

Non-collateralised Structured Products

Base Listing Document relating to Hong Kong Listed Structured Products

to be issued by



The Hongkong and Shanghai Banking Corporation Limited

(incorporated in Hong Kong with limited liability under the Companies Ordinance of Hong Kong)

The Hongkong and Shanghai Banking Corporation Limited (the “**Bank**”, “**Issuer**”, “**we**” or “**us**”) has published this document in respect of call/put warrants on single equities (“**Equity Warrants**”), call/put warrants on indices (“**Index Warrants**”) and call/put warrants on funds (“**Fund Warrants**”) (together the “**Warrants**”), inline warrants on single equities (“**Equity Inline Warrants**”) and inline warrants on indices (“**Index Inline Warrants**”) (together the “**Inline Warrants**”), callable bull/bear contracts on single equities (“**Equity Callable Bull/Bear Contracts**”), callable bull/bear contracts on indices (“**Index Callable Bull/Bear Contracts**”) and callable bull/bear contracts on funds (“**Fund Callable Bull/Bear Contracts**”) (together the “**CBBCs**”) and, together with the Warrants, the Inline Warrants and any other structured products approved by The Stock Exchange of Hong Kong Limited (the “**stock exchange**”) from time to time, the “**structured products**”) to be issued by us in series (each a “**series**”) from time to time and listed on the stock exchange.

Hong Kong Exchanges and Clearing Limited (“**HKEX**”), the stock exchange and Hong Kong Securities Clearing Company Limited (“**HKSCC**”) take no responsibility for the contents of this document, make no representation as to its accuracy or completeness and expressly disclaim any liability whatsoever for any loss howsoever arising from or in reliance upon the whole or any part of the contents of this document.

This document, for which we accept full responsibility, includes particulars given in compliance with the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the “**rules**”) for the purpose of giving information with regard to us and the structured products. We, having made all reasonable enquiries, confirm that to the best of our knowledge and belief the information contained in this document is accurate and complete in all material respects and not misleading or deceptive, and there are no other matters the omission of which would make any statement herein or this document misleading. Additional terms relating to each series of our structured products will be set out in a launch announcement and supplemental listing document (each a “**launch announcement and supplemental listing document**”) which will be supplemental to, and should be read in conjunction with, this document.

The structured products involve derivatives. You should not invest in the structured products unless you fully understand and are willing to assume the risks associated with the structured products. The structured products are complex products. You should exercise caution in relation to them. You are warned that the price of our structured products may fall in value as rapidly as it may rise and you may sustain a total loss of your investment. Prospective purchasers should therefore ensure that they understand the nature of our structured products and carefully study the risk factors set out in this base listing document and the relevant launch announcement and supplemental listing document and, where necessary, seek professional advice, before they invest in any of our structured products. The Issuer is part of a large global financial institution and has many financial products and contracts outstanding at any given time.

The structured products constitute general unsecured contractual obligations of the Issuer and of no other person and will rank equally among themselves and with all of the Issuer’s other unsecured obligations (save for those obligations preferred by law) upon liquidation. If you purchase the structured products, you are relying upon the Issuer’s creditworthiness and have no rights under the structured products against (a) any company which has issued the underlying shares, (b) the fund which has issued the underlying securities, or its trustee or manager (as applicable), or (c) the index compiler of any underlying index or any other person. If the Issuer becomes insolvent or defaults on its obligations under the structured products, you may not be able to recover all or even part of the amount due under the structured products (if any).

Dated 4 April 2022

IMPORTANT

If you are in any doubt as to any of the contents of this document, you should consult your stockbroker or other registered dealer in securities, bank manager, solicitor, professional accountant or other professional adviser.

If at the time of issue of the structured products, any information in this base listing document needs to be updated and/or amended, we will either include the updated and/or amended information in the relevant launch announcement and supplemental listing document or publish an addendum to this base listing document.

You should read this document, together with any addendum to it and the relevant launch announcement and supplemental listing document, together with any addendum to it, before deciding whether to invest in the structured products.

We cannot give you investment advice. You must decide for yourself whether our structured products meet your investment needs, and obtain independent professional advice if appropriate. This document is for information purposes only and is not intended to be, and should not be considered as, a recommendation or advice by us or any of our affiliates that you should purchase any of our structured products, and you must make your own independent investigation of our financial condition and affairs and your own appraisal of our creditworthiness.

We undertake during the period in which our structured products are listed on the stock exchange to make the following documents available on the website of the HKEX at www.hkexnews.hk and our website which is presently at <https://www.warrants.hsbc.com.hk/en/warrant/latest-document-and-notice>:

- (a) a copy of this document and any addendum to this document (both the English version and the Chinese translation);
- (b) a copy of our latest publicly available annual report (both the English version and the Chinese translation) and interim report (if any); and
- (c) a copy of the consent letter from our auditor referred to in this document.

本公司承諾，以下文件可於結構性產品在聯交所上市的期間內於香港交易所披露易網站 (www.hkexnews.hk/index_c.htm) 以及本公司網站 (網址現為 <https://www.warrants.hsbc.com.hk/tc/warrant/latest-document-and-notice>) 瀏覽：

- (a) 本文件及本文件的任何增編 (英文版本及中文譯本)；
- (b) 本公司最近期可供查閱的年報 (英文版本及中文譯本) 及中期報告 (如有)；及
- (c) 本文件所述本公司核數師的同意函件。

For the purpose of this document and where the context requires, references to “**Hong Kong**” are to the Hong Kong Special Administrative Region of the People’s Republic of China, to “**Macau**” are to the Macau Special Administrative Region of the People’s Republic of China, to the “**PRC**” or “**mainland China**” are to the People’s Republic of China (which for the purposes of this document shall exclude Hong Kong, Macau and Taiwan) and to “**China**” are to the People’s Republic of China (which shall, for the avoidance of doubt, include Hong Kong, Macau and Taiwan).

Our structured products are not available to any person that is, (a) a U.S. Person (as defined in Regulation S of the United States Securities Act of 1933, as amended), (b) a U.S. person as defined in 17 C.F.R. § 23.23(a)(23) (a “**CFTC U.S. Person**”) or to others for offer or sale to or for the account or benefit of any such CFTC U.S. person or (c) a “United States person” as defined in U.S. Executive Order 13959, as amended by U.S. Executive Order 14032, or in the Chinese Military-Industrial Complex Sanctions Regulations (31 C.F.R. Part 586) (“**E.O. 13959 U.S. Persons**”), to the extent that the underlyings for the relevant structured products include (i)

equities whose purchase or sale by E.O. 13959 U.S. Persons is restricted under Executive Order 13959 (as amended) or (ii) provide any investment exposure to any such equities ((i) and (ii) collectively, “**E.O. 13959 Restricted Underlyings**”).

E.O. 13959 U.S. Persons are restricted from purchasing or selling the structured products with E.O. 13959 Restricted Underlyings after the effective date of the Executive Order 13959 (as amended) restrictions applicable to those underlyings and investors should seek their own independent legal advice regarding compliance with Executive Order 13959 (as amended).

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OVERVIEW OF OUR PROGRAMME

We have set up this **programme** for the purpose of offering from time to time to the public in Hong Kong **structured products** listed on the stock exchange. The following is an overview of the main features of the programme.

Who issues the structured products?	The Hongkong and Shanghai Banking Corporation Limited is the Issuer of the structured products. References in this base listing document to the “ Bank ”, “ we ”, “ our ” and “ us ” are to the Issuer and the “ Bank Group ” are to the Issuer and its subsidiaries.
Will the structured products be guaranteed?	No.
What types of structured products may we issue under the programme?	We may issue Warrants, Inline Warrants and CBBCs under the programme, each as described below. We may also issue from time to time under the programme other structured products approved by the stock exchange.
What types of Warrants may be issued under the programme?	The Warrants which we may issue under the programme include: <ul style="list-style-type: none">(a) call/put warrants on single equities (“Equity Warrants”);(b) call/put warrants on a single index (“Index Warrants”); and(c) call/put warrants on a single fund (“Fund Warrants”).
What types of Inline Warrants may be issued under the programme?	The Inline Warrants which we may issue under the programme include: <ul style="list-style-type: none">(a) inline warrants on single equities (“Equity Inline Warrants”); and(b) inline warrants on a single index (“Index Inline Warrants”).
What types of CBBCs may be issued under the programme?	The callable bull/bear contracts (the “ CBBCs ”) which we may issue under the programme include: <ul style="list-style-type: none">(a) callable bull/bear contracts on single equities (“Equity Callable Bull/Bear Contracts”);(b) callable bull/bear contracts on a single index (“Index Callable Bull/Bear Contracts”); and(c) callable bull/bear contracts on a single fund (“Fund Callable Bull/Bear Contracts”).
How are the structured products issued?	Our structured products will be issued in one or more series . Structured products within a series will have the same terms, but the terms of one series of structured products may be different from another.

What is the legal status of the structured products?

The structured products are our direct, unconditional, unsubordinated and unsecured obligations, ranking equally (*pari passu*) among themselves and with all our other present and future direct, unconditional, unsecured and unsubordinated obligations (save for those obligations preferred by law).

Will the structured products be listed?

Yes. We will apply to the stock exchange to list each series of the structured products which we issue under the programme. This base listing document has been published for the purposes of obtaining a listing of each series of structured products which we issue under the programme.

Will the structured products be admitted to CCASS?

Yes. We will make arrangements to ensure that each series of structured products will be accepted by HKSCC as eligible securities for deposit, clearance and settlement in the Central Clearing and Settlement System (“**CCASS**”). All activities under CCASS are subject to the General Rules of CCASS and CCASS Operational Procedures in effect from time to time (the “**CCASS Rules**”).

What are the listing documents for the structured products?

We have published this base listing document to permit the listing of our structured products on the stock exchange. This base listing document sets out the terms and conditions of the structured products, common features of the structured products, the legal terms relating to the programme and information about us. This base listing document includes particulars given in compliance with the rules for the purpose of giving information with regard to us and the structured products.

When we apply to list one or more series of structured products, we will publish a **launch announcement and supplemental listing document**, which will include information on the particular structured products to be listed. The launch announcement and supplemental listing document will be available in English and Chinese versions (which may be printed together in the same document).

If any information in this base listing document needs to be updated and/or amended at the time we issue a launch announcement and supplemental listing document, we will either include the updated and/or amended information in the relevant launch announcement and supplemental listing document or publish an addendum to this base listing document.

What will a launch announcement and supplemental listing document specify?

The launch announcement and supplemental listing document will, amongst other things, set out the terms of the series of structured products being offered to supplement the applicable set of master terms and conditions in this base listing document, which will include the following:

Type of structured product

The launch announcement and supplemental listing document will specify the type of the series of structured products offered.

<i>Exercise</i>	The launch announcement and supplemental listing document will specify the date on which the structured products may be exercised. The structured products which we issue under the programme may be exercised only upon the specified expiry date.
<i>Settlement Basis</i>	The holder of the structured products will be entitled to a cash payment upon exercise (assuming that the cash payment is greater than zero).
<i>Issue price</i>	The launch announcement and supplemental listing document will specify the issue price of the structured product.
<i>Underlying</i>	The launch announcement and supplemental listing document will specify the underlying for the structured product, which may be a share of a company, an index or a share or a unit of a fund. References in this base listing document to a “ fund ” are to a unit trust or an exchange-traded fund (“ ETF ”) (as the case may be) and the “ securities ” of a fund are to the units or shares of the fund (as the case may be).
<i>Expiry Date</i>	The launch announcement and supplemental listing document will specify the expiry date for the series of structured products offered.
<i>Liquidity Provider</i>	The launch announcement and supplemental listing document will specify the name and contact details of the liquidity provider appointed for the series of structured products offered, and the basis on which the appointed liquidity provider will provide liquidity in the relevant structured products.
How will the structured products be represented?	The structured products of each series will be issued in registered form and represented by a global certificate which will be registered in the name of HKSCC Nominees Limited (or such other nominee company as HKSCC may specify from time to time) and will be deposited with CCASS in accordance with the CCASS Rules.
Will you get any individual certificate representing an investment in a series of our structured products?	No, you will not receive any individual certificates.
In the Terms and Conditions for the structured products, there are references to “holders”. Who are they?	<p>The Issuer will maintain a register showing the details of each person who is entitled to a particular number of structured products of a series. The person registered will be treated by us as the absolute owner and holder of that number of structured products.</p> <p>The register for each series of structured products will record at all times that HKSCC Nominees Limited (or such other nominee company as HKSCC may specify for that series) is the holder of 100 per cent. of the structured products of that series.</p>

Accordingly you will not be recognised by us as the holder of the structured products in which you invest, and you must refer to the records of CCASS and/or your custodian/broker, and the statements that you receive, to determine your beneficial interest in the structured products.

How do we give notices and make payments under our structured products?

We will give any necessary notices by publishing such notices in English and in Chinese on the website of HKEX, or otherwise in accordance with the terms and conditions of the relevant structured products.

We will make all payments that are due under our structured products to the registered holder of the structured products. The registered holder will be HKSCC Nominees Limited (or such other nominee company as HKSCC may specify for that series). In this situation, the payments to which you are entitled will be made to you or to your custodian/broker through CCASS in accordance with the CCASS Rules.

Can we repurchase our structured products?

Yes, we or our affiliates may repurchase our structured products at any time. We may offer for sale any structured products which we repurchase, and may do so at prevailing market prices or in negotiated transactions at our discretion (acting in good faith and in a commercially reasonable manner). You should not therefore make any assumptions as to the number of structured products of any series which may be in issue from time to time.

RISK FACTORS

You should carefully consider the following information together with the other information contained in this base listing document (and any applicable addendum) and in the applicable launch announcement and supplemental listing document (and any applicable addendum) before purchasing our structured products.

This section highlights only some of the risks of dealing in the structured products but their inclusion in this document does not mean these are the only significant or relevant risks of dealing in our structured products. If you have any concerns or doubts about our structured products, you should obtain independent professional advice.

General Risk Factors relating to us and our Structured Products

(1) Non-collateralised structured products

Our structured products are not secured on any of our assets or any collateral.

(2) You must rely on our creditworthiness

If you purchase our structured products, you rely on our creditworthiness and of no other person (including the ultimate holding company of our group, HSBC Holdings plc) and you have no rights under the structured products against any company which has issued the underlying shares (in respect of equity-linked structured products), any company constituting the underlying index or the index compiler (in respect of index-linked structured products), or any fund which has issued the underlying securities, or its trustee or manager (as applicable) (in respect of fund-linked structured products). There is no assurance of protection against a default by us in respect of our obligations under our structured products. If we become insolvent or default on our obligations under the structured products, you can only claim as our unsecured creditor regardless of the performance of the underlying and you may not be able to recover all or even part of the amount due under the structured products (if any).

You should note that rating agencies usually receive a fee from the issuers that they rate. When evaluating our creditworthiness, you should not solely rely on our credit ratings (which are set out in the section headed "General Information" on page 125 of this base

listing document and the section headed "Important information" of the relevant launch announcement and supplemental listing document) because:

- (a) a credit rating is not a recommendation to buy, sell or hold our structured products;
- (b) ratings of companies may involve difficult-to-quantify factors such as market competition, the success or failure of new products and markets and managerial competence;
- (c) a high credit rating is not necessarily indicative of low risk. Our credit ratings as set out in this base listing document and the relevant launch announcement and supplemental listing document are for reference only. Any downgrading of our ratings could result in a reduction in the value of the structured products;
- (d) a credit rating is not an indication of the liquidity or volatility of the structured products; and
- (e) a credit rating may be downgraded if the credit quality of the Issuer declines.

(3) Macroeconomic and geopolitical risks

Current economic and market conditions may materially adversely affect the Bank Group's results

The Bank Group's earnings are affected by global and local economic and market conditions.

Uncertain and at times volatile economic conditions can create a challenging operating environment for financial services companies such as the Bank Group. In particular, the Bank Group have faced and may continue to face challenges to its operations and operating model, including but not limited to challenges in connection with these factors:

- the ongoing COVID-19 pandemic and its impact on global economies could have a material adverse effect on (among other things) the profitability, capital and liquidity of financial institutions such as the Bank Group. For further information, please refer to the section headed “Risks relating to the impact of COVID-19” under this risk factor;
- the demand for borrowing from creditworthy customers may diminish during periods of recession or where economic activity slows or remains subdued;
- lower interest rates could have a negative impact on the Bank Group’s net interest income and profitability, which in turn might affect financial stability or cause credit supply to subsequently tighten;
- the Bank Group’s ability to borrow from other financial institutions or to engage in funding transactions may be adversely affected by market disruption; and
- market developments may depress consumer and business confidence beyond expected levels. If economic growth is subdued, for example, asset prices and payment patterns may be adversely affected, leading to greater than expected increases in delinquencies, default rates and expected credit losses (“ECLs”). However, if growth is too rapid, new asset valuation bubbles could appear, particularly in the real estate sector, with potentially negative consequences for financial institutions, such as the Bank Group.

The occurrence of any of these events or circumstances could have a material adverse effect on the Bank Group’s business, financial condition, results of operations, prospects and customers.

The Bank Group is likely to be affected by global geopolitical trends, including the risk of government intervention

While economic globalisation appears to remain deeply embedded in the international system, it is increasingly challenged by nationalism and protectionism, and international institutions such as the Bank Group may be less capable of arresting this trend. A dispersion of global economic power from the United States of America (the “U.S.”) and Europe towards China and emerging markets appears to be occurring, providing a backdrop for greater U.S.-China competition.

A rise in nationalism and protectionism, including trade barriers, may be driven by populist sentiment and structural challenges facing developed and developing economies. Similarly, if capital flows are disrupted, some emerging markets may impose protectionist measures that could affect financial institutions and their clients, and other emerging, as well as developed, markets, may be tempted to follow suit. This rise could contribute to weaker global trade, potentially affecting the Bank Group’s traditional lines of business.

The broad geographic footprint and coverage of the Bank Group will make it and its customers susceptible to protectionist measures taken by national governments and authorities, including imposition of trade tariffs, restrictions on market access, restrictions on the ability to transact on a cross-border basis, expropriation, restrictions on international ownership, interest rate caps, limits on dividend flows and increases in taxation.

There may be uncertainty as to the conflicting nature of such measures, their duration, the potential for escalation, and their potential impact on global economies. Whether these emerging trends are cyclical or permanent is hard to determine, and their causes are likely

to be difficult to address. The occurrence of any of these events or circumstances could have a material adverse effect on the Bank Group's business, financial condition, results of operations and prospects.

Risks relating to the impact of COVID-19

The COVID-19 pandemic and its effect on the global economy have continued to impact the Bank Group's customers and itself, and the future effects of the pandemic are uncertain. The COVID-19 pandemic necessitated governments to respond at unprecedented levels to protect public health, local economies and livelihoods. It has affected regions at different times and varying degrees as it has developed. The resulting government support measures and restrictions imposed have created additional challenges given the rapid pace of change and significant operational demands. Renewed outbreaks, particularly those resulting from the emergence of new variants of the virus, emphasise the ongoing threat of COVID-19 and could result in further tightening of government restrictions.

Over the course of 2021, government restrictions across many countries and territories were gradually unwound, allowing the global economy to stage a robust recovery up until the fourth quarter, when the highly transmissible Omicron variant began to emerge. While government restrictions were re-imposed in many countries and territories in response to this variant, they have in certain countries been less restrictive than those that were imposed during previous waves of the pandemic.

The global vaccination roll-out in 2021 helped reduce the social and economic impact of the COVID-19 pandemic, although there has been significant divergence in the speed at which vaccines have been deployed around the world. Most developed countries have now vaccinated a large proportion of their populations, but many less developed countries have struggled to secure supplies and are at an earlier stage of their roll-out. By the end of 2021, high vaccination rates had ensured that many

COVID-19-related restrictions on activity in developed markets had been lifted and travel constraints were easing. However, the emergence of the Omicron variant, which proved to be more contagious and able, to a certain extent, to evade vaccine immunity, demonstrated the risk that new variants pose and led to government restrictions being reintroduced. A full return to pre-pandemic levels of social interaction across all the Bank Group's key markets is therefore, unlikely in the short to medium term. There remains a divergence in approach taken by countries with regards to the level of restrictions on activity and travel imposed in response to the pandemic. Such diverging approach to future pandemic waves could prolong or worsen supply chain and international travel disruptions. The evolving COVID-19 restrictions in Hong Kong, including travel, public gathering and social distancing restrictions are impacting the Hong Kong economy, and may affect the ability to attract and retain staff.

Mismatches between the supply and demand of goods and services contributed to a rise in inflation in 2021. Central banks in major markets are expected to raise interest rates, but such increases are expected to be gradual and monetary policy is expected to remain accommodative overall. Policy tightening in major emerging markets has already begun in order to counteract rising inflation and the risk of capital outflows. Governments are also expected to reduce the level of fiscal support they offer households and businesses as the appetite for broad lockdowns and public health restrictions decreases. Government debt has risen in most advanced economies, and is expected to remain high into the medium term. High government debt burdens have raised fiscal vulnerabilities, increasing the sensitivity of debt service costs to interest rate and potentially reducing the fiscal space available to address any future economic downturns. Economic growth in the Bank Group's major markets is expected to slow in 2022 to more sustainable rates, contingent on the successful further containment of the

virus, the continued roll-out of vaccination programmes, and the evolution of other top risks.

There is a material risk of a renewed drop in economic activity, particularly in countries and territories with low vaccination rates. The economic fallout from the COVID-19 pandemic risks increasing inequality across markets, which may leave the burden on governments and central banks to continue providing fiscal and monetary stimulus, possibly in a more targeted fashion than seen during 2020 and 2021. After financial markets suffered a sharp fall in the early phases of the spread of COVID-19, they rebounded but still remain volatile. Depending on the degree of global economic growth, financial asset prices may suffer a further sharp fall.

Depending on the time taken for economic activity to return to previous levels, there could be further adverse impacts on the Bank Group's income due to lower lending and transaction volumes and lower wealth and insurance manufacturing revenue due to equity market volatility and weakness. Lower interest rates globally will increase the cost of guarantees for insurance manufacturing, and there could also be adverse impacts on other assets, such as the Bank Group's investment in Bank of Communications Co., Limited, goodwill and other intangible assets.

The COVID-19 pandemic may also have material impacts on capital and liquidity. This may include downward customer credit rating migration, which could negatively impact the Bank Group's risk weighted assets ("**RWAs**") and capital position, and potential liquidity stress due, among other factors, to increased customer drawdowns, notwithstanding the significant initiatives that governments and central banks have put in place to support funding and liquidity. Central banks in some markets also initiated a series of capital measures, including the reduction of certain regulatory capital buffers, to support the ability of banks to supply credit to businesses and households through periods of economic disruption.

The Bank Group continues to support its personal and business customers through market-specific measures initiated during the COVID-19 pandemic and by supporting the remaining government schemes that focus on the parts of the economy most impacted by the pandemic.

The rapid introduction and varying nature of the government support schemes introduced throughout the COVID-19 pandemic has led to increased operational risks, including complex conduct considerations, increased reputational risk and increased risk of fraud. These risks are likely to be heightened further as and when those government support schemes are unwound. These events have also led to increased litigation risk.

The impact of the pandemic on the long-term prospects of businesses in the most vulnerable sectors of the economy – such as retail, hospitality and commercial real estate – remains uncertain and may lead to significant credit losses on specific exposures, which may not be fully captured in ECL estimates. In addition, in times of stress, fraudulent activity is often more prevalent, leading to potentially significant credit or operational losses.

The Bank Group's financial models continue to be impacted by the pandemic. These include retail and wholesale credit models such as HKFRS loss models, as well as capital models, traded risk models and models used in the asset/liability management process. This continues to require enhanced monitoring of model outputs and the use of model overlays, including management judgemental adjustments based on the expert judgement of senior credit risk managers and the recalibration of key loss models to take into account the impacts of COVID-19 on critical model inputs.

The operational support functions on which the Bank Group relies are based in a number of countries worldwide, some of which were particularly affected by the COVID-19 pandemic during 2021. We continue to monitor the situation, in particular in those countries and regions

where COVID-19 infections are most prevalent and/or where travel restrictions are in place.

Despite the ongoing economic recovery, significant uncertainties remain in assessing the duration and impact of the COVID-19 pandemic, including where government restrictions are re-imposed as a result of further outbreaks of the virus, in particular those outbreaks which result from the emergence of new variants. There is a risk that economic activity remains below pre-pandemic levels for a prolonged period and this could have a material adverse effect on the Bank Group's financial condition, results of operations, prospects, liquidity, capital position and credit ratings.

The Bank Group is subject to political, social and other risks in the countries and territories in which it operates and globally

The Bank Group operates through an international network of subsidiaries, branches and affiliates across countries and territories around the world. The Bank Group's operations are subject to potentially unfavourable political, social, environmental and economic developments in such jurisdictions, which may include:

- coups, civil unrest or acts of terrorism;
- political and/or social instability;
- geopolitical tensions;
- climate change and acts of God, including epidemics and pandemics, (such as the COVID-19 pandemic, which is further discussed under the section headed "Risks relating to the impact of COVID-19" under this risk factor) and natural disasters (such as floods and hurricanes); and
- infrastructure issues, such as transportation or power failures.

Each of the above could impact credit RWAs, and the financial losses caused by any of these risk events or developments could impair asset values and the

creditworthiness of customers. These risk events or developments may also give rise to disruption to the Bank Group's services and some may result in physical damage to the Bank Group's operations and/or risks to the safety of the Bank Group's personnel and customers. Geopolitical tensions could have significant ramifications for the Bank Group and its customers. In particular:

- Diplomatic tensions between China and the U.S., and extending to the UK, the European Union (the "EU"), India and other countries, and developments in Hong Kong and Taiwan, may affect the Bank Group, creating regulatory, reputational and market risks.
- In particular, the U.S.-China relationship remains complex, with tensions over a number of critical issues. The U.S., the UK, the EU, Canada and other countries have imposed various sanctions and trade restrictions on Chinese individuals or companies, and the U.S. continues to develop its approach to perceived strategic competition with China. Among these, the U.S. Hong Kong Autonomy Act authorises the imposition of secondary sanctions against non-U.S. financial institutions found to be knowingly engaged in significant transactions with individuals and entities subject to U.S. sanctions for engaging in certain activities that undermine Hong Kong's autonomy. In addition, the U.S. has imposed restrictions on U.S. persons' ability to buy or sell certain publicly traded securities linked to a number of prominent Chinese companies.
- There is also a risk of increased sanctions being imposed by the U.S. and other governments in relation to human rights, technology and other issues with China, and this could create a more complex operating environment for the Bank Group and its customers. Notably, alongside the EU, UK, and Canada, the U.S. has increasingly imposed sanctions and

other measures in response to allegations of human rights abuses in Xinjiang.

- China, in turn, has announced a number of its own sanctions and trade restrictions that target, or provide authority to target, foreign individuals or companies. These have been imposed mainly against certain public officials associated with the implementation of foreign sanctions against China. China has also promulgated new laws that provide a legal framework for imposing further sanctions and export restrictions, including laws prohibiting implementation of – or compliance with – foreign sanctions against China and creating a private rights of action in Chinese courts for damages caused by third parties implementing foreign sanctions or other discriminatory measures.
- These and any future measures and countermeasures that maybe taken by the U.S., China and other countries may affect the Bank Group, its customers and the markets in which the Bank Group operates.

As the geopolitical landscape evolves, the compliance by multinational corporations with their legal or regulatory obligations in one jurisdiction may be seen as supporting the law or policy objectives of that jurisdiction over another, creating additional compliance, reputational and political risks for the Bank Group.

While it is the Bank Group's policy to comply with all applicable laws and regulations of all jurisdictions in which it operates, geopolitical risks and tensions, and potential ambiguities in the Bank Group's compliance obligations, will continue to present challenges and risks for the Bank Group and could have a material adverse impact on the Bank Group's business, financial condition, results of operations, prospects and strategy, as well as on the Bank Group's customers.

(4) The Financial Institutions (Resolution) Ordinance may adversely affect the structured products

On 7 July 2017, the Financial Institutions (Resolution) Ordinance (Cap. 628) of Hong Kong (the "**FIRO**") came into operation. The FIRO provides for, among other things, the establishment of a resolution regime for authorized institutions and other within scope financial institutions in Hong Kong which may be designated by the relevant resolution authorities, which includes us as the issuer of the structured products. The resolution regime seeks to provide the relevant resolution authorities with administrative powers to bring about timely and orderly resolution in order to stabilise and secure continuity for a failing authorized institution or within scope financial institution in Hong Kong. In particular, the relevant resolution authority is provided with powers to affect contractual and property rights as well as payments (including in respect of any priority of payment) that creditors would receive in resolution. These may include, but are not limited to, powers to cancel, write off, modify, convert or replace all or a part of the structured products or cash payment under the structured products, and powers to amend or alter the contractual provisions of the structured products, all of which may adversely affect the value of the structured products, and the holders thereof may suffer a loss of some or all of their investment as a result. Holders of the structured products may become subject to and bound by the FIRO.

On 25 June 2021, the government of Hong Kong published the Financial Institutions (Resolution) (Contractual Recognition of Suspension of Termination Rights – Banking Sector) Rules (the "**Stay Rules**") in the Gazette. The Stay Rules have come into operation on 27 August 2021 following completion of the vetting process by the Legislative Council of Hong Kong. Following a transitional period of 24 months from the date of the commencement of the Stay Rules for the earliest first phase compliance, entities subject to the Stay Rules are required to adopt appropriate provisions in certain financial contracts to the effect that the

contractual parties agree to be bound by the temporary stay that may be imposed by the Hong Kong Monetary Authority under the FIRO, which may in turn affect any in-scope financial contracts between a qualifying entity and its counterparty(ies).

As the implementation of FIRO remains untested and certain details relating to FIRO will be set out through secondary legislation and supporting rules, we are unable to assess the full impact of FIRO, the Stay Rules, any potential secondary legislation and/or supporting rules and regulations made under FIRO on the financial system generally, our counterparties, us, any of our consolidated subsidiaries, our operations and/or our financial position. **In the worst case scenario, you may get nothing back and the maximum loss could be 100% of your initial investment amount.**

(5) Recent and future U.S. government actions

The U.S. government's recent and future actions against mainland China and Hong Kong may affect the price or value of the underlying equities or indices (as applicable) and the prevailing trading price of the structured products. There can be no assurances that any future actions taken by the U.S. government (or other governments) against mainland China and Hong Kong will not have an adverse effect on the trading price or value of the structured products.

(6) Restrictions on E.O. 13959 U.S. Persons

To the extent the structured products include underlying equities or indices that are or become E.O. 13959 Restricted Underlyings, E.O. 13959 U.S. Persons are or will be restricted under Executive Order 13959 (as amended) from purchasing and selling the structured products, which may adversely affect the prevailing trading price of the structured products. E.O. 13959 U.S. Persons are urged to seek independent legal advice regarding compliance with Executive Order 13959 (as amended).

(7) The structured products are not principal protected and may become worthless

Although the cost of a structured product may cost a fraction of the value of the underlying, the structured product's price may change more rapidly than the price or level of the underlying. Given the gearing feature inherent in the structured products, a small change in the price or level of the underlying may lead to a substantial price movement in the structured products. You may suffer higher losses in percentage terms if you expect the price or level of the underlying to move one way but it moves in the opposite direction. In the worst case, the structured products may become worthless and you will lose all of your investment (or, in the case of Inline Warrants, a substantial part of your investment). The structured products may only be suitable for experienced investors who are willing to accept the risk that they may lose all their investment (or, in the case of Inline Warrants, a substantial part of their investment).

(8) The price of our structured products may fluctuate to a great extent

The price of our structured products may fall or rise rapidly in value and our structured products may expire or become worthless, resulting in a total loss of your investment (or, in the case of Inline Warrants, a substantial part of your investment). Before dealing in our structured products, you should carefully consider, among other things, (i) the prevailing trading price of the structured products; (ii) the value or level and volatility of the underlying; (iii) in the case of an Inline Warrant, the range between the upper strike price/upper strike level and the lower strike price/lower strike level (both inclusive) of the Inline Warrant and the expected probability of the average price/closing level falling within the range between the upper strike price/upper strike level and the lower strike price/lower strike level (both inclusive) at expiry; (iv) the time remaining to expiration; (v) any change(s) in interim interest rates and dividend yields; (vi) any change(s) in currency exchange rates; (vii) the demand and supply of the

structured products; (viii) any related transaction costs; and (ix) our creditworthiness.

(9) The secondary market for our structured products may be limited

We cannot predict if and to what extent a secondary market may develop for the structured products or whether that market will be liquid or illiquid. Whilst we intend to apply to list each series of our structured products on the stock exchange, the fact that a particular series of structured products is listed does not necessarily lead to greater liquidity. In addition, even if a series of structured products is listed on the stock exchange, there can be no assurance that any such listing can be maintained. Our appointed liquidity provider may be the only person quoting prices on the stock exchange for the structured products. Therefore, the secondary market may be limited. The more limited the secondary market, the more difficult it may be for you to realise the value in the structured products prior to expiry.

(10) The liquidity provider may not be able to provide liquidity for the structured products

You should also be aware that the appointed liquidity provider may not be able to provide liquidity when there are operational and technical problem hindering its ability to do so. Even if the appointed liquidity provider is able to provide liquidity in such circumstances, its performance of liquidity provision may be adversely affected. For example: (i) the spread between bid and ask prices quoted by the appointed liquidity provider may be significantly wider than its normal standard; (ii) the quantity for which liquidity will be provided by the appointed liquidity provider may be significantly smaller than its normal standard; and/or (iii) the appointed liquidity provider's response time for a quote may be significantly longer than its normal standard.

(11) The structured products constitute our unsecured and unsubordinated contractual obligations

The structured products constitute our general unsecured contractual obligations and of no other person and shall rank equally (*pari passu*) among themselves and with all our other unsecured obligations (save for certain obligations required to be preferred by law). At any given time, the number of our structured products outstanding may be substantial. We issue a large number of financial instruments on a global basis. We have no obligation to you other than to pay amounts in accordance with the terms set out in the applicable launch announcement and supplemental listing document. We do not in any respect underwrite or guarantee the performance of any structured product. We shall have the absolute discretion (acting in good faith and in a commercially reasonable manner) to put in place any hedging transaction or arrangement appropriate in connection with any structured product or the applicable underlying.

(12) Trading in the structured products may be affected by suspension of trading in the underlying

If an underlying is suspended from trading or dealing for whatever reason on the market on which it is listed or dealt in (including the stock exchange), trading in the relevant series of the structured products may be suspended for a similar period. In addition, if an underlying is an index and the calculation and/or publication of the index level by the index compiler is suspended for whatever reasons, trading in the relevant series of the structured products may be suspended for a similar period. Without taking into account: (i) interim interest rates and (ii) expected dividend payments or other distributions on the underlying shares (in respect of equity-linked structured products), expected dividend payments or other distributions on any components comprising the underlying index (in respect of index-linked structured products), or expected dividend payments or other distributions on the underlying securities of the fund (in respect of fund-linked structured

products), and assuming all other factors remain constant, the value of a Warrant or a CBBC is likely to decrease over time while the value of an Inline Warrant is likely to decrease over time when the price or level of the underlying falls outside the range between the upper strike price/upper strike level and the lower strike price/lower strike level (both inclusive). You should note that in the case of a prolonged suspension period, the market price of the structured products may be subject to a significant impact of time decay of such prolonged suspension period and may fluctuate significantly upon resumption of trading after the suspension period of the structured products. This may adversely affect your investment in the structured products.

In respect of our structured products linked to foreign underlying assets, you should note that the trading hours of the foreign underlying assets (based on Hong Kong time) on a stock exchange outside Hong Kong (a “**Foreign Stock Exchange**”) may be different from the trading hours of the stock exchange. In the case where trading in the foreign underlying assets on a Foreign Stock Exchange is suspended during non-trading hours of the stock exchange, trading in the relevant structured products on the stock exchange will be suspended as soon as practicable afterwards. Such suspension may be lifted and trading of foreign underlying assets on the Foreign Stock Exchange may resume during non-trading hours of the stock exchange, in which case, trading in the relevant structured products on the stock exchange will also resume as soon as practicable afterwards.

(13) There is a time lag between exercise of the structured products and payment to you

Any delay between exercise of the structured products and payment to you will be specified in the applicable launch announcement and supplemental listing document or in the relevant terms and conditions. We will not compensate you for any loss you suffer as a result of any such time lag.

(14) Time decay

Without taking into account: (i) interim interest rates and (ii) expected dividend payments or other distributions on the underlying shares (in respect of equity-linked structured products), expected dividend payments or other distributions on any components comprising the underlying index (in respect of index-linked structured products) or expected dividend payments or other distributions on the underlying securities of the fund (in respect of fund-linked structured products), and assuming all other factors remain constant, the value of a Warrant or a CBBC is likely to decrease over time while the value of an Inline Warrant is likely to decrease over time when the price or level of the underlying falls outside the range between the upper strike price/upper strike level and the lower strike price/lower strike level (both inclusive). Therefore, the structured product should not be viewed as a product for long term investments.

(15) The value of the underlying may fluctuate

An investment in our structured products involves risks relating to changes in the value of the underlying. The value of the underlying will vary over time, including as a result of corporate actions (where the underlying is a share of a company or a share or a unit of a fund) or changes in computation (where the underlying is an index). Certain of such events which affect the value of the underlying may require an adjustment to the structured products. However, even if such event does not require an adjustment to the structured products, the price of our structured products or the return on an investment in our structured products may be affected.

(16) Investments in the structured products are not the same as investments in the underlying

The value of our structured products may not correlate directly with the movements of the underlying and may be affected by the time remaining to expiry. Also, as holder of our structured products you will

not have the same rights (including voting rights and rights to dividends or other distributions and any other rights that a direct holder of the underlying securities would normally be entitled to) as if you were a direct holder of the underlying securities (where the underlying is a share of a company or a share or a unit of a fund) or voting rights or rights to dividends or other distributions or any other rights with respect to any company constituting the underlying index (where the underlying is an index).

(17) Gearing effects

Since the structured products are leveraged, the percentage change in the price of a structured product is greater compared with that of the underlying. You may suffer higher losses in percentage terms if you expect the price or level of the underlying to move one way but it moves in the opposite direction. It is possible that while the price or level of the underlying is moving up, the value of the Warrant or CBBC is falling. In the case of Inline Warrants, generally, without taking into account interim interest rates and expected dividend payments or other distributions on the underlying shares or on any components comprising the underlying index and assuming all other factors remain constant, the closer the price/level of the underlying towards the mid-way of the upper strike price/upper strike level and the lower strike price/lower strike level, the greater the value of the Inline Warrants; conversely, the farther the price/level of the underlying from the mid-way of the upper strike price/upper strike level and the lower strike price/lower strike level, the lower the value of the Inline Warrants.

(18) There could be conflicts of interests which may affect our structured products

Various potential and actual conflicts of interest may arise from our overall activities or activities of our subsidiaries and affiliates. Such actions and conflicts may include, without limitation, the exercise of voting power, the purchase and sale of securities, financial advisory relationships and exercise of creditor rights. Such activities, information and/or

research reports may involve or affect the company which has issued the underlying shares, the fund which has issued the underlying securities, the underlying index and/or any components comprising the underlying index and may cause consequences adverse to you or otherwise create conflicts of interests in connection with the issue of the structured products. We have no obligation to disclose such information and may issue research reports and engage in any such activities without regard to the issue of the structured products. In the ordinary course of our business, we and our subsidiaries and affiliates may effect transactions on our own account or for the account of our customers and may enter into one or more transactions with respect to the company which has issued the underlying shares, the fund which has issued the underlying securities, the underlying index and/or any components comprising the underlying index or related derivatives. This may indirectly affect your interests. Any such activities in the ordinary course of our business may also affect the price of the underlying asset and could potentially lead to a negative impact on the value and/or market price of our structured products as well as the cash settlement amount (if any). In respect of CBBCs, such activities may also lead to a mandatory call event.

(19) Our structured products will be issued in global registered form

Our structured products are issued in global registered form and are held within CCASS. This means that evidence of your interest in the structured products, and the efficiency of the ultimate payment of any cash settlement amount will be governed by the CCASS Rules.

Our structured products in global registered form will be registered in the name of a nominee for HKSCC (currently HKSCC Nominees Limited), who will be treated by us as the holder of the structured products. You are not entitled to any definitive certificates representing your beneficial interests in the structured products. You will have to rely on CCASS and/or your custodian/broker to (a) determine your beneficial interest in the

structured products, (b) receive announcements and/or information relating to the structured products and (c) receive any payments under the structured products. Our obligation to you will be duly performed by the delivery of the cash settlement amount (less any exercise expenses) (if any) to HKSCC Nominees Limited as the registered holder of the structured products in accordance with the relevant terms and conditions of the structured products. The amounts will be delivered to you or your custodian/broker through CCASS in accordance with the CCASS Rules.

(20) There may be exchange rate risks and interest rate risks

You should note that there may be exchange rate risks. For example, the underlying may be denominated in a currency other than that of our structured products, our structured products may be denominated in a currency other than the currency of your home jurisdiction and our structured products may settle in a currency other than the currency in which you wishes to receive funds.

Changes in the exchange rate(s) between the currency of the underlying, the currency in which the structured products settle and/or the currency of your home jurisdiction may adversely affect the return of your investment in the structured products. We cannot assure that current exchange rates at the issue date of the structured products will be representative of the future exchange rates used in computing the value of our structured products. Fluctuations in exchange rates may therefore affect the value of the structured products.

In addition, you should be aware that an investment in the structured products may involve interest rate risks in that the intrinsic value of a structured product may be sensitive to fluctuations in interest rates. Interest rates are determined by factors of supply and demand in the international money markets which are affected by macroeconomic factors, speculation and central bank and government intervention. Fluctuations in interest rates (whether short term or long term, and whether of the currency in

which the structured products are settled or of the currency in which the underlying is denominated) may affect the value of the structured products.

(21) There may be certain events relating to an index underlying that affect index-linked structured products

In the case of index-linked structured products, the level of the index may vary over time and may increase or decrease due to various factors including changes in the formula for or the method of calculating the index. In addition, a level for the index may be published by the index compiler (as defined in the relevant terms and conditions) at a time when one or more shares comprised in the relevant index are not trading. If this occurs on a valuation date (as defined in the relevant terms and conditions) and there is no market disruption event (as defined in the relevant terms and conditions) under the terms of the relevant index-linked structured products, then the closing level of the index will be calculated by reference to the remaining shares comprised in the relevant index. Certain events relating to the index permit us to determine the level of the index on the basis of the formula or method last in effect prior to such change in formula or method.

(22) Two or more risk factors may simultaneously affect the structured products

Two or more risk factors may simultaneously have an effect on the value of a structured product such that the effect of any individual risk factor may not be predicted. No assurance can be given as to the effect any combination of risk factors may have on the value of a structured product.

(23) We are not the holding company of the group to which we belong

We are not the ultimate holding company of the group to which we belong and with which our name is identified. The ultimate holding company of the group to which we belong is HSBC Holdings plc.

(24) U.S. Foreign Account Tax Compliance Withholding

We and other financial institutions through which payments on the structured products are made may be required to withhold U.S. tax at a rate of 30 per cent. on all, or a portion of, payments made after the second anniversary of the date on which final U.S. Treasury Regulations defining the term “foreign passthru payments” are published with the U.S. Federal Register in respect of (i) any structured products characterised as obligations for U.S. federal tax purposes that are issued after (or are materially modified after) the date that is six months after the date on which final U.S. Treasury Regulations defining the term “foreign passthru payments” are filed with the U.S. Federal Register and (ii) any structured products not characterised as obligations for U.S. federal tax purposes, whenever issued, pursuant to Sections 1471 through 1474 of the U.S. Internal Revenue Code (“**FATCA**”) or similar law implementing an intergovernmental approach to FATCA.

In addition, we and other financial institutions through which payments on the structured products are made may be required to withhold U.S. tax pursuant to FATCA at a rate of 30 per cent. on payments made in respect of any structured products characterised as obligations for U.S. federal tax purposes that are issued after (or are materially modified after) the date that is six months after the date on which such products are treated as giving rise to “dividend equivalent” payments as described under “Legislation Affecting Dividend Equivalent Payments” under the section headed “Taxation”.

FATCA withholding tax may apply to an investor or to any non-U.S. financial institution through which payment on the structured products is made if the investor or non-U.S. financial institution does not fulfill its obligations under FATCA, including if (i) that investor (unless otherwise exempt from FATCA) does not provide information or consent to determine whether the investor is a U.S.

person or should otherwise be treated as holding a “United States account” of the Issuer or (ii) that non-U.S. financial institution does not become a Participating Foreign Financial Institution (as defined by FATCA) by entering into an agreement with the U.S. Internal Revenue Service (“**IRS**”) to provide the IRS with certain information in respect of its account holders and investors or is not otherwise deemed FATCA compliant or exempt from FATCA withholding tax. Structured product holders therefore may receive less settlement amount than expected. We are not required to pay any additional amounts with respect to amounts so withheld.

Each holder of structured products should consult its own tax advisor as to the application of FATCA to an investment in the structured products.

Further information on FATCA may be found at <https://www.irs.gov/corporations> under the section headed “Foreign Account Tax Compliance Act (FATCA)”. Any information appearing on such website does not form part of this base listing document.

(25) Changes in the landscape of financial sector regulation

The global landscape of financial sector regulation is undergoing significant change. The extensive programme of regulatory change carries significant implementation risks for authorities and industry participants. Many official measures are proposals in development and negotiation, and have yet to be enacted into regional and national legislation. These processes could result in differing, fragmented and overlapping implementation around the world, leading to risks of regulatory arbitrage, a far from level competitive playing field and increased compliance costs. Any regulatory changes may affect our ability to perform our obligations under the structured products or to continue to issue structured products under the programme.

(26) We may early terminate the structured products on the grounds of illegality or impracticability

We are entitled to terminate the structured products if we determine in good faith and in a commercially reasonable manner that, for reasons beyond our control, it has become or it will become illegal or impracticable for us to perform our obligations under the structured products, in whole or in part, as a result of a change in law event (as defined in the relevant terms and conditions), or for us or any of our affiliates to maintain our hedging arrangements with respect to the structured products due to a change in law event.

Upon the occurrence of a change in law event, we will, if and to the extent permitted by applicable law or regulation, pay to you a cash amount that we determine in good faith and in a commercially reasonable manner to be the fair market value in respect of each structured product held by you immediately prior to such termination (ignoring such illegality or impracticability) less the cost to us of unwinding any related hedging arrangement and any charges or expenses including any taxes or duties which are incurred or withheld as we determine in our sole and absolute discretion (acting in good faith and in a commercially reasonable manner). Such amount could be substantially less than the amount you invested and can be as low as zero.

(27) We may adjust the terms and conditions of our structured products upon the occurrence of certain corporate events or extraordinary events affecting the underlying

We may determine that certain corporate events or extraordinary events affecting the underlying have occurred and may make corresponding adjustments to the terms and conditions of our structured products, including adjustments to the value or level of the underlying or changing the composition of the underlying. Such events and/or

adjustments (if any) may have an adverse impact on the value and/or market price of our structured products. We may also in our sole discretion adjust the entitlement of our structured products for dilution events such as stock subdivisions and stock dividends.

However, we have no obligation to make an adjustment for every event that can affect the underlying. The value and/or market price of our structured products may be adversely affected by such events in the absence of an adjustment by us. If adjustments were made, we do not assure that such adjustments can negate any adverse impact of such events on the value and/or market price of our structured products.

(28) Modification to the terms and conditions

Under the terms and conditions of the structured products, we may, without the consent of the holder of the structured products, modify the terms and conditions applicable to the structured products if such modification, in our opinion, is (a) not materially prejudicial to the interests of any holder of the structured products generally (without considering circumstances of any individual holder of the structured products or the tax or other consequences of such modification in any particular jurisdiction), (b) of a formal, minor or technical nature, (c) made to correct a manifest error, or (d) necessary in order to comply with mandatory provisions of the laws or regulations of Hong Kong.

(29) Risks in using our structured products for hedging

If you intend to purchase our structured products to hedge against the market risk associated with investing in or having an exposure to any underlying, you should recognise the risks of utilising the structured products in this manner. There is no assurance that the value of the structured products will correlate with movements of the relevant underlying. You may therefore incur substantial losses in the structured products,

notwithstanding any losses already incurred with respect to investments in or exposures to the relevant underlying.

(30) Liquidation of the underlying company

In the case of structured products linked to shares, in the event of liquidation or dissolution of the company that issues the underlying shares or the appointment of a liquidator, receiver or administrator or analogous person under Hong Kong law in respect of the whole or substantially the whole of its undertaking, property or assets, the relevant structured products shall lapse.

(31) Liquidation or termination of the underlying fund

In the case of structured products linked to securities of a fund, in the event of (i) a liquidation, dissolution or termination of the fund or (ii) a liquidation or dissolution of the trustee of the fund (including any successor trustee appointed from time to time) or where applicable, the trustee ceases to be authorised under the fund to hold the property of the fund in its name and perform its obligations under the trust deed constituting the fund or (iii) the appointment of a liquidator, receiver or administrator or analogous person under applicable law in respect of the whole or substantially the whole of the fund's or the trustee's (as the case may be) undertaking, property or assets or (iv) the withdrawal of the Securities and Futures Commission's authorisation of the fund under the Securities and Futures Ordinance, the relevant structured products shall lapse.

(32) Commodity market risk

In the case of structured products linked to securities of a fund and the value of the underlying securities relates directly to the value of a commodity, you should note that fluctuations in the price of the commodity could materially adversely affect the value of the underlying securities. Commodity market is generally subject to greater risks than other markets. The price of a commodity is highly volatile. Price movement of a

commodity is influenced by, among other things, interest rates, changing market supply and demand relationships, trade, fiscal, monetary and exchange control programmes and policies of governments, and international political and economic events and policies.

(33) Risks relating to structured products linked to exchange-traded funds

Some of our structured products may be linked to an ETF. You should note that:

- (a) an ETF is exposed to the economic, political, currency, legal and other risks of a specific sector or market related to the underlying asset pool or index or market that the ETF is designed to track;
- (b) there may be disparity between the performance of the ETF and the performance of the underlying asset pool or index or market that the ETF is designed to track as a result of, for example, failure of the tracking strategy, currency differences, fees and expenses; and
- (c) where the underlying asset pool or index or market that the ETF tracks is subject to restricted access, the efficiency in the creation or redemption of securities to keep the price of the ETF in line with its net asset value may be disrupted, causing the ETF to trade at a higher premium or discount to its net asset value. Hence, the market price of the structured products will also be indirectly subject to these risks.

(34) Risks relating to structured products linked to synthetic exchange-traded funds

An ETF is designed to replicate the performance of an underlying index (or in some cases, a group of assets such as commodities). Some ETFs gain exposure to the underlying index by investing in shares, bonds or other assets that make up the index. An increasing number of ETFs, however, adopt a synthetic replication investment strategy to achieve

its investment objectives by investing in financial derivative instruments linked to the performance of an underlying asset pool or index that the ETF is designed to track (“**synthetic ETF**”). You should note that:

- (a) investments in financial derivative instruments will expose the synthetic ETF to the credit, potential contagion and concentration risks of the counterparties who issued such financial derivative instruments. As such counterparties are predominantly international financial institutions, the failure of one such counterparty may have a negative effect on other counterparties of the synthetic ETF. Even if the synthetic ETF has collateral to reduce the counterparty risk, there may still be a risk that the market value of the collateral has fallen substantially when the synthetic ETF seeks to realise the collateral; and
- (b) the synthetic ETF may be exposed to higher liquidity risk if the synthetic ETF invests in financial derivative instruments which do not have an active secondary market.

Accordingly, investing in the structured products is also exposed to the credit risk of the counterparties who issued the derivatives in addition to the risks associated with the underlying index the performance of which the synthetic ETF is designed to replicate. The above risks may have a significant impact on the performance of the synthetic ETF and hence the market price of our structured products.

(35) Risks relating to structured products linked to real estate investment trust

Some of our structured products may be linked to a real estate investment trust (“**REIT**”). The primary investment objective of REIT is to invest in a real estate portfolio. A REIT is exposed to risks relating to investments in real estate, including but not limited to (a) adverse changes in political or economic conditions; (b) changes in interest rates

and the availability of debt or equity financing, which may result in an inability by the REIT to maintain or improve the real estate portfolio and finance future acquisitions; (c) changes in environmental, zoning and other governmental rules; (d) changes in market rents; (e) any required repair and maintenance of the portfolio properties; (f) breach of any property laws or regulations; (g) the relative illiquidity of real estate investment; (h) real estate taxes; (i) any hidden interests in the portfolio properties; (j) any increase in insurance premiums and (k) any uninsurable losses.

There may also be disparity between the market price of the units of a REIT and the net asset value per unit. This is because the market price of the units of a REIT also depends on many factors, including but not limited to (a) the market value and perceived prospects of the real estate portfolio; (b) changes in economic or market conditions; (c) changes in market valuations of similar companies; (d) changes in interest rates; (e) the perceived attractiveness of the units of the REIT against those of other equity securities; (f) the future size and liquidity of the market for the units and the REIT market generally; (g) any future changes to the regulatory system, including the tax system and (h) the ability of the REIT to implement its investment and growth strategies and to retain its key personnel.

The above risks may have a significant impact on the performance of the units and the price of our structured products.

(36) Risks relating to structured products linked to an ETF investing through the QFI regimes and/or China Connect

Some of our structured products may be linked to securities of an ETF (“**China ETF**”) issued and traded outside the PRC with direct investment in the mainland Chinese securities markets through the Qualified Foreign Institutional Investor regime and the Renminbi Qualified Foreign Institutional Investor regime (collectively, the “**QFI**” regimes) and/or the Shanghai-Hong Kong Stock Connect and

Shenzhen-Hong Kong Stock Connect (collectively, “**China Connect**”). You should note that, amongst others:

- (a) the novelty and untested nature of China Connect makes China ETFs riskier than traditional ETFs investing directly in more developed markets. The policy and rules for the QFI regimes and China Connect prescribed by the PRC government are relatively new and subject to change, and there may be uncertainty to their interpretation and/or implementation. The uncertainty and change of the laws and regulations in the PRC may adversely impact on the performance of the China ETFs and the trading price of the securities;
- (b) a China ETF primarily invests in securities traded in the mainland Chinese securities markets and is subject to concentration risk. Investment in the mainland Chinese securities markets (which are inherently stock markets with restricted access) involves certain risks and special considerations as compared with investment in more developed economies or markets, such as greater political, tax, economic, foreign exchange, liquidity and regulatory risks. The operation of a China ETF may also be affected by interventions by the applicable government(s) and regulators in the financial markets;
- (c) trading of securities invested by a China ETF under China Connect will be subject to a daily quota (“**Daily Quota**”) which is utilised on a “first-come-first-serve” basis under China Connect. In the event that the Daily Quota under China Connect is reached, the manager may need to suspend creation of further securities of such China ETF, and therefore may affect liquidity in trading of the securities of such China ETF. In such event, the trading price of the securities of such China ETF is likely to be at a significant premium to its net asset value, and may be highly volatile. The People’s Bank of China and the State Administration of Foreign Exchange have jointly published detailed implementation rules removing the investment quota under the QFI regimes with effect from 6 June 2020;
- (d) although there is no longer an aggregate quota limitation, trading eligible mainland Chinese securities through China Connect is still subject to the Daily Quota. The Daily Quota under China Connect is applicable to the whole market and limits the maximum net buy value of cross-boundary trades under China Connect each day. Daily Quota limitations may prevent such China ETF from purchasing the eligible mainland Chinese securities when it is otherwise advantageous to do so. In particular, once the remaining balance of the relevant Daily Quota drops to zero or the Daily Quota is exceeded, buy orders will be rejected (although such China ETF will be permitted to sell its eligible mainland Chinese securities regardless of the quota balance). If such China ETF becomes unable to invest directly in or alternatively hold the eligible mainland Chinese securities, the value of the securities of such China ETF may be adversely affected which in turn may have an adverse effect on the market value and/or potential payout of the structured products; and
- (e) there are risks and uncertainties associated with the current PRC tax laws applicable to China ETFs investing in the PRC through the QFI regimes and/or China Connect. Although such China ETF may have made a tax provision in respect of potential tax liability, however, any such provision may be excessive or inadequate. Any shortfall between the provisions and actual tax liabilities may be covered by the assets of such China ETF and may therefore adversely affect the net

asset value of such China ETF and the market value and/or potential payout of the structured products.

The above risks may have a significant adverse impact on the performance of the securities of a China ETF and the market value and/or potential payout of our structured products. Please read the offering documents of the relevant China ETF to understand its key features and risks.

(37) Risks relating to structured products linked to ETF traded through dual counters model

Some of our structured products may be linked to securities of an ETF traded through the dual counters model. If our structured products are linked to securities of an ETF that adopts the dual counters model for trading its securities on the stock exchange in Hong Kong dollars (“HKD”) and other currency (such as Renminbi or U.S. dollars) (“**Other Currency**”) separately, you need to consider the following additional risks in light of the novelty and relatively untested nature of the stock exchange’s dual counters model:

- (a) our structured products may be linked to the HKD-traded securities or the Other Currency traded securities. If the underlying asset is the HKD-traded securities, movements in the trading prices of the Other Currency traded securities should not directly affect the price of our structured products. Similarly, if the underlying asset is the Other Currency traded securities, movements in the trading prices of the HKD-traded securities should not directly affect the price of our structured products;
- (b) if there is a suspension of inter-counter transfer of such securities between the HKD counter and the Other Currency counter for any reason, such securities will only be able to be traded in the relevant currency counter on the stock exchange, which may affect the

demand and supply of such securities and have an adverse effect on the price of our structured products; and

- (c) the trading prices on the stock exchange of the HKD-traded securities and the Other Currency traded securities may deviate significantly due to different factors, such as market liquidity, foreign exchange conversion risk, supply and demand in each counter and the exchange rate between HKD and the Other Currency. Changes in the trading price of the underlying securities in HKD or the Other Currency may adversely affect the price of our structured products.

Risk Factors relating to Inline Warrants

(38) Inline Warrants are exotic warrants and are not comparable to standard derivative warrants

Inline Warrants are exotic warrants with different terms and risk and return profile compared to standard call or put derivative warrants listed on the stock exchange and are not comparable to standard derivative warrants. Inline Warrants carry exotic features and their terms and pricing may be more complicated than standard derivative warrants. Inline Warrants may behave quite differently from standard derivative warrants and other exotic warrants in its response to the price levels/levels or movements in the price/level of the underlying asset/index. The pricing structure of Inline Warrants requires investors to assess accurately the value of Inline Warrants in relation to the expected probability of the average price/closing level falling within the range between the upper strike price/upper strike level and the lower strike price/lower strike level (both inclusive). Inline Warrants are highly complicated and risky financial instruments and may be difficult for investors to properly value and/or to use as a hedging tool. You should carefully review and understand the terms and conditions, including the exotic features, before deciding to invest in

Inline Warrants. In particular, you should note that Inline Warrants provide a pre-fixed potential payoff at either a **capped amount or a floor amount** at expiry. If the average price/closing level falls outside the range between the lower strike price/lower strike level and the upper strike price/upper strike level (both inclusive), you will receive a lower fixed and floor amount equal to the minimum payoff amount per Inline Warrant (which may be substantially less than your initial investment) at expiry and may suffer loss in your investment. You will still receive the minimum payoff amount per Inline Warrant in this scenario because such amount is included in the price you pay for buying the Inline Warrants. Do not invest in Inline Warrants unless you fully understand them and are willing to assume the risks associated with them.

(39) Maximum potential payoff is fixed and capped

If the average price/closing level stays within the range between the lower strike price/lower strike level and the upper strike price/upper strike level (both inclusive), we will only pay you a fixed and capped amount equal to the maximum payoff amount per Inline Warrant at expiry. This is the maximum potential payoff under the Inline Warrants.

(40) Rejection of orders and trades at the price above HK\$1

You should note that any orders and reported trades of Inline Warrants at the price above HK\$1 will be automatically rejected upon their entry to the stock exchange's trading system. The stock exchange and its recognised exchange controller, HKEX, will not incur any liability (whether based on contract, tort (including, without limitation, negligence), or any other legal or equitable grounds and without regard to the circumstances giving rise to any purported claim except in the case of wilful misconduct on the part of the stock exchange and/or HKEX) for any direct, consequential, special, indirect, economic, punitive, exemplary or any other loss or damage suffered or incurred by us or any other party arising

from or in connection with such rejection of orders and trades, including without limitation, any delay, failure, mistake or error in such rejection of orders and trades.

We and our subsidiaries and affiliates shall not have any responsibility for any losses suffered as a result of such rejection of orders and trades in any circumstances.

(41) Prohibition on the sale of certain binary options in European retail markets

There have been regulatory concerns over the sale of certain binary options to retail investors across the European Union in recent years. Such binary options are typically traded over-the-counter with bespoke structures and are very short-term, making them extremely speculative in nature. Until recently, the European Securities and Markets Authority ("**ESMA**") implemented a temporary ban on the marketing, distribution or sale of binary options to retail customers in the European Union except for securitised binary options. The temporary ban expired and was lifted by ESMA on 1 July 2019 based on the fact that most national competent authorities within the European Union had taken permanent national product intervention measures relating to binary options that are at least as stringent as ESMA's measure. For example, the Financial Conduct Authority ("**FCA**") in the United Kingdom (a then European Union member) imposed a permanent ban effective from 2 April 2019 on the marketing, distribution or sale of all binary options (including securitised binary options) to retail customers in the United Kingdom while the Federal Financial Supervisory Authority ("**BaFin**") in Germany and the Autorite des Marches Financiers ("**AMF**") of France had also permanently banned the marketing, distribution or sale of binary options (other than securitised binary options) to retail customers.

Inline Warrants are a form of securitised binary options. Unlike the binary options in the European retail markets as described above, Inline Warrants listed on the stock exchange have a more standardised structure and relatively longer period to expiry (with a minimum duration of 6 months before expiry).

Irrespective of the differences between Inline Warrants listed on the stock exchange and the binary options in Europe, you should nevertheless note the approach taken by the European regulators over binary options. Inline Warrants are complex products. You should fully understand the structure and terms and conditions of the Inline Warrants and are willing to assume the risks associated with them before investing in the Inline Warrants.

Risk Factors relating to CBBCs

(42) Our CBBCs could automatically expire worthless in certain circumstances

In the case of CBBCs, you should note that you can lose your entire investment on or prior to the expiry date. Unlike Warrants and Inline Warrants, CBBCs has a mandatory call feature and trading in the CBBCs will be suspended when the price or level of the underlying reaches the call price or call level (as defined in the relevant terms and conditions) (subject to the circumstances in which a mandatory call event will be reversed as set out in the sub-section titled “A mandatory call event is irrevocable” below). No investors can sell the CBBCs after the occurrence of a mandatory call event. Even if the price or level of the underlying bounces back in the right direction, the CBBCs which have been terminated as a result of the mandatory call event will not be revived and investors will not be able to profit from the bounce-back. Investors may receive a residual value per board lot (if positive) (as defined in the relevant terms and conditions) (less any exercise expenses) after the occurrence of a mandatory call event but such amount may be zero. If a

mandatory call event occurs, the CBBCs will automatically expire. The CBBCs may become worthless.

(43) The trading price of a CBBC may not be the same as the theoretical value of such CBBC

A CBBC can be terminated when the price or level of the underlying reaches or goes beyond the call price or call level (as defined in the relevant terms and conditions). When the price or level of the underlying approaches the call price or call level, the trading price and theoretical value of the CBBC will likely be more volatile and any change in the trading price of the CBBCs may not be comparable and may be disproportionate with the change in the price or level of the underlying. This is because it is more likely that a mandatory call event will occur.

Once a mandatory call event has occurred in respect of a CBBC, the CBBC will be settled at the residual value (as defined in the relevant terms and conditions) (less exercise expenses), and you will not be able to benefit under that CBBC from any changes to the price or level of the underlying after the occurrence of a mandatory call event.

Further, when you sell your CBBC holdings in the market at any time prior to the expiry of such CBBC, the price realised may not be the same as the theoretical value of the CBBC, as the price will be determined by the levels of supply and demand in the market at that time.

(44) The residual value payable (if any) will not include residual funding cost

The residual value (if any) payable by us following the occurrence of a mandatory call event will not include the residual funding cost for the CBBCs. When a mandatory call event occurs, you will lose the funding cost for the full period.

(45) A mandatory call event is irrevocable

A mandatory call event is irrevocable unless it is triggered due to the occurrence of one of the following events:

- (i) report of system malfunction or other technical errors of the stock exchange (e.g. the setting up of the wrong call level or call price or other parameters) by the stock exchange to us; or
- (ii) report of manifest errors caused by the relevant third party price sources where applicable (e.g. miscalculation of the index level by the relevant index compiler) by us to the stock exchange.

And, in each case, we agree with the stock exchange that such mandatory call event is to be revoked provided that such mutual agreement must be reached no later than 30 minutes before the commencement of trading (including the pre-opening session) (Hong Kong time) on the trading day of the stock exchange immediately following the day on which the mandatory call event occurs, or such other time as prescribed by the stock exchange from time to time.

In such case, the mandatory call event so triggered will be reversed and all trades cancelled (if any) will be reinstated and the trading of the CBBCs will resume.

(46) Delay in mandatory call event notification

We will notify the market as soon as reasonably practicable after the occurrence of a mandatory call event. You should be aware that there may be a delay in our announcement of a mandatory call event due to technical errors, system failures and other factors that are beyond the reasonable control of the stock exchange and us.

(47) Non-Recognition of Post MCE Trades

The stock exchange and its recognised exchange controller, HKEX, will not incur any liability (whether based on contract,

tort, (including, without limitation, negligence), or any other legal or equitable grounds and without regard to the circumstances giving rise to any purported claim except in the case of wilful misconduct on the part of the stock exchange and/or HKEX) for, any direct, consequential, special, indirect, economic, punitive, exemplary or any other loss or damage suffered or incurred by us or any other party arising from or in connection with the mandatory call event or the suspension of trading (“**Trading Suspension**”) or the non-recognition of trades after a mandatory call event (“**Non-Recognition of Post MCE Trades**”), including without limitation, any delay, failure, mistake or error in the Trading Suspension or Non-Recognition of Post MCE Trades.

We and our affiliates shall not have any responsibility for any losses suffered as a result of the Trading Suspension and/or Non-Recognition of Post MCE Trades in connection with the occurrence of a mandatory call event, notwithstanding that such Trading Suspension or Non-Recognition of Post MCE Trades may have occurred as a result of an error in the observation of the event.

(48) Fluctuation in the funding cost

The issue price of the CBBCs is set by reference to the difference between the initial reference spot price of the underlying securities and the strike price or the initial reference spot level of the underlying index and the strike level (as the case may be), plus the applicable funding cost as of the relevant launch date. The initial funding cost applicable to the CBBCs as set out in the relevant launch announcement and supplemental listing document will fluctuate throughout the life of the CBBCs as the funding rate may change from time to time. The funding rate is a rate determined by us based on one or more of the following factors, including but not limited to the strike price or the strike level (as the case may be), the prevailing interest rate, the expected life of the CBBCs, any expected notional dividend payments or other distributions in respect of the underlying

securities or any securities comprising the index (as the case may be) and the margin financing provided by us.

(49) Our hedging activities

Our trading and/or hedging activities or those of our related parties related to the CBBCs and/or other financial instruments issued by us from time to time may have an impact on the price or level of the underlying and may trigger a mandatory call event.

In particular, when the price or level of the underlying is close to the call price or call level (as defined in the relevant terms and conditions), our unwinding activities in relation to the underlying may cause a fall or rise (as the case may be) in the price or level of the underlying leading to a mandatory call event as a result of such unwinding activities.

We or our related party may unwind our hedging transactions relating to the CBBCs in proportion to the amount of the CBBCs we repurchase from the market from time to time. Such activity may lead to greater volatility of the price or level of the underlying, and may lead to a mandatory call event as a result. Upon the occurrence of a mandatory call event, we or our related party may unwind any hedging transactions relating to the CBBCs. Such unwinding activities after the occurrence of a mandatory call event may affect the price or level of the underlying and consequently the residual value (if any) for the CBBCs.

The relevant terms and conditions will, together with the supplemental provisions contained in the relevant launch announcement and supplemental listing document and subject to completion and amendment, be endorsed on the global certificate. The applicable launch announcement and supplemental listing document in relation to the issue of any series of structured products may specify additional terms and conditions which shall, to the extent so specified or to the extent inconsistent with the relevant terms and conditions, replace or modify the relevant terms and conditions for the purpose of such series of structured products. Capitalised terms used in the relevant terms and conditions and not otherwise defined therein shall have the meaning given to them in the relevant launch announcement and supplemental listing document.

TERMS AND CONDITIONS OF THE EQUITY WARRANTS (CASH SETTLED)

1. Form, Status, Transfer and Title

- (a) *Form.* The call/put Warrants (the “**Warrants**”) (which expression shall, unless the context otherwise requires, include any further Warrants issued pursuant to Condition 13) relating to the Shares of the Company are issued in registered form subject to and with the benefit of a global certificate by way of deed poll (the “**Global Certificate**”) dated the Issue Date, made by The Hongkong and Shanghai Banking Corporation Limited (the “**Issuer**”) and an instrument by way of deed poll dated 2 April 2012 executed by the Issuer (the “**Instrument**”). Copies of the Global Certificate and the Instrument are available for inspection at the specified office of the Issuer. The Warrantheolders (as defined below) are entitled to the benefit of, are bound by and are deemed to have notice of all the provisions of the Global Certificate and the Instrument.
- (b) *Status.* The Warrants represent general, unsecured, contractual obligations of the Issuer and of no other person and rank *pari passu* among themselves and (save for certain obligations required to be preferred by law) equally with all other unsecured obligations of the Issuer.
- (c) *Transfer.* Transfers of beneficial interests in the Warrants may be effected only in Board Lots or integral multiples thereof in CCASS (as defined below) in accordance with the CCASS Rules (as defined below).
- (d) *Title.* Each person who is for the time being shown in the register kept by the Issuer as entitled to a particular number of Warrants shall be treated by the Issuer as the absolute owner and holder of such number of Warrants. The expression “**Warrantheolder**” shall be construed accordingly.

2. Warrant Rights and Exercise Expenses

- (a) *Warrant Rights.* Every Board Lot gives each Warrantheolder, upon due exercise and compliance with Condition 4, the right to receive the payment of the Cash Settlement Amount (as defined below), if any, less any Exercise Expenses (as defined below).
- (b) *Exercise Expenses.* On exercise of the Warrants, Warrantheolders are required to pay Exercise Expenses. To effect such payment, an irrevocable authorisation to deduct all Exercise Expenses from the applicable Cash Settlement Amount is deemed to be given by a Warrantheolder to the Issuer upon purchase of the Warrants. Any Exercise Expenses which have not been determined on the Expiry Date (as defined below) shall be notified to the Warrantheolder as soon as practicable after determination thereof by the Issuer and shall be paid by the Warrantheolder immediately upon demand.
- (c) *Definitions.* For the purposes of these Conditions:

“Average Price” means the arithmetic mean of the closing prices of a Share (as derived from the Daily Quotation Sheet of the Stock Exchange, subject to any adjustment to such closing prices as may be necessary to reflect any event as contemplated in Condition 6 such as capitalisation, rights issue, distribution or the like) for each Valuation Date (as defined below);

“Board Lot” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“Business Day” means a day (excluding Saturdays) on which the Stock Exchange (as defined below) is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong;

“Cash Settlement Amount” means in respect of every Board Lot, an amount in the Settlement Currency calculated by the Issuer as equal to:

(1) in the case of a series of call Warrants:

$$\begin{array}{l} \text{Cash Settlement} \\ \text{Amount per} \\ \text{Board Lot} \end{array} = \frac{\text{Entitlement} \times (\text{Average Price} - \text{Exercise Price}) \times \text{one Board Lot}}{\text{Number of Warrants per Entitlement}}$$

(2) in the case of a series of put Warrants:

$$\begin{array}{l} \text{Cash Settlement} \\ \text{Amount per} \\ \text{Board Lot} \end{array} = \frac{\text{Entitlement} \times (\text{Exercise Price} - \text{Average Price}) \times \text{one Board Lot}}{\text{Number of Warrants per Entitlement}}$$

provided that if the Cash Settlement Amount is a negative amount it shall be deemed to be zero;

“CCASS” means the Central Clearing and Settlement System established and operated by Hong Kong Securities Clearing Company Limited (**“HKSCC”**);

“CCASS Rules” means the General Rules of CCASS and the CCASS Operational Procedures in effect from time to time;

“CCASS Settlement Day” has the meaning ascribed to the term “Settlement Day” in the General Rules of CCASS, subject to such modification and amendment prescribed by HKSCC from time to time;

“Company” means the company specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“Entitlement” means the number specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

“Exercise Expenses” means any charges or expenses including any taxes or duties which are incurred or withheld in respect of the exercise of the Warrants;

“Exercise Price” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

“Expiry Date” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“Market Disruption Event” means:

- (1) the occurrence or existence on any Valuation Date during the one-half hour period that ends at the close of trading of any suspension of or limitation imposed on trading (by reason of movements in price exceeding limits permitted by the Stock Exchange or otherwise) on the Stock Exchange in (i) the Shares; or (ii) any options or futures contracts relating to the Shares if, in any such case, such suspension or limitation is, in the determination of the Issuer, material;
- (2) the issuance of the tropical cyclone warning signal number 8 or above or a “BLACK” rainstorm signal on any day which either (i) results in the Stock Exchange being closed for trading for the entire day; or (ii) results in the Stock Exchange being closed prior to its regular time for close of trading for the relevant day (for the avoidance of doubt, in the case when the Stock Exchange is scheduled to open for the morning trading session only, closed prior to its regular time for close of trading for the morning session), PROVIDED THAT there shall be no Market Disruption Event solely by reason of the Stock Exchange opening for trading later than its regular time for opening of trading on any day as a result of the tropical cyclone warning signal number 8 or above or the “BLACK” rainstorm signal having been issued; or
- (3) a limitation or closure of the Stock Exchange due to any unforeseen circumstances;

“Settlement Currency” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“Settlement Date” means the third CCASS Settlement Day after the later of: (i) the Expiry Date; and (ii) the day on which the Average Price is determined in accordance with these Conditions;

“Settlement Disruption Event” means an event beyond the control of the Issuer as a result of which the Issuer is unable to procure payment electronically through CCASS to the relevant bank account designated by the relevant Warrantholder (**“Designated Bank Account”**);

“Shares” means the shares of the Company specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“Stock Exchange” means The Stock Exchange of Hong Kong Limited; and

“Valuation Date” means, with respect to the exercise of Warrants, and subject as provided below in relation to a Market Disruption Event, each of the five Business Days immediately preceding the Expiry Date.

3. Exercise of Warrants, Automatic Exercise and Expiry

- (a) *Exercise of Warrants.* The Warrants are exercisable only on the Expiry Date.
- (b) *Automatic Exercise.* Any Warrant will automatically be exercised if the Cash Settlement Amount on the Expiry Date is greater than zero (without notice being given to the Warrantheholders). The Warrantheholders will not be required to deliver any exercise notice and the Issuer or its agent will pay to the Warrantheholders the Cash Settlement Amount (if any) less any Exercise Expenses in accordance with Condition 4(d).
- (c) *Expiry.* Any Warrant which has not been automatically exercised in accordance with Condition 3(b) shall expire immediately without value thereafter and all rights of the Warrantheholder and obligations of the Issuer with respect to such Warrant shall cease.

4. Exercise of Warrants

- (a) Warrants may only be exercised in a Board Lot or integral multiples thereof.
- (b) *No requirement to deliver an exercise notice.* The Warrantheholders will not be required to deliver an exercise notice for any purpose in relation to the Warrants.
- (c) *Cancellation.* The Issuer will, with effect from the first Business Day following the Expiry Date, remove from its register the name of the person in respect of the Warrants which (i) are the subject of an exercise pursuant to automatic exercise in accordance with these Conditions; or (ii) have expired worthless, and thereby cancel the relevant Warrants.
- (d) *Cash Settlement.* Subject to automatic exercise of Warrants in accordance with these Conditions, the Issuer will make a payment, in respect of every Board Lot, to the relevant Warrantheholder equal to the Cash Settlement Amount less any Exercise Expenses. If the Cash Settlement Amount is equal to, or less than, the determined Exercise Expenses, no Cash Settlement Amount shall be payable by the Issuer.

The Cash Settlement Amount less the determined Exercise Expenses shall be despatched no later than the Settlement Date by crediting that amount in accordance with the CCASS Rules, to the Designated Bank Account.

If as a result of a Settlement Disruption Event, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Warrantheholder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Warrantheholder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the Warrantheholder for any interest in respect of the amount due or any loss or damage that such Warrantheholder may suffer as a result of the existence of the Settlement Disruption Event.

If the Issuer determines, in its sole discretion (acting in good faith and in a commercially reasonable manner), that a Market Disruption Event has occurred on any Valuation Date, then that Valuation Date shall be postponed until the first succeeding Business Day on which there is no Market Disruption Event, irrespective of whether that postponed Valuation Date would fall on a Business Day that is already or is deemed to be a Valuation Date. For the avoidance of doubt, in the event that a Market Disruption Event has occurred and a Valuation Date is postponed as aforesaid, the closing price of the Shares on the first succeeding Business Day will be used more than once in determining the Average Price, so that in no event shall there be less

than five closing prices used to determine the Average Price. If the postponement of the Valuation Date as aforesaid would result in the Valuation Date falling on or after the Expiry Date, then: (i) the Business Day immediately preceding the Expiry Date (the “**Last Valuation Date**”) shall be deemed to be the Valuation Date notwithstanding the Market Disruption Event; and (ii) the Issuer shall determine the closing price of the Shares on the basis of its good faith estimate of the price that would have prevailed on the Last Valuation Date but for the Market Disruption Event.

5. Register

The Issuer will at all times maintain or arrange for the maintenance of a register in Hong Kong.

6. Adjustments

- (a) *Rights Issues*. If and whenever the Company shall, by way of Rights (as defined below), offer new Shares for subscription at a fixed subscription price to the holders of existing Shares pro rata to existing holdings (a “**Rights Offer**”), the Entitlement will be adjusted to take effect on the Business Day on which trading in the Shares of the Company becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

Where:

$$\text{Adjustment Factor} = \frac{1 + M}{1 + (R/S) \times M}$$

E: Existing Entitlement immediately prior to the Rights Offer

S: Cum-Rights Share price being the closing price of the Shares on the Stock Exchange on the last Business Day on which the Shares are traded on a cum-Rights basis

R: Subscription price per new Share as specified in the Rights Offer plus an amount equal to any dividends or other benefits foregone to exercise the Rights

M: Number of new Share(s) (whether a whole or a fraction) per existing Share each holder thereof is entitled to subscribe

Provided that if the adjustment to be made would result in the Entitlement being changed by one per cent. or less, then no adjustment will be made. In addition, the Issuer shall adjust the Exercise Price in accordance with the following formula:

$$\begin{array}{l} \text{Adjusted Exercise Price} \\ \text{(rounded to the nearest 0.001)} \end{array} = \text{Exercise Price} \div \text{Adjustment Factor}$$

Adjustment to the Exercise Price shall take effect on the same day that the Entitlement is adjusted.

For the purposes of these Conditions:

“**Rights**” means the right(s) attached to each existing Share or needed to acquire one new Share (as the case may be) which are given to the holders of existing Shares to subscribe at a fixed subscription price for new Shares pursuant to the Rights Offer (whether by the exercise of one Right, a part of a Right or an aggregate number of Rights).

- (b) *Bonus Issues*. If and whenever the Company shall make an issue of Shares credited as fully paid to the holders of Shares generally by way of capitalisation of profits or reserves (other than pursuant to a scrip dividend or similar scheme for the time being operated by the Company or otherwise in lieu of a cash dividend and without any payment or other consideration being made or given by such holders) (a “**Bonus Issue**”) the Entitlement will be increased on the Business Day on which trading in the Shares of the Company becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

Where:

$$\text{Adjustment Factor} = 1 + N$$

E: Existing Entitlement immediately prior to the Bonus Issue

N: Number of additional Shares (whether a whole or a fraction) received by a holder of existing Shares for each Share held prior to the Bonus Issue

Provided that if the adjustment to be made would result in the Entitlement being changed by one per cent. or less, then no adjustment will be made. In addition, the Issuer shall adjust the Exercise Price in accordance with the following formula:

$$\begin{array}{l} \text{Adjusted Exercise Price} \\ \text{(rounded to the nearest 0.001)} \end{array} = \text{Exercise Price} \div \text{Adjustment Factor}$$

Adjustment to the Exercise Price shall take effect on the same day that the Entitlement is adjusted.

- (c) *Share Subdivisions or Consolidations*. If and whenever the Company shall subdivide its Shares or any class of its outstanding share capital comprised of the Shares into a greater number of shares (a “**Subdivision**”) or consolidate the Shares or any class of its outstanding share capital comprised of the Shares into a smaller number of shares (a “**Consolidation**”), the Entitlement in effect immediately prior thereto will be increased (in the case of a Subdivision) or decreased (in the case of a Consolidation) accordingly in each case on the day on which the relevant Subdivision or Consolidation shall have taken effect. In addition, the Exercise Price (which shall be rounded to the nearest 0.001) will be decreased (in the case of a Subdivision) or increased (in the case of a Consolidation) accordingly.

Adjustment to the Exercise Price shall take effect on the same day that the Entitlement is adjusted.

- (d) *Merger or Consolidation*. If it is announced that the Company is to or may merge or consolidate with or into any other corporation (including becoming, by agreement or otherwise, a subsidiary of any corporation or controlled by any person or corporation) (except where the Company is the surviving corporation in a merger) or that it is to or

may sell or transfer all or substantially all of its assets, the rights attaching to the Warrants may in the absolute discretion of the Issuer (acting in good faith and in a commercially reasonable manner) be amended no later than the Business Day preceding the consummation of such merger, consolidation, sale or transfer (each a “**Restructuring Event**”) (as determined by the Issuer in its absolute discretion (acting in good faith and in a commercially reasonable manner)).

The rights attaching to the Warrants after the adjustment shall, after such Restructuring Event, relate to the number of shares of the corporation(s) resulting from or surviving such Restructuring Event or other securities (“**Substituted Securities**”) and/or cash offered in substitution for the affected Shares, as the case may be, to which the holder of such number of Shares to which the Warrants related immediately before such Restructuring Event would have been entitled upon such Restructuring Event. Thereafter the provisions hereof shall apply to such Substituted Securities, provided that any Substituted Securities may, in the absolute discretion of the Issuer (acting in good faith and in a commercially reasonable manner), be deemed to be replaced by an amount in the relevant currency equal to the market value or, if no market value is available, fair value, of such Substituted Securities in each case as determined by the Issuer as soon as practicable after such Restructuring Event is effected.

For the avoidance of doubt, any remaining Shares shall not be affected by this paragraph (d) and, where cash is offered in substitution for Shares or is deemed to replace Substituted Securities as described above, references in these Conditions to the Shares shall include any such cash.

- (e) *Cash Distributions.* Generally, no adjustment will be made for an ordinary cash dividend (whether or not it is offered with a scrip alternative). For any other forms of cash distribution (each a “**Cash Distribution**”) announced by the Company, such as a cash bonus, special dividend or extraordinary dividend, no adjustment will be made unless the value of the Cash Distribution accounts for two per cent. or more of the Share’s closing price on the day of announcement by the Company.

If and whenever the Company shall make a Cash Distribution credited as fully paid to the holders of Shares generally, the Entitlement will be adjusted to take effect on the Business Day on which trading in the Shares of the Company becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

Where:

$$\text{Adjustment Factor} = \frac{S - OD}{S - OD - CD}$$

OD: Amount of the relevant ordinary cash dividend per Share, provided that OD shall be deducted from S only if the Business Day on which trading in the Shares of the Company becomes ex-entitlement with respect to the Cash Distribution and the distribution of the ordinary cash dividend by the Company falls on the same date. For the avoidance of doubt, OD shall be deemed to be zero if the ex-entitlement dates of the relevant ordinary cash dividend and the Cash Distribution are different

CD: Amount of the relevant Cash Distribution per Share

E: Existing Entitlement immediately prior to the Cash Distribution

S: Cum-Cash Distribution Share price being the closing price of the Shares on the Stock Exchange on the last Business Day on which the Shares of the Company are traded on a cum-Cash Distribution basis

In addition, the Issuer shall adjust the Exercise Price in accordance with the following formula:

$$\begin{array}{l} \text{Adjusted Exercise Price} \\ \text{(rounded to the nearest 0.001)} \end{array} = \text{Exercise Price} \div \text{Adjustment Factor}$$

Adjustment to the Exercise Price shall take effect on the same day that the Entitlement is adjusted.

- (f) *Other Adjustments.* Without prejudice to and notwithstanding any prior adjustment(s) made pursuant to the applicable Conditions, the Issuer may (but shall not be obliged to) make such other adjustments to the terms and conditions of the Warrants as appropriate where any event (including the events as contemplated in the applicable Conditions) occurs and irrespective of, in substitution for, or in addition to the provisions contemplated in the applicable Conditions, provided that such adjustment is:
- (i) not materially prejudicial to the interests of the Warrantheolders generally (without considering the circumstances of any individual Warrantheolder or the tax or other consequences of such adjustment in any particular jurisdiction); or
 - (ii) determined by the Issuer in good faith to be appropriate and commercially reasonable.
- (g) *Notice of Adjustments.* All determinations made by the Issuer pursuant hereto will be conclusive and binding on the Warrantheolders. The Issuer will give, or procure that there is given, notice as soon as practicable of any adjustment and of the date from which such adjustment is effective by publication in accordance with Condition 11.

7. Illegality or Impracticability

The Issuer is entitled to terminate the Warrants if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

- (a) for it to perform its obligations under the Warrants, in whole or in part, as a result of:
 - (i) the adoption of, any change in, any relevant law or regulation (including any tax law); or
 - (ii) the promulgation of, or any change in the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law), (each of (i) and (ii), a “**Change in Law Event**”); or
- (b) for it or any of its affiliates to maintain the Issuer’s hedging arrangements with respect to the Warrants due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by applicable law or regulation, pay to each Warrantheolder a cash amount that the Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each Warrant held by such Warrantheolder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement and any charges or expenses including any taxes or duties which are incurred or withheld as determined by the Issuer in its sole and

absolute discretion (acting in good faith and in a commercially reasonable manner). Payment will be made in such manner as shall be notified to the Warrantheolders in accordance with Condition 11.

8. Purchases

The Issuer and/or any of its subsidiaries and affiliates may at any time purchase Warrants at any price in the open market or by tender or by private treaty. Any Warrants so purchased may be held or resold or surrendered for cancellation.

9. Global Certificate

The Warrants are represented by the Global Certificate registered in the name of HKSCC Nominees Limited and deposited with CCASS in accordance with the CCASS Rules. Warrantheolders will not be entitled to definitive certificates in respect of any Warrants issued or transferred to them.

10. Meetings of Warrantheolders; Modification

- (a) *Meetings of Warrantheolders.* The Instrument contains provisions for convening meetings of the Warrantheolders to consider any matter affecting their interests, including the sanctioning by Extraordinary Resolution (as defined in the Instrument) of a modification of the provisions of the Warrants or of the Global Certificate.

Any resolution to be passed in a meeting of the Warrantheolders shall be decided by poll. Such a meeting may be convened by the Issuer or by Warrantheolders holding not less than 10 per cent. of the Warrants for the time being remaining unexercised. The quorum at any such meeting for passing an Extraordinary Resolution will be two or more persons holding or representing not less than 25 per cent. of the Warrants for the time being remaining unexercised, or at any adjourned meeting two or more persons being or representing Warrantheolders whatever the number of Warrants so held or represented.

A resolution will be an Extraordinary Resolution when it has been passed at a duly convened meeting by not less than three-quarters of the votes cast by such Warrantheolders who, being entitled to do so, vote in person or by proxy.

An Extraordinary Resolution passed at any meeting of the Warrantheolders shall be binding on all the Warrantheolders, whether or not they are present at the meeting.

Resolutions can be passed in writing without a meeting of the Warrantheolders being held if passed unanimously.

- (b) *Modification.* The Issuer may, without the consent of the Warrantheolders, effect any modification of the terms and conditions of the Warrants or the Global Certificate which, in the opinion of the Issuer, is:
- (i) not materially prejudicial to the interests of the Warrantheolders generally (without considering the circumstances of any individual Warrantheolder or the tax or other consequences of such modification in any particular jurisdiction);
 - (ii) of a formal, minor or technical nature;
 - (iii) made to correct a manifest error; or

- (iv) necessary in order to comply with mandatory provisions of the laws or regulations of Hong Kong.

Any such modification shall be binding on the Warrantheolders and shall be notified to them by the Issuer as soon as practicable in accordance with Condition 11.

11. Notices

All notices to Warrantheolders will be validly given if published in English and in Chinese on the website of Hong Kong Exchanges and Clearing Limited. Such notices shall be deemed to have been given on the date of the first such publication. If publication is not practicable, notice will be given in such other manner as the Issuer may determine.

12. Liquidation

In the event of a liquidation or dissolution of the Company or the appointment of a liquidator, receiver or administrator or analogous person under applicable law in respect of the whole or substantially the whole of its undertaking, property or assets, all unexercised Warrants will lapse and shall cease to be valid for any purpose, in the case of voluntary liquidation, on the effective date of the relevant resolution and, in the case of an involuntary liquidation or dissolution, on the date of the relevant court order or, in the case of the appointment of a liquidator or receiver or administrator or analogous person under any applicable law in respect of the whole or substantially the whole of its undertaking, property or assets, on the date when such appointment is effective but subject (in any such case) to any contrary mandatory requirement of law.

13. Further Issues

The Issuer shall be at liberty from time to time, without the consent of the Warrantheolders, to create and issue further Warrants so as to form a single series with the Warrants.

14. Delisting

- (a) If at any time the Shares cease to be listed on the Stock Exchange, the Issuer shall give effect to these Conditions in such manner and make such adjustments to the rights attaching to the Warrants as it shall, in its absolute discretion (acting in good faith and in a commercially reasonable manner), consider appropriate to ensure, so far as it is reasonably able to do so, that the interests of the Warrantheolders generally are not materially prejudiced as a consequence of such delisting (without considering the individual circumstances of any Warrantheolder or the tax or other consequences that may result in any particular jurisdiction).
- (b) Without prejudice to the generality of Condition 14(a), where the Shares are, or, upon the delisting, become, listed on any other stock exchange, these Conditions may, in the absolute discretion of the Issuer (acting in good faith and in a commercially reasonable manner), be amended to the extent necessary to allow for the substitution of that other stock exchange in place of the Stock Exchange and the Issuer may, without the consent of the Warrantheolders, make such adjustments to the entitlements of Warrantheolders on exercise (including, if appropriate, by converting foreign currency amounts at prevailing market rates into the relevant currency) as may be appropriate in the circumstances.
- (c) The Issuer shall determine, in its absolute discretion (acting in good faith and in a commercially reasonable manner), any adjustment or amendment and its determination shall be conclusive and binding on the Warrantheolders save in the case

of manifest error. Notice of any adjustments or amendments shall be given to the Warrantheolders in accordance with Condition 11 as soon as practicable after they are determined.

15. Contracts (Rights of Third Parties) Ordinance

A person who is not a party to these Conditions has no right under the Contracts (Rights of Third Parties) Ordinance (Cap. 623 of the Laws of Hong Kong) to enforce or to enjoy the benefit of any term of the Warrants.

16. Governing Law

The Warrants, the Global Certificate and the Instrument will be governed by and construed in accordance with the laws of the Hong Kong Special Administrative Region of the People's Republic of China ("**Hong Kong**"). The Issuer and each Warrantheolder (by its purchase of the Warrants) shall be deemed to have submitted for all purposes in connection with the Warrants, the Global Certificate and the Instrument to the non-exclusive jurisdiction of the courts of Hong Kong.

17. Language

In the event of any inconsistency between the Chinese translation of these Conditions and the English version of these Conditions, the English version of these Conditions shall prevail.

The relevant terms and conditions will, together with the supplemental provisions contained in the relevant launch announcement and supplemental listing document and subject to completion and amendment, be endorsed on the global certificate. The applicable launch announcement and supplemental listing document in relation to the issue of any series of structured products may specify additional terms and conditions which shall, to the extent so specified or to the extent inconsistent with the relevant terms and conditions, replace or modify the relevant terms and conditions for the purpose of such series of structured products. Capitalised terms used in the relevant terms and conditions and not otherwise defined therein shall have the meaning given to them in the relevant launch announcement and supplemental listing document.

TERMS AND CONDITIONS OF THE INDEX WARRANTS (CASH SETTLED)

1. Form, Status, Transfer and Title

- (a) *Form.* The call/put Warrants (the “**Warrants**”) (which expression shall, unless the context otherwise requires, include any further Warrants issued pursuant to Condition 12) relating to the Index as published by the Index Compiler are issued in registered form subject to and with the benefit of a global certificate by way of deed poll (the “**Global Certificate**”) dated the Issue Date, made by The Hongkong and Shanghai Banking Corporation Limited (the “**Issuer**”) and an instrument by way of deed poll dated 2 April 2012 executed by the Issuer (the “**Instrument**”). Copies of the Global Certificate and the Instrument are available for inspection at the specified office of the Issuer. The Warrantholders (as defined below) are entitled to the benefit of, are bound by and are deemed to have notice of all the provisions of the Global Certificate and the Instrument.
- (b) *Status.* The Warrants represent general, unsecured, contractual obligations of the Issuer and of no other person and rank *pari passu* among themselves and (save for certain obligations required to be preferred by law) equally with all other unsecured obligations of the Issuer.
- (c) *Transfer.* Transfers of beneficial interests in the Warrants may be effected only in Board Lots or integral multiples thereof in CCASS (as defined below) in accordance with the CCASS Rules (as defined below).
- (d) *Title.* Each person who is for the time being shown in the register kept by the Issuer as entitled to a particular number of Warrants shall be treated by the Issuer as the absolute owner and holder of such number of Warrants. The expression “**Warrantholder**” shall be construed accordingly.

2. Warrant Rights and Exercise Expenses

- (a) *Warrant Rights.* Every Board Lot entitles each Warrantholder, upon due exercise and compliance with Condition 4, to payment of the Cash Settlement Amount (as defined below), if any, less any Exercise Expenses (as defined below).
- (b) *Exercise Expenses.* On exercise of the Warrants, Warrantholders are required to pay Exercise Expenses. To effect such payment, an irrevocable authorisation to deduct all Exercise Expenses from the applicable Cash Settlement Amount is deemed to be given by a Warrantholder to the Issuer upon purchase of the Warrants. Any Exercise Expenses which have not been determined on the Expiry Date shall be notified to the Warrantholder as soon as practicable after determination thereof by the Issuer and shall be paid by the Warrantholder immediately upon demand.

(c) *Definitions.* For the purposes of these Conditions:

“**Board Lot**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**Business Day**” means a day (excluding Saturdays) on which the Stock Exchange (as defined below) is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong;

“**Cash Settlement Amount**” means in respect of every Board Lot, an amount, converted (if applicable) into the Settlement Currency at the Exchange Rate, calculated by the Issuer as equal to:

(1) in the case of a series of call Warrants:

$$\begin{array}{l} \text{Cash Settlement} \\ \text{Amount per} \\ \text{Board Lot} \end{array} = \frac{(\text{Closing Level} - \text{Strike Level}) \times \text{one Board Lot} \times \text{Index Currency Amount}}{\text{Divisor}}$$

(2) in the case of a series of put Warrants:

$$\begin{array}{l} \text{Cash Settlement} \\ \text{Amount per} \\ \text{Board Lot} \end{array} = \frac{(\text{Strike Level} - \text{Closing Level}) \times \text{one Board Lot} \times \text{Index Currency Amount}}{\text{Divisor}}$$

provided that if the Cash Settlement Amount is a negative amount it shall be deemed to be zero;

“**CCASS**” means the Central Clearing and Settlement System established and operated by Hong Kong Securities Clearing Company Limited (“**HKSCC**”);

“**CCASS Rules**” means the General Rules of CCASS and the CCASS Operational Procedures in effect from time to time;

“**CCASS Settlement Day**” has the meaning ascribed to the term “Settlement Day” in the General Rules of CCASS, subject to such modification and amendment prescribed by HKSCC from time to time;

“**Closing Level**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

“**Divisor**” means the number specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Exchange Rate**” means the rate specified in the relevant Launch Announcement and Supplemental Listing Document (if applicable);

“**Exercise Expenses**” means any charges or expenses including any taxes or duties which are incurred or withheld in respect of the exercise of the Warrants;

“**Expiry Date**” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“Index” means the index specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

“Index Compiler” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“Index Currency Amount” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“Index Exchange” means the exchange specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“Market Disruption Event” means:

- (1) the occurrence or existence, on the Valuation Date during the one-half hour period that ends at the close of trading on the Index Exchange, of any of:
 - (i) the suspension or material limitation of the trading of a material number of securities that comprise the Index; or
 - (ii) the suspension or material limitation of the trading of options or futures contracts relating to the Index on any exchanges on which such contracts are traded; or
 - (iii) the imposition of any exchange controls in respect of any currencies involved in determining the Cash Settlement Amount;

for the purposes of paragraph (1), (x) the limitation of the number of hours or days of trading will not constitute a Market Disruption Event if it results from an announced change in the regular business hours of any relevant exchange, and (y) a limitation on trading imposed by reason of the movements in price exceeding the levels permitted by any relevant exchange will constitute a Market Disruption Event; or

- (2) where the Index Exchange is the Stock Exchange, the issuance of the tropical cyclone warning signal number 8 or above or a “BLACK” rainstorm signal on any day which either (i) results in the Stock Exchange being closed for trading for the entire day; or (ii) results in the Stock Exchange being closed prior to its regular time for close of trading for the relevant day (for the avoidance of doubt, in the case when the Stock Exchange is scheduled to open for the morning trading session only, closed prior to its regular time for close of trading for the morning session), PROVIDED THAT there shall be no Market Disruption Event solely by reason of the Stock Exchange opening for trading later than its regular time for opening of trading on any day as a result of the tropical cyclone warning signal number 8 or above or the “BLACK” rainstorm signal having been issued; or
- (3) a limitation or closure of the Index Exchange due to any unforeseen circumstances; or
- (4) any circumstances beyond the control of the Issuer in which the Closing Level or, if applicable, the Exchange Rate cannot be determined by the Issuer in the manner set out in these Conditions or in such other manner as the Issuer considers appropriate at such time after taking into account all the relevant circumstances;

“Settlement Currency” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“Settlement Date” means the third CCASS Settlement Day after the later of: (i) the Expiry Date; and (ii) the day on which the Closing Level is determined in accordance with these Conditions;

“Settlement Disruption Event” means an event beyond the control of the Issuer as a result of which the Issuer is unable to procure payment electronically through CCASS to the relevant bank account designated by the relevant Warrantholder (**“Designated Bank Account”**);

“Stock Exchange” means The Stock Exchange of Hong Kong Limited;

“Strike Level” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6; and

“Valuation Date” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document.

3. Exercise of Warrants, Automatic Exercise and Expiry

- (a) *Exercise of Warrants.* The Warrants are exercisable only on the Expiry Date.
- (b) *Automatic Exercise.* Any Warrant will automatically be exercised if the Cash Settlement Amount on the Expiry Date is greater than zero (without notice being given to the Warrantholders). The Warrantholders will not be required to deliver any exercise notice and the Issuer or its agent will pay to the Warrantholders the Cash Settlement Amount (if any) less any Exercise Expenses in accordance with Condition 4(d).
- (c) *Expiry.* Any Warrant which has not been automatically exercised in accordance with Condition 3(b) shall expire immediately without value thereafter and all rights of the Warrantholder and obligations of the Issuer with respect to such Warrant shall cease.

4. Exercise of Warrants

- (a) Warrants may only be exercised in a Board Lot or integral multiples thereof.
- (b) *No requirement to deliver an exercise notice.* The Warrantholders will not be required to deliver an exercise notice for any purpose in relation to the Warrants.
- (c) *Cancellation.* The Issuer will, with effect from the first Business Day following the Expiry Date, remove from its register the name of the person in respect of the Warrants which (i) are the subject of an exercise pursuant to automatic exercise in accordance with these Conditions or (ii) have expired worthless, and thereby cancel the relevant Warrants.
- (d) *Cash Settlement.* Subject to automatic exercise of Warrants in accordance with these Conditions, the Issuer will make a payment, in respect of every Board Lot, to the relevant Warrantholder equal to the Cash Settlement Amount less any Exercise Expenses. If the Cash Settlement Amount is equal to, or less than, the determined Exercise Expenses, no Cash Settlement Amount shall be payable by the Issuer.

The Cash Settlement Amount less the determined Exercise Expenses shall be despatched no later than the Settlement Date by crediting that amount in accordance with the CCASS Rules, to the Designated Bank Account.

If as a result of a Settlement Disruption Event, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Warrantholder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Warrantholder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the Warrantholder for any interest in respect of the amount due or any loss or damage that such Warrantholder may suffer as a result of the existence of the Settlement Disruption Event.

If the Issuer determines, in its sole discretion (acting in good faith and in a commercially reasonable manner), that on the Valuation Date a Market Disruption Event has occurred, then the Issuer shall determine the Closing Level or, if applicable, the Exchange Rate on the basis of its good faith estimate of the Closing Level or, if applicable, the Exchange Rate that would have prevailed on that day but for the occurrence of the Market Disruption Event provided that in the case of determining the Closing Level, the Issuer, if applicable, may, but shall not be obliged to, determine such Closing Level by having regard to the manner in which futures contracts relating to the Index are calculated.

5. Register

The Issuer will at all times maintain or arrange for the maintenance of a register in Hong Kong.

6. Adjustments to the Index

(a) *Successor Index Compiler Calculates and Reports Index.* If the Index is (i) not calculated and announced by the Index Compiler but is calculated and published by a successor to the Index Compiler (the “**Successor Index Compiler**”) acceptable to the Issuer or (ii) replaced by a successor index using, in the determination of the Issuer, the same or a substantially similar formula for and method of calculation as used in the calculation of the Index, then the Index will be deemed to be the index so calculated and announced by the Successor Index Compiler or that successor index, as the case may be.

(b) *Modification and Cessation of Calculation of Index.*

If:

- (i) on or prior to a Valuation Date the Index Compiler or (if applicable) the Successor Index Compiler makes a material change in the formula for or the method of calculating the Index or in any other way materially modifies the Index (other than a modification prescribed in that formula or method to maintain the Index in the event of changes in constituent stock, contracts or commodities and other routine events); or
- (ii) on a Valuation Date the Index Compiler or (if applicable) the Successor Index Compiler fails to calculate and publish the Index (other than as a result of a Market Disruption Event),

then the Issuer shall determine the Closing Level using, in lieu of a published level for the Index, the level for the Index as at that Valuation Date as determined by the Issuer in accordance with the formula for and method of calculating the Index last in effect prior to that change or failure, but using only those securities, contracts or commodities that comprised the Index immediately prior to that change or failure.

- (c) *Other Adjustments.* Without prejudice to and notwithstanding any prior adjustment(s) made pursuant to the applicable Conditions, the Issuer may (but shall not be obliged to) make such other adjustments to the terms and conditions of the Warrants as appropriate where any event (including the events as contemplated in the applicable Conditions) occurs and irrespective of, in substitution for, or in addition to the provisions contemplated in the applicable Conditions, provided that such adjustment is:
- (i) not materially prejudicial to the interests of the Warrantholders generally (without considering the circumstances of any individual Warrantholder or the tax or other consequences of such adjustment in any particular jurisdiction); or
 - (ii) determined by the Issuer in good faith to be appropriate and commercially reasonable.
- (d) *Notice of Adjustments.* All determinations made by the Issuer pursuant hereto will be conclusive and binding on the Warrantholders. The Issuer will give, or procure that there is given, notice as soon as practicable of any determinations by publication in accordance with Condition 11.

7. **Illegality or Impracticability**

The Issuer is entitled to terminate the Warrants if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

- (a) for it to perform its obligations under the Warrants, in whole or in part, as a result of:
 - (i) the adoption of, any change in, any relevant law or regulation (including any tax law); or (ii) the promulgation of, or any change in the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law), (each of (i) and (ii), a “**Change in Law Event**”); or
- (b) for it or any of its affiliates to maintain the Issuer’s hedging arrangements with respect to the Warrants due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by applicable law or regulation, pay to each Warrantholder a cash amount that the Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each Warrant held by such Warrantholder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement and any charges or expenses including any taxes or duties which are incurred or withheld as determined by the Issuer in its sole and absolute discretion (acting in good faith and in a commercially reasonable manner). Payment will be made in such manner as shall be notified to the Warrantholders in accordance with Condition 11.

8. Purchases

The Issuer and/or any of its subsidiaries and affiliates may at any time purchase Warrants at any price in the open market or by tender or by private treaty. Any Warrants so purchased may be held or resold or surrendered for cancellation.

9. Global Certificate

The Warrants are represented by the Global Certificate registered in the name of HKSCC Nominees Limited and deposited with CCASS in accordance with the CCASS Rules. Warrantheolders will not be entitled to definitive certificates in respect of any Warrants issued or transferred to them.

10. Meetings of Warrantheolders; Modification

- (a) *Meetings of Warrantheolders.* The Instrument contains provisions for convening meetings of the Warrantheolders to consider any matter affecting their interests, including the sanctioning by Extraordinary Resolution (as defined in the Instrument) of a modification of the provisions of the Warrants or of the Global Certificate.

Any resolution to be passed in a meeting of the Warrantheolders shall be decided by poll. Such a meeting may be convened by the Issuer or by Warrantheolders holding not less than 10 per cent. of the Warrants for the time being remaining unexercised. The quorum at any such meeting for passing an Extraordinary Resolution will be two or more persons holding or representing not less than 25 per cent. of the Warrants for the time being remaining unexercised, or at any adjourned meeting two or more persons being or representing Warrantheolders whatever the number of Warrants so held or represented.

A resolution will be an Extraordinary Resolution when it has been passed at a duly convened meeting by not less than three-quarters of the votes cast by such Warrantheolders who, being entitled to do so, vote in person or by proxy.

An Extraordinary Resolution passed at any meeting of the Warrantheolders shall be binding on all the Warrantheolders, whether or not they are present at the meeting.

Resolutions can be passed in writing without a meeting of the Warrantheolders being held if passed unanimously.

- (b) *Modification.* The Issuer may, without the consent of the Warrantheolders, effect any modification of the terms and conditions of the Warrants or the Global Certificate which, in the opinion of the Issuer, is:
- (i) not materially prejudicial to the interests of the Warrantheolders generally (without considering the circumstances of any individual Warrantheolder or the tax or other consequences of such modification in any particular jurisdiction);
 - (ii) of a formal, minor or technical nature;
 - (iii) made to correct a manifest error; or
 - (iv) necessary in order to comply with mandatory provisions of the laws or regulations of Hong Kong.

Any such modification shall be binding on the Warrantheolders and shall be notified to them by the Issuer as soon as practicable in accordance with Condition 11.

11. Notices

All notices to Warrantholders will be validly given if published in English and in Chinese on the website of Hong Kong Exchanges and Clearing Limited. Such notices shall be deemed to have been given on the date of the first such publication. If publication is not practicable, notice will be given in such other manner as the Issuer may determine.

12. Further Issues

The Issuer shall be at liberty from time to time, without the consent of the Warrantholders, to create and issue further Warrants so as to form a single series with the Warrants.

13. Contracts (Rights of Third Parties) Ordinance

A person who is not a party to these Conditions has no right under the Contracts (Rights of Third Parties) Ordinance (Cap. 623 of the Laws of Hong Kong) to enforce or to enjoy the benefit of any term of the Warrants.

14. Governing Law

The Warrants, the Global Certificate and the Instrument will be governed by and construed in accordance with the laws of the Hong Kong Special Administrative Region of the People's Republic of China ("**Hong Kong**"). The Issuer and each Warrantholder (by its purchase of the Warrants) shall be deemed to have submitted for all purposes in connection with the Warrants, the Global Certificate and the Instrument to the non-exclusive jurisdiction of the courts of Hong Kong.

15. Language

In the event of any inconsistency between the Chinese translation of these Conditions and the English version of these Conditions, the English version of these Conditions shall prevail.

The relevant terms and conditions will, together with the supplemental provisions contained in the relevant launch announcement and supplemental listing document and subject to completion and amendment, be endorsed on the global certificate. The applicable launch announcement and supplemental listing document in relation to the issue of any series of structured products may specify additional terms and conditions which shall, to the extent so specified or to the extent inconsistent with the relevant terms and conditions, replace or modify the relevant terms and conditions for the purpose of such series of structured products. Capitalised terms used in the relevant terms and conditions and not otherwise defined therein shall have the meaning given to them in the relevant launch announcement and supplemental listing document.

TERMS AND CONDITIONS OF THE FUND WARRANTS (CASH SETTLED)

1. Form, Status, Transfer and Title

- (a) *Form.* The call/put Warrants (the “**Warrants**”) (which expression shall, unless the context otherwise requires, include any further Warrants issued pursuant to Condition 13) relating to the Units of the Fund are issued in registered form subject to and with the benefit of a global certificate by way of deed poll (the “**Global Certificate**”) dated the Issue Date, made by The Hongkong and Shanghai Banking Corporation Limited (the “**Issuer**”) and an instrument by way of deed poll dated 2 April 2012 executed by the Issuer (the “**Instrument**”). Copies of the Global Certificate and the Instrument are available for inspection at the specified office of the Issuer. The Warrantheolders (as defined below) are entitled to the benefit of, are bound by and are deemed to have notice of all the provisions of the Global Certificate and the Instrument.
- (b) *Status.* The Warrants represent general, unsecured, contractual obligations of the Issuer and of no other person and rank *pari passu* among themselves and (save for certain obligations required to be preferred by law) equally with all other unsecured obligations of the Issuer.
- (c) *Transfer.* Transfers of beneficial interests in the Warrants may be effected only in Board Lots or integral multiples thereof in CCASS (as defined below) in accordance with the CCASS Rules (as defined below).
- (d) *Title.* Each person who is for the time being shown in the register kept by the Issuer as entitled to a particular number of Warrants shall be treated by the Issuer as the absolute owner and holder of such number of Warrants. The expression “**Warrantheolder**” shall be construed accordingly.

2. Warrant Rights and Exercise Expenses

- (a) *Warrant Rights.* Every Board Lot gives each Warrantheolder, upon due exercise and compliance with Condition 4, the right to receive the payment of the Cash Settlement Amount (as defined below), if any, less any Exercise Expenses (as defined below).
- (b) *Exercise Expenses.* On exercise of the Warrants, Warrantheolders are required to pay Exercise Expenses. To effect such payment, an irrevocable authorisation to deduct all Exercise Expenses from the applicable Cash Settlement Amount is deemed to be given by a Warrantheolder to the Issuer upon purchase of the Warrants. Any Exercise Expenses which have not been determined on the Expiry Date (as defined below) shall be notified to the Warrantheolder as soon as practicable after determination thereof by the Issuer and shall be paid by the Warrantheolder immediately upon demand.

(c) *Definitions.* For the purposes of these Conditions:

“**Average Price**” means the arithmetic mean of the closing prices of a Unit (as derived from the Daily Quotation Sheet of the Stock Exchange, subject to any adjustment to such closing prices as may be necessary to reflect any event as contemplated in Condition 6 such as capitalisation, rights issue, distribution or the like) for each Valuation Date (as defined below);

“**Board Lot**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**Business Day**” means a day (excluding Saturdays) on which the Stock Exchange (as defined below) is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong;

“**Cash Settlement Amount**” means in respect of every Board Lot, an amount in the Settlement Currency calculated by the Issuer as equal to:

(1) in the case of a series of call Warrants:

$$\text{Cash Settlement Amount per Board Lot} = \frac{\text{Entitlement} \times (\text{Average Price} - \text{Exercise Price}) \times \text{one Board Lot}}{\text{Number of Warrants per Entitlement}}$$

(2) in the case of a series of put Warrants:

$$\text{Cash Settlement Amount per Board Lot} = \frac{\text{Entitlement} \times (\text{Exercise Price} - \text{Average Price}) \times \text{one Board Lot}}{\text{Number of Warrants per Entitlement}}$$

provided that if the Cash Settlement Amount is a negative amount it shall be deemed to be zero;

“**CCASS**” means the Central Clearing and Settlement System established and operated by Hong Kong Securities Clearing Company Limited (“**HKSCC**”);

“**CCASS Rules**” means the General Rules of CCASS and the CCASS Operational Procedures in effect from time to time;

“**CCASS Settlement Day**” has the meaning ascribed to the term “Settlement Day” in the General Rules of CCASS, subject to such modification and amendment prescribed by HKSCC from time to time;

“**Entitlement**” means the number specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

“**Exercise Expenses**” means any charges or expenses including any taxes or duties which are incurred or withheld in respect of the exercise of the Warrants;

“**Exercise Price**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

“**Expiry Date**” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“Fund” means the unit trust or exchange-traded fund (as the case may be) specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“Market Disruption Event” means:

- (1) the occurrence or existence on any Valuation Date during the one-half hour period that ends at the close of trading of any suspension of or limitation imposed on trading (by reason of movements in price exceeding limits permitted by the Stock Exchange or otherwise) on the Stock Exchange in (i) the Units; or (ii) any options or futures contracts relating to the Units if, in any such case, such suspension or limitation is, in the determination of the Issuer, material;
- (2) the issuance of the tropical cyclone warning signal number 8 or above or a “BLACK” rainstorm signal on any day which either (i) results in the Stock Exchange being closed for trading for the entire day; or (ii) results in the Stock Exchange being closed prior to its regular time for close of trading for the relevant day (for the avoidance of doubt, in the case when the Stock Exchange is scheduled to open for the morning trading session only, closed prior to its regular time for close of trading for the morning session), PROVIDED THAT there shall be no Market Disruption Event solely by reason of the Stock Exchange opening for trading later than its regular time for opening of trading on any day as a result of the tropical cyclone warning signal number 8 or above or the “BLACK” rainstorm signal having been issued; or
- (3) a limitation or closure of the Stock Exchange due to any unforeseen circumstances;

“Settlement Currency” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“Settlement Date” means the third CCASS Settlement Day after the later of: (i) the Expiry Date; and (ii) the day on which the Average Price is determined in accordance with these Conditions;

“Settlement Disruption Event” means an event beyond the control of the Issuer as a result of which the Issuer is unable to procure payment electronically through CCASS to the relevant bank account designated by the relevant Warrantholder (**“Designated Bank Account”**);

“Stock Exchange” means The Stock Exchange of Hong Kong Limited;

“Units” means the units or shares (as the case may be) of the Fund specified as such in the relevant Launch Announcement and Supplemental Listing Document; and

“Valuation Date” means, with respect to the exercise of Warrants, and subject as provided below in relation to a Market Disruption Event, each of the five Business Days immediately preceding the Expiry Date.

3. Exercise of Warrants, Automatic Exercise and Expiry

- (a) *Exercise of Warrants.* The Warrants are exercisable only on the Expiry Date.
- (b) *Automatic Exercise.* Any Warrant will automatically be exercised if the Cash Settlement Amount on the Expiry Date is greater than zero (without notice being given to the Warrantheholders). The Warrantheholders will not be required to deliver any exercise notice and the Issuer or its agent will pay to the Warrantheholders the Cash Settlement Amount (if any) less any Exercise Expenses in accordance with Condition 4(d).
- (c) *Expiry.* Any Warrant which has not been automatically exercised in accordance with Condition 3(b) shall expire immediately without value thereafter and all rights of the Warrantheholder and obligations of the Issuer with respect to such Warrant shall cease.

4. Exercise of Warrants

- (a) Warrants may only be exercised in a Board Lot or integral multiples thereof.
- (b) *No requirement to deliver an exercise notice.* The Warrantheholders will not be required to deliver an exercise notice for any purpose in relation to the Warrants.
- (c) *Cancellation.* The Issuer will, with effect from the first Business Day following the Expiry Date, remove from its register the name of the person in respect of the Warrants which (i) are the subject of an exercise pursuant to automatic exercise in accordance with these Conditions; or (ii) have expired worthless, and thereby cancel the relevant Warrants.
- (d) *Cash Settlement.* Subject to automatic exercise of Warrants in accordance with these Conditions, the Issuer will make a payment, in respect of every Board Lot, to the relevant Warrantheholder equal to the Cash Settlement Amount less any Exercise Expenses. If the Cash Settlement Amount is equal to, or less than, the determined Exercise Expenses, no Cash Settlement Amount shall be payable by the Issuer.

The Cash Settlement Amount less the determined Exercise Expenses shall be despatched no later than the Settlement Date by crediting that amount in accordance with the CCASS Rules, to the Designated Bank Account.

If as a result of a Settlement Disruption Event, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Warrantheholder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Warrantheholder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the Warrantheholder for any interest in respect of the amount due or any loss or damage that such Warrantheholder may suffer as a result of the existence of the Settlement Disruption Event.

If the Issuer determines, in its sole discretion (acting in good faith and in a commercially reasonable manner), that a Market Disruption Event has occurred on any Valuation Date, then that Valuation Date shall be postponed until the first succeeding Business Day on which there is no Market Disruption Event, irrespective of whether that postponed Valuation Date would fall on a Business Day that is already or is deemed to be a Valuation Date. For the avoidance of doubt, in the event that a Market Disruption Event has occurred and a Valuation Date is postponed as aforesaid, the closing price of the Units on the first succeeding Business Day will be used more than once in determining the Average Price, so that in no event shall there be less than five

closing prices used to determine the Average Price. If the postponement of the Valuation Date as aforesaid would result in the Valuation Date falling on or after the Expiry Date, then: (i) the Business Day immediately preceding the Expiry Date (the “**Last Valuation Date**”) shall be deemed to be the Valuation Date notwithstanding the Market Disruption Event; and (ii) the Issuer shall determine the closing price of the Units on the basis of its good faith estimate of the price that would have prevailed on the Last Valuation Date but for the Market Disruption Event.

5. Register

The Issuer will at all times maintain or arrange for the maintenance of a register in Hong Kong.

6. Adjustments

- (a) *Rights Issues.* If and whenever the Fund shall, by way of Rights (as defined below), offer new Units for subscription at a fixed subscription price to the holders of existing Units pro rata to existing holdings (a “**Rights Offer**”), the Entitlement will be adjusted to take effect on the Business Day on which trading in the Units of the Fund becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

Where:

$$\text{Adjustment Factor} = \frac{1 + M}{1 + (R/S) \times M}$$

E: Existing Entitlement immediately prior to the Rights Offer

S: Cum-Rights Unit price being the closing price of the Units on the Stock Exchange on the last Business Day on which the Units are traded on a cum-Rights basis

R: Subscription price per new Unit as specified in the Rights Offer plus an amount equal to any distributions or other benefits foregone to exercise the Rights

M: Number of new Unit(s) (whether a whole or a fraction) per existing Unit each holder thereof is entitled to subscribe

Provided that if the adjustment to be made would result in the Entitlement being changed by one per cent. or less, then no adjustment will be made. In addition, the Issuer shall adjust the Exercise Price in accordance with the following formula:

$$\begin{array}{l} \text{Adjusted Exercise Price} \\ \text{(rounded to the nearest 0.001)} \end{array} = \text{Exercise Price} \div \text{Adjustment Factor}$$

Adjustment to the Exercise Price shall take effect on the same day that the Entitlement is adjusted.

For the purposes of these Conditions:

“**Rights**” means the right(s) attached to each existing Unit or needed to acquire one new Unit (as the case may be) which are given to the holders of existing Units to subscribe at a fixed subscription price for new Units pursuant to the Rights Offer (whether by the exercise of one Right, a part of a Right or an aggregate number of Rights).

- (b) *Bonus Issues.* If and whenever the Fund shall make an issue of Units credited as fully paid to the holders of Units generally (other than pursuant to a scrip dividend or distribution or similar scheme for the time being operated by the Fund or otherwise in lieu of a cash dividend or distribution and without any payment or other consideration being made or given by such holders) (a “**Bonus Issue**”) the Entitlement will be increased on the Business Day on which trading in the Units of the Fund becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

Where:

$$\text{Adjustment Factor} = 1 + N$$

E: Existing Entitlement immediately prior to the Bonus Issue

N: Number of additional Units (whether a whole or a fraction) received by a holder of existing Units for each Unit held prior to the Bonus Issue

Provided that if the adjustment to be made would result in the Entitlement being changed by one per cent. or less, then no adjustment will be made. In addition, the Issuer shall adjust the Exercise Price in accordance with the following formula:

$$\begin{array}{l} \text{Adjusted Exercise Price} \\ \text{(rounded to the nearest 0.001)} \end{array} = \text{Exercise Price} \div \text{Adjustment Factor}$$

Adjustment to the Exercise Price shall take effect on the same day that the Entitlement is adjusted.

- (c) *Unit Subdivisions or Consolidations.* If and whenever the Fund shall subdivide its Units or any class of its outstanding units or shares into a greater number of units or shares (a “**Subdivision**”) or consolidate the Units or any class of its outstanding units or shares into a smaller number of units or shares (a “**Consolidation**”), the Entitlement in effect immediately prior thereto will be increased (in the case of a Subdivision) or decreased (in the case of a Consolidation) accordingly in each case on the day on which the relevant Subdivision or Consolidation shall have taken effect. In addition, the Exercise Price (which shall be rounded to the nearest 0.001) will be decreased (in the case of a Subdivision) or increased (in the case of a Consolidation) accordingly.

Adjustment to the Exercise Price shall take effect on the same day that the Entitlement is adjusted.

- (d) *Merger or Consolidation.* If it is announced that the Fund is to or may merge or consolidate with or into any other fund or corporation (including becoming, by agreement or otherwise, controlled by any person or corporation) (except where the Fund is the surviving entity in a merger) or that it is to or may sell or transfer all or substantially all of its assets, the rights attaching to the Warrants may in the absolute discretion of the Issuer (acting in good faith and in a commercially reasonable manner)

be amended no later than the Business Day preceding the consummation of such merger, consolidation, sale or transfer (each a “**Restructuring Event**”) (as determined by the Issuer in its absolute discretion (acting in good faith and in a commercially reasonable manner)).

The rights attaching to the Warrants after the adjustment shall, after such Restructuring Event, relate to the number of units or shares of the fund(s) or corporation(s) resulting from or surviving such Restructuring Event or other securities (“**Substituted Securities**”) and/or cash offered in substitution for the affected Units, as the case may be, to which the holder of such number of Units to which the Warrants related immediately before such Restructuring Event would have been entitled upon such Restructuring Event. Thereafter the provisions hereof shall apply to such Substituted Securities, provided that any Substituted Securities may, in the absolute discretion of the Issuer (acting in good faith and in a commercially reasonable manner), be deemed to be replaced by an amount in the relevant currency equal to the market value or, if no market value is available, fair value, of such Substituted Securities in each case as determined by the Issuer as soon as practicable after such Restructuring Event is effected.

For the avoidance of doubt, any remaining Units shall not be affected by this paragraph (d) and, where cash is offered in substitution for Units or is deemed to replace Substituted Securities as described above, references in these Conditions to the Units shall include any such cash.

- (e) *Cash Distributions.* Generally, no adjustment will be made for an ordinary cash distribution (whether or not it is offered with a scrip alternative). For any other forms of cash distribution (each a “**Cash Distribution**”) announced by the Fund, no adjustment will be made unless the value of the Cash Distribution accounts for two per cent. or more of the Unit’s closing price on the day of announcement by the Fund.

If and whenever the Fund shall make a Cash Distribution credited as fully paid to the holders of Units generally, the Entitlement will be adjusted to take effect on the Business Day on which trading in the Units of the Fund becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

Where:

$$\text{Adjustment Factor} = \frac{S - OD}{S - OD - CD}$$

OD: Amount of the relevant ordinary cash distribution per Unit, provided that OD shall be deducted from S only if the Business Day on which trading in the Units of the Fund becomes ex-entitlement with respect to the Cash Distribution and the distribution of the ordinary cash distribution by the Fund falls on the same date. For the avoidance of doubt, OD shall be deemed to be zero if the ex-entitlement dates of the relevant ordinary cash distribution and the Cash Distribution are different

CD: Amount of the relevant Cash Distribution per Unit

E: Existing Entitlement immediately prior to the Cash Distribution

S: Cum-Cash Distribution Unit price being the closing price of the Units on the Stock Exchange on the last Business Day on which the Units of the Fund are traded on a cum-Cash Distribution basis

In addition, the Issuer shall adjust the Exercise Price in accordance with the following formula:

$$\text{Adjusted Exercise Price (rounded to the nearest 0.001)} = \text{Exercise Price} \div \text{Adjustment Factor}$$

Adjustment to the Exercise Price shall take effect on the same day that the Entitlement is adjusted.

- (f) *Other Adjustments.* Without prejudice to and notwithstanding any prior adjustment(s) made pursuant to the applicable Conditions, the Issuer may (but shall not be obliged to) make such other adjustments to the terms and conditions of the Warrants as appropriate where any event (including the events as contemplated in the applicable Conditions) occurs and irrespective of, in substitution for, or in addition to the provisions contemplated in the applicable Conditions, provided that such adjustment is:
- (i) not materially prejudicial to the interests of the Warrantholders generally (without considering the circumstances of any individual Warrantholder or the tax or other consequences of such adjustment in any particular jurisdiction); or
 - (ii) determined by the Issuer in good faith to be appropriate and commercially reasonable.
- (g) *Notice of Adjustments.* All determinations made by the Issuer pursuant hereto will be conclusive and binding on the Warrantholders. The Issuer will give, or procure that there is given, notice as soon as practicable of any adjustment and of the date from which such adjustment is effective by publication in accordance with Condition 11.

7. Illegality or Impracticability

The Issuer is entitled to terminate the Warrants if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

- (a) for it to perform its obligations under the Warrants, in whole or in part, as a result of:
 - (i) the adoption of, any change in, any relevant law or regulation (including any tax law); or
 - (ii) the promulgation of, or any change in the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law), (each of (i) and (ii), a “**Change in Law Event**”); or
- (b) for it or any of its affiliates to maintain the Issuer’s hedging arrangements with respect to the Warrants due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by applicable law or regulation, pay to each Warrantholder a cash amount that the Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each Warrant held by such Warrantholder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement and any charges or expenses including any taxes or duties which are incurred or withheld as determined by the Issuer in its sole and absolute discretion (acting in good faith and in a commercially reasonable manner). Payment will be made in such manner as shall be notified to the Warrantholders in accordance with Condition 11.

8. Purchases

The Issuer and/or any of its subsidiaries and affiliates may at any time purchase Warrants at any price in the open market or by tender or by private treaty. Any Warrants so purchased may be held or resold or surrendered for cancellation.

9. Global Certificate

The Warrants are represented by the Global Certificate registered in the name of HKSCC Nominees Limited and deposited with CCASS in accordance with the CCASS Rules. Warrantheolders will not be entitled to definitive certificates in respect of any Warrants issued or transferred to them.

10. Meetings of Warrantheolders; Modification

- (a) *Meetings of Warrantheolders.* The Instrument contains provisions for convening meetings of the Warrantheolders to consider any matter affecting their interests, including the sanctioning by Extraordinary Resolution (as defined in the Instrument) of a modification of the provisions of the Warrants or of the Global Certificate.

Any resolution to be passed in a meeting of the Warrantheolders shall be decided by poll. Such a meeting may be convened by the Issuer or by Warrantheolders holding not less than 10 per cent. of the Warrants for the time being remaining unexercised. The quorum at any such meeting for passing an Extraordinary Resolution will be two or more persons holding or representing not less than 25 per cent. of the Warrants for the time being remaining unexercised, or at any adjourned meeting two or more persons being or representing Warrantheolders whatever the number of Warrants so held or represented.

A resolution will be an Extraordinary Resolution when it has been passed at a duly convened meeting by not less than three-quarters of the votes cast by such Warrantheolders who, being entitled to do so, vote in person or by proxy.

An Extraordinary Resolution passed at any meeting of the Warrantheolders shall be binding on all the Warrantheolders, whether or not they are present at the meeting.

Resolutions can be passed in writing without a meeting of the Warrantheolders being held if passed unanimously.

- (b) *Modification.* The Issuer may, without the consent of the Warrantheolders, effect any modification of the terms and conditions of the Warrants or the Global Certificate which, in the opinion of the Issuer, is:
- (i) not materially prejudicial to the interests of the Warrantheolders generally (without considering the circumstances of any individual Warrantheolder or the tax or other consequences of such modification in any particular jurisdiction);
 - (ii) of a formal, minor or technical nature;
 - (iii) made to correct a manifest error; or
 - (iv) necessary in order to comply with mandatory provisions of the laws or regulations of Hong Kong.

Any such modification shall be binding on the Warrantheolders and shall be notified to them by the Issuer as soon as practicable in accordance with Condition 11.

11. Notices

All notices to Warrantholders will be validly given if published in English and in Chinese on the website of Hong Kong Exchanges and Clearing Limited. Such notices shall be deemed to have been given on the date of the first such publication. If publication is not practicable, notice will be given in such other manner as the Issuer may determine.

12. Liquidation

In the event of (i) a liquidation, dissolution or termination of the Fund or (ii) a liquidation or dissolution of the trustee of the Fund (including any successor trustee appointed from time to time) (“Trustee”) or where applicable, the Trustee ceases to be authorised under the Fund to hold the property of the Fund in its name and perform its obligations under the trust deed constituting the Fund or (iii) the appointment of a liquidator, receiver or administrator or analogous person under applicable law in respect of the whole or substantially the whole of the Fund’s or the Trustee’s (as the case may be) undertaking, property or assets or (iv) the withdrawal of the Securities and Futures Commission’s authorisation of the Fund under the Securities and Futures Ordinance, all unexercised Warrants will lapse and shall cease to be valid for any purpose, in the case of (i) voluntary liquidation, on the effective date of the relevant resolution, (ii) an involuntary liquidation or dissolution, on the date of the relevant court order, (iii) a termination, on the effective date of the termination, (iv) the appointment of a liquidator or receiver or administrator or analogous person under any applicable law in respect of the whole or substantially the whole of the Fund’s or the Trustee’s (as the case may be) undertaking, property or assets, on the date on which such appointment is effective, or (v) withdrawal of authorisation, on the date on which such withdrawal becomes effective, but subject (in any such case) to any contrary mandatory requirement of law.

13. Further Issues

The Issuer shall be at liberty from time to time, without the consent of the Warrantholders, to create and issue further Warrants so as to form a single series with the Warrants.

14. Delisting

- (a) If at any time the Units cease to be listed on the Stock Exchange, the Issuer shall give effect to these Conditions in such manner and make such adjustments to the rights attaching to the Warrants as it shall, in its absolute discretion (acting in good faith and in a commercially reasonable manner), consider appropriate to ensure, so far as it is reasonably able to do so, that the interests of the Warrantholders generally are not materially prejudiced as a consequence of such delisting (without considering the individual circumstances of any Warrantholder or the tax or other consequences that may result in any particular jurisdiction).
- (b) Without prejudice to the generality of Condition 14(a), where the Units are, or, upon the delisting, become, listed on any other stock exchange, these Conditions may, in the absolute discretion of the Issuer (acting in good faith and in a commercially reasonable manner), be amended to the extent necessary to allow for the substitution of that other stock exchange in place of the Stock Exchange and the Issuer may, without the consent of the Warrantholders, make such adjustments to the entitlements of Warrantholders on exercise (including, if appropriate, by converting foreign currency amounts at prevailing market rates into the relevant currency) as may be appropriate in the circumstances.

- (c) The Issuer shall determine, in its absolute discretion (acting in good faith and in a commercially reasonable manner), any adjustment or amendment and its determination shall be conclusive and binding on the Warrantholders save in the case of manifest error. Notice of any adjustments or amendments shall be given to the Warrantholders in accordance with Condition 11 as soon as practicable after they are determined.

15. Contracts (Rights of Third Parties) Ordinance

A person who is not a party to these Conditions has no right under the Contracts (Rights of Third Parties) Ordinance (Cap. 623 of the Laws of Hong Kong) to enforce or to enjoy the benefit of any term of the Warrants.

16. Governing Law

The Warrants, the Global Certificate and the Instrument will be governed by and construed in accordance with the laws of the Hong Kong Special Administrative Region of the People's Republic of China ("**Hong Kong**"). The Issuer and each Warrantholder (by its purchase of the Warrants) shall be deemed to have submitted for all purposes in connection with the Warrants, the Global Certificate and the Instrument to the non-exclusive jurisdiction of the courts of Hong Kong.

17. Language

In the event of any inconsistency between the Chinese translation of these Conditions and the English version of these Conditions, the English version of these Conditions shall prevail.

The relevant terms and conditions will, together with the supplemental provisions contained in the relevant launch announcement and supplemental listing document and subject to completion and amendment, be endorsed on the global certificate. The applicable launch announcement and supplemental listing document in relation to the issue of any series of structured products may specify additional terms and conditions which shall, to the extent so specified or to the extent inconsistent with the relevant terms and conditions, replace or modify the relevant terms and conditions for the purpose of such series of structured products. Capitalised terms used in the relevant terms and conditions and not otherwise defined therein shall have the meaning given to them in the relevant launch announcement and supplemental listing document.

TERMS AND CONDITIONS OF THE EQUITY INLINE WARRANTS (CASH SETTLED)

1. Form, Status, Transfer and Title

- (a) *Form.* The inline warrants (the “**Inline Warrants**”) (which expression shall, unless the context otherwise requires, include any further Inline Warrants issued pursuant to Condition 13) relating to the Shares of the Company are issued in registered form subject to and with the benefit of a global certificate by way of deed poll (the “**Global Certificate**”) dated the Issue Date, made by The Hongkong and Shanghai Banking Corporation Limited (the “**Issuer**”) and an instrument by way of deed poll dated 2 April 2012 executed by the Issuer (the “**Instrument**”). Copies of the Global Certificate and the Instrument are available for inspection at the specified office of the Issuer. The Inline Warrantholders (as defined below) are entitled to the benefit of, are bound by and are deemed to have notice of all the provisions of the Global Certificate and the Instrument.
- (b) *Status.* The Inline Warrants represent general, unsecured, contractual obligations of the Issuer and of no other person and rank *pari passu* among themselves and (save for certain obligations required to be preferred by law) equally with all other unsecured obligations of the Issuer.
- (c) *Transfer.* Transfers of beneficial interests in the Inline Warrants may be effected only in Board Lots or integral multiples thereof in CCASS (as defined below) in accordance with the CCASS Rules (as defined below).
- (d) *Title.* Each person who is for the time being shown in the register kept by the Issuer as entitled to a particular number of Inline Warrants shall be treated by the Issuer as the absolute owner and holder of such number of Inline Warrants. The expression “**Inline Warrantholder**” shall be construed accordingly.

2. Inline Warrant Rights and Exercise Expenses

- (a) *Inline Warrant Rights.* Every Board Lot gives each Inline Warrantholder, upon due exercise and compliance with Condition 4, the right to receive the payment of the Cash Settlement Amount (as defined below), less any Exercise Expenses (as defined below).
- (b) *Exercise Expenses.* On exercise of the Inline Warrants, Inline Warrantholders are required to pay Exercise Expenses. To effect such payment, an irrevocable authorisation to deduct all Exercise Expenses from the applicable Cash Settlement Amount is deemed to be given by the Inline Warrantholder to the Issuer upon purchase of the Inline Warrants. Any Exercise Expenses which have not been determined on the Expiry Date (as defined below) shall be notified to the Inline Warrantholder as soon as practicable after determination thereof by the Issuer and shall be paid by the Inline Warrantholder immediately upon demand.

(c) *Definitions.* For the purposes of these Conditions:

“**Average Price**” means the arithmetic mean of the closing prices of a Share (as derived from the Daily Quotation Sheet of the Stock Exchange, subject to any adjustment to such closing prices as may be necessary to reflect any event as contemplated in Condition 6 such as capitalisation, rights issue, distribution or the like) for each Valuation Date (as defined below);

“**Board Lot**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**Business Day**” means a day (excluding Saturdays) on which the Stock Exchange (as defined below) is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong;

“**Cash Settlement Amount**” means in respect of every Board Lot, an amount in the Settlement Currency calculated by the Issuer as equal to:

(1) if the Average Price is at or below the Upper Strike Price and at or above the Lower Strike Price:

Cash Settlement
Amount per Board Lot = Maximum Payoff Amount per Inline Warrant x one Board Lot

OR

(2) if the Average Price is above the Upper Strike Price or below the Lower Strike Price:

Cash Settlement
Amount per Board Lot = Minimum Payoff Amount per Inline Warrant x one Board Lot

“**CCASS**” means the Central Clearing and Settlement System established and operated by Hong Kong Securities Clearing Company Limited (“**HKSCC**”);

“**CCASS Rules**” means the General Rules of CCASS and the CCASS Operational Procedures in effect from time to time;

“**CCASS Settlement Day**” has the meaning ascribed to the term “Settlement Day” in the General Rules of CCASS, subject to such modification and amendment prescribed by HKSCC from time to time;

“**Company**” means the company specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Exercise Expenses**” means any charges or expenses including any taxes or duties which are incurred or withheld in respect of the exercise of the Inline Warrants;

“**Expiry Date**” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Inline Warrants**” means the warrants specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“Lower Strike Price” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6.

“Market Disruption Event” means:

- (1) the occurrence or existence on any Valuation Date during the one-half hour period that ends at the close of trading of any suspension of or limitation imposed on trading (by reason of movements in price exceeding limits permitted by the Stock Exchange or otherwise) on the Stock Exchange in (i) the Shares; or (ii) any options or futures contracts relating to the Shares if, in any such case, such suspension or limitation is, in the determination of the Issuer, material;
- (2) the issuance of the tropical cyclone warning signal number 8 or above or a “BLACK” rainstorm signal on any day which either (i) results in the Stock Exchange being closed for trading for the entire day; or (ii) results in the Stock Exchange being closed prior to its regular time for close of trading for the relevant day (for the avoidance of doubt, in the case when the Stock Exchange is scheduled to open for the morning trading session only, closed prior to its regular time for close of trading for the morning session), PROVIDED THAT there shall be no Market Disruption Event solely by reason of the Stock Exchange opening for trading later than its regular time for opening of trading on any day as a result of the tropical cyclone warning signal number 8 or above or the “BLACK” rainstorm signal having been issued; or
- (3) a limitation or closure of the Stock Exchange due to any unforeseen circumstances;

“Maximum Payoff Amount per Inline Warrant” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“Minimum Payoff Amount per Inline Warrant” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“Settlement Currency” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“Settlement Date” means the third CCASS Settlement Day after the later of: (i) the Expiry Date; and (ii) the day on which the Average Price is determined in accordance with these Conditions;

“Settlement Disruption Event” means an event beyond the control of the Issuer as a result of which the Issuer is unable to procure payment electronically through CCASS to the relevant bank account designated by the relevant Inline Warrantholder (**“Designated Bank Account”**);

“Shares” means the shares of the Company specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“Stock Exchange” means The Stock Exchange of Hong Kong Limited; and

“Upper Strike Price” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6.

“**Valuation Date**” means, with respect to the exercise of Inline Warrants, and subject as provided below in relation to a Market Disruption Event, each of the five Business Days immediately preceding the Expiry Date.

3. Exercise of Inline Warrants and Automatic Exercise

- (a) *Exercise of Inline Warrants.* The Inline Warrants are exercisable only on the Expiry Date.
- (b) *Automatic Exercise.* Any Inline Warrant will automatically be exercised on the Expiry Date (without notice being given to the Inline Warrantholders). The Inline Warrantholders will not be required to deliver any exercise notice and the Issuer or its agent will pay to the Inline Warrantholders the Cash Settlement Amount less any Exercise Expenses in accordance with Condition 4(d).

4. Exercise of Inline Warrants

- (a) Inline Warrants may only be exercised in a Board Lot or integral multiples thereof.
- (b) *No requirement to deliver an exercise notice.* The Inline Warrantholders will not be required to deliver an exercise notice for any purpose in relation to the Inline Warrants.
- (c) *Cancellation.* The Issuer will, with effect from the first Business Day following the Expiry Date, remove from its register the name of the person in respect of the Inline Warrants which are the subject of an exercise pursuant to automatic exercise in accordance with these Conditions, and thereby cancel the relevant Inline Warrants.
- (d) *Cash Settlement.* Subject to automatic exercise of Inline Warrants in accordance with these Conditions, the Issuer will make a payment, in respect of every Board Lot, to the relevant Inline Warrantholder equal to the Cash Settlement Amount less any Exercise Expenses. If the Cash Settlement Amount is equal to, or less than, the determined Exercise Expenses, no Cash Settlement Amount shall be payable by the Issuer.

The Cash Settlement Amount less the determined Exercise Expenses shall be despatched no later than the Settlement Date by crediting that amount in accordance with the CCASS Rules, to the Designated Bank Account.

If as a result of a Settlement Disruption Event, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Inline Warrantholder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Inline Warrantholder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the Inline Warrantholder for any interest in respect of the amount due or any loss or damage that such Inline Warrantholder may suffer as a result of the existence of the Settlement Disruption Event.

If the Issuer determines, in its sole discretion (acting in good faith and in a commercially reasonable manner), that a Market Disruption Event has occurred on any Valuation Date, then that Valuation Date shall be postponed until the first succeeding Business Day on which there is no Market Disruption Event, irrespective of whether that postponed Valuation Date would fall on a Business Day that is already or is deemed to be a Valuation Date. For the avoidance of doubt, in the event that a Market Disruption Event has occurred and a Valuation Date is postponed as aforesaid, the closing price of the Shares on the first succeeding Business Day will be used more

than once in determining the Average Price, so that in no event shall there be less than five closing prices used to determine the Average Price. If the postponement of the Valuation Date as aforesaid would result in the Valuation Date falling on or after the Expiry Date, then: (i) the Business Day immediately preceding the Expiry Date (the “**Last Valuation Date**”) shall be deemed to be the Valuation Date notwithstanding the Market Disruption Event; and (ii) the Issuer shall determine the closing price of the Shares on the basis of its good faith estimate of the price that would have prevailed on the Last Valuation Date but for the Market Disruption Event.

5. Register

The Issuer will at all times maintain or arrange for the maintenance of a register in Hong Kong.

6. Adjustments

- (a) *Rights Issues*. If and whenever the Company shall, by way of Rights (as defined below), offer new Shares for subscription at a fixed subscription price to the holders of existing Shares pro rata to existing holdings (a “**Rights Offer**”), the Upper Strike Price and the Lower Strike Price (which shall be rounded to the nearest 0.001) will be adjusted to take effect on the Business Day on which trading in the Shares of the Company becomes ex-entitlement in accordance with the following formula:

$$\begin{array}{l} \text{Adjusted Upper Strike Price} \\ \text{(rounded to the nearest 0.001)} \end{array} = \text{Upper Strike Price} \div \text{Adjustment Factor}$$

$$\begin{array}{l} \text{Adjusted Lower Strike Price} \\ \text{(rounded to the nearest 0.001)} \end{array} = \text{Lower Strike Price} \div \text{Adjustment Factor}$$

Where:

$$\text{Adjustment Factor} = \frac{1 + M}{1 + (R/S) \times M}$$

S: Cum-Rights Share price being the closing price of the Shares on the Stock Exchange on the last Business Day on which the Shares are traded on a cum-Rights basis

R: Subscription price per new Share as specified in the Rights Offer plus an amount equal to any dividends or other benefits foregone to exercise the Rights

M: Number of new Share(s) (whether a whole or a fraction) per existing Share each holder thereof is entitled to subscribe

Provided that no adjustment will be made if the Adjustment Factor is equal to or less than 1.

For the purposes of these Conditions:

“**Rights**” means the right(s) attached to each existing Share or needed to acquire one new Share (as the case may be) which are given to the holders of existing Shares to subscribe at a fixed subscription price for new Shares pursuant to the Rights Offer (whether by the exercise of one Right, a part of a Right or an aggregate number of Rights).

For the avoidance of doubt, the entitlement of the Inline Warrants is always 1 Share and no adjustment will be made to the entitlement.

- (b) *Bonus Issues.* If and whenever the Company shall make an issue of Shares credited as fully paid to the holders of Shares generally by way of capitalisation of profits or reserves (other than pursuant to a scrip dividend or similar scheme for the time being operated by the Company or otherwise in lieu of a cash dividend and without any payment or other consideration being made or given by such holders) (a “**Bonus Issue**”) the Upper Strike Price and the Lower Strike Price (which shall be rounded to the nearest 0.001) will be adjusted on the Business Day on which trading in the Shares of the Company becomes ex-entitlement in accordance with the following formula:

$$\begin{array}{l} \text{Adjusted Upper Strike Price} \\ \text{(rounded to the nearest 0.001)} \end{array} = \text{Upper Strike Price} \div \text{Adjustment Factor}$$

$$\begin{array}{l} \text{Adjusted Lower Strike Price} \\ \text{(rounded to the nearest 0.001)} \end{array} = \text{Lower Strike Price} \div \text{Adjustment Factor}$$

Where:

$$\text{Adjustment Factor} = 1 + N$$

N: Number of additional Shares (whether a whole or a fraction) received by a holder of existing Shares for each Share held prior to the Bonus Issue

For the avoidance of doubt, the entitlement of the Inline Warrants is always 1 Share and no adjustment will be made to the entitlement.

- (c) *Share Subdivisions or Consolidations.* If and whenever the Company shall subdivide its Shares or any class of its outstanding share capital comprised of the Shares into a greater number of shares (a “**Subdivision**”) or consolidate the Shares or any class of its outstanding share capital comprised of the Shares into a smaller number of shares (a “**Consolidation**”) then:

- (i) in the case of a Subdivision, the Upper Strike Price and the Lower Strike Price (which shall be rounded to the nearest 0.001) will be decreased in the same ratio as the Subdivision; and
- (ii) in the case of a Consolidation, the Upper Strike Price and the Lower Strike Price (which shall be rounded to the nearest 0.001) will be increased in the same ratio as the Consolidation.

in each case on the day on which the relevant Subdivision or Consolidation shall have taken effect.

For the avoidance of doubt, the entitlement of the Inline Warrants is always 1 Share and no adjustment will be made to the entitlement.

- (d) *Merger or Consolidation.* If it is announced that the Company is to or may merge or consolidate with or into any other corporation (including becoming, by agreement or otherwise, a subsidiary of any corporation or controlled by any person or corporation) (except where the Company is the surviving corporation in a merger) or that it is to or may sell or transfer all or substantially all of its assets, the rights attaching to the Inline Warrants may in the absolute discretion of the Issuer (acting in good faith and in a commercially reasonable manner) be amended no later than the Business Day preceding the consummation of such merger, consolidation, sale or transfer (each a “**Restructuring Event**”) (as determined by the Issuer in its absolute discretion (acting in good faith and in a commercially reasonable manner)) so that the interests of the Inline Warrant holders generally are not materially prejudiced as a consequence of

such Restructuring Event (without considering the individual circumstances of any Inline Warrantholder or the tax or other consequences that may result in any particular jurisdiction).

For the avoidance of doubt, the entitlement of the Inline Warrants is always 1 Share and no adjustment will be made to the entitlement.

- (e) *Cash Distributions.* Generally, no adjustment will be made for an ordinary cash dividend (whether or not it is offered with a scrip alternative). For any other forms of cash distribution (each a “**Cash Distribution**”) announced by the Company, such as a cash bonus, special dividend or extraordinary dividend, no adjustment will be made unless the value of the Cash Distribution accounts for two per cent. or more of the Share’s closing price on the day of announcement by the Company.

If and whenever the Company shall make a Cash Distribution credited as fully paid to the holders of Shares generally, the Upper Strike Price and the Lower Strike Price (which shall be rounded to the nearest 0.001) will be adjusted to take effect on the Business Day on which trading in the Shares of the Company becomes ex-entitlement in accordance with the following formula:

$$\begin{array}{l} \text{Adjusted Upper Strike Price} \\ \text{(rounded to the nearest 0.001)} \end{array} = \text{Upper Strike Price} \div \text{Adjustment Factor}$$

$$\begin{array}{l} \text{Adjusted Lower Strike Price} \\ \text{(rounded to the nearest 0.001)} \end{array} = \text{Lower Strike Price} \div \text{Adjustment Factor}$$

Where:

$$\text{Adjustment Factor} = \frac{S - OD}{S - OD - CD}$$

OD: Amount of the relevant ordinary cash dividend per Share, provided that OD shall be deducted from S only if the Business Day on which trading in the Shares of the Company becomes ex-entitlement with respect to the Cash Distribution and the distribution of the ordinary cash dividend by the Company falls on the same date. For the avoidance of doubt, OD shall be deemed to be zero if the ex-entitlement dates of the relevant ordinary cash dividend and the Cash Distribution are different

CD: Amount of the relevant Cash Distribution per Share

S: Cum-Cash Distribution Share price being the closing price of the Shares on the Stock Exchange on the last Business Day on which the Shares of the Company are traded on a cum-Cash Distribution basis

For the avoidance of doubt, the entitlement of the Inline Warrants is always 1 Share and no adjustment will be made to the entitlement.

- (f) *Other Adjustments.* Without prejudice to and notwithstanding any prior adjustment(s) made pursuant to the applicable Conditions, the Issuer may (but shall not be obliged to) make such other adjustments to the terms and conditions of the Inline Warrants as appropriate where any event (including the events as contemplated in the applicable Conditions) occurs and irrespective of, in substitution for, or in addition to the provisions contemplated in the applicable Conditions, provided that such adjustment is:

- (i) not materially prejudicial to the interests of the Inline Warrantheolders generally (without considering the circumstances of any individual Inline Warrantheolder or the tax or other consequences of such adjustment in any particular jurisdiction); or
- (ii) determined by the Issuer in good faith to be appropriate and commercially reasonable.

For the avoidance of doubt, the entitlement of the Inline Warrants is always 1 Share and no adjustment will be made to the entitlement.

- (g) *Notice of Adjustments.* All determinations made by the Issuer pursuant hereto will be conclusive and binding on the Inline Warrantheolders. The Issuer will give, or procure that there is given, notice as soon as practicable of any adjustment and of the date from which such adjustment is effective by publication in accordance with Condition 11.

7. Illegality or Impracticability

The Issuer is entitled to terminate the Inline Warrants if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

- (a) for it to perform its obligations under the Inline Warrants, in whole or in part, as a result of: (i) the adoption of, any change in, any relevant law or regulation (including any tax law); or (ii) the promulgation of, or any change in the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law), (each of (i) and (ii), a “**Change in Law Event**”); or
- (b) for it or any of its affiliates to maintain the Issuer’s hedging arrangements with respect to the Inline Warrants due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by applicable law or regulation, pay to each Inline Warrantheolder a cash amount that the Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each Inline Warrant held by such Inline Warrantheolder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement and any charges or expenses including any taxes or duties which are incurred or withheld as determined by the Issuer in its sole and absolute discretion (acting in good faith and in a commercially reasonable manner). Payment will be made in such manner as shall be notified to the Inline Warrantheolders in accordance with Condition 11.

8. Purchases

The Issuer and/or any of its subsidiaries and affiliates may at any time purchase Inline Warrants at any price in the open market or by tender or by private treaty. Any Inline Warrants so purchased may be held or resold or surrendered for cancellation.

9. Global Certificate

The Inline Warrants are represented by the Global Certificate registered in the name of HKSCC Nominees Limited and deposited with CCASS in accordance with the CCASS Rules. Inline Warrantheolders will not be entitled to definitive certificates in respect of any Inline Warrants issued or transferred to them.

10. Meetings of Inline Warrantheolders; Modification

- (a) *Meetings of Inline Warrantheolders.* The Instrument contains provisions for convening meetings of the Inline Warrantheolders to consider any matter affecting their interests, including the sanctioning by Extraordinary Resolution (as defined in the Instrument) of a modification of the provisions of the Inline Warrants or of the Global Certificate.

Any resolution to be passed in a meeting of the Inline Warrantheolders shall be decided by poll. Such a meeting may be convened by the Issuer or by Inline Warrantheolders holding not less than 10 per cent. of the Inline Warrants for the time being remaining unexercised. The quorum at any such meeting for passing an Extraordinary Resolution will be two or more persons holding or representing not less than 25 per cent. of the Inline Warrants for the time being remaining unexercised, or at any adjourned meeting two or more persons being or representing Inline Warrantheolders whatever the number of Inline Warrants so held or represented.

A resolution will be an Extraordinary Resolution when it has been passed at a duly convened meeting by not less than three-quarters of the votes cast by such Inline Warrantheolders who, being entitled to do so, vote in person or by proxy.

An Extraordinary Resolution passed at any meeting of the Inline Warrantheolders shall be binding on all the Inline Warrantheolders, whether or not they are present at the meeting.

Resolutions can be passed in writing without a meeting of the Inline Warrantheolders being held if passed unanimously.

- (b) *Modification.* The Issuer may, without the consent of the Inline Warrantheolders, effect any modification of the terms and conditions of the Inline Warrants or the Global Certificate which, in the opinion of the Issuer, is:
- (i) not materially prejudicial to the interests of the Inline Warrantheolders generally (without considering the circumstances of any individual Inline Warrantheolder or the tax or other consequences of such modification in any particular jurisdiction);
 - (ii) of a formal, minor or technical nature;
 - (iii) made to correct a manifest error; or
 - (iv) necessary in order to comply with mandatory provisions of the laws or regulations of Hong Kong.

Any such modification shall be binding on the Inline Warrantheolders and shall be notified to them by the Issuer as soon as practicable in accordance with Condition 11.

11. Notices

All notices to Inline Warrantheolders will be validly given if published in English and in Chinese on the website of Hong Kong Exchanges and Clearing Limited. Such notices shall be deemed to have been given on the date of the first such publication. If publication is not practicable, notice will be given in such other manner as the Issuer may determine.

12. Liquidation

In the event of a liquidation or dissolution of the Company or the appointment of a liquidator, receiver or administrator or analogous person under applicable law in respect of the whole or substantially the whole of its undertaking, property or assets, all unexercised Inline Warrants will lapse and shall cease to be valid for any purpose, in the case of voluntary liquidation, on the effective date of the relevant resolution and, in the case of an involuntary liquidation or dissolution, on the date of the relevant court order or, in the case of the appointment of a liquidator or receiver or administrator or analogous person under any applicable law in respect of the whole or substantially the whole of its undertaking, property or assets, on the date when such appointment is effective but subject (in any such case) to any contrary mandatory requirement of law.

13. Further Issues

The Issuer shall be at liberty from time to time, without the consent of the Inline Warrantheolders, to create and issue further Inline Warrants so as to form a single series with the Inline Warrants.

14. Delisting

- (a) If at any time the Shares cease to be listed on the Stock Exchange, the Issuer shall give effect to these Conditions in such manner and make such adjustments to the rights attaching to the Inline Warrants as it shall, in its absolute discretion (acting in good faith and in a commercially reasonable manner), consider appropriate to ensure, so far as it is reasonably able to do so, that the interests of the Inline Warrantheolders generally are not materially prejudiced as a consequence of such delisting (without considering the individual circumstances of any Inline Warrantheolder or the tax or other consequences that may result in any particular jurisdiction).
- (b) Without prejudice to the generality of Condition 14(a), where the Shares are, or, upon the delisting, become, listed on any other stock exchange, these Conditions may, in the absolute discretion of the Issuer (acting in good faith and in a commercially reasonable manner), be amended to the extent necessary to allow for the substitution of that other stock exchange in place of the Stock Exchange and the Issuer may, without the consent of the Inline Warrantheolders, make such adjustments to the entitlements of Inline Warrantheolders on exercise (including, if appropriate, by converting foreign currency amounts at prevailing market rates into the relevant currency) as may be appropriate in the circumstances.
- (c) The Issuer shall determine, in its absolute discretion (acting in good faith and in a commercially reasonable manner), any adjustment or amendment and its determination shall be conclusive and binding on the Inline Warrantheolders save in the case of manifest error. Notice of any adjustments or amendments shall be given to the Inline Warrantheolders in accordance with Condition 11 as soon as practicable after they are determined.

15. Contracts (Rights of Third Parties) Ordinance

A person who is not a party to these Conditions has no right under the Contracts (Rights of Third Parties) Ordinance (Cap. 623 of the Laws of Hong Kong) to enforce or to enjoy the benefit of any term of the Inline Warrants.

16. Governing Law

The Inline Warrants, the Global Certificate and the Instrument will be governed by and construed in accordance with the laws of the Hong Kong Special Administrative Region of the People's Republic of China ("**Hong Kong**"). The Issuer and each Inline Warrantholder (by its purchase of the Inline Warrants) shall be deemed to have submitted for all purposes in connection with the Inline Warrants, the Global Certificate and the Instrument to the non-exclusive jurisdiction of the courts of Hong Kong.

17. Language

In the event of any inconsistency between the Chinese translation of these Conditions and the English version of these Conditions, the English version of these Conditions shall prevail.

The relevant terms and conditions will, together with the supplemental provisions contained in the relevant launch announcement and supplemental listing document and subject to completion and amendment, be endorsed on the global certificate. The applicable launch announcement and supplemental listing document in relation to the issue of any series of structured products may specify additional terms and conditions which shall, to the extent so specified or to the extent inconsistent with the relevant terms and conditions, replace or modify the relevant terms and conditions for the purpose of such series of structured products. Capitalised terms used in the relevant terms and conditions and not otherwise defined therein shall have the meaning given to them in the relevant launch announcement and supplemental listing document.

TERMS AND CONDITIONS OF THE INDEX INLINE WARRANTS (CASH SETTLED)

1. Form, Status, Transfer and Title

- (a) *Form.* The inline warrants (the “**Inline Warrants**”) (which expression shall, unless the context otherwise requires, include any further Inline Warrants issued pursuant to Condition 12) relating to the Index as published by the Index Compiler are issued in registered form subject to and with the benefit of a global certificate by way of deed poll (the “**Global Certificate**”) dated the Issue Date, made by The Hongkong and Shanghai Banking Corporation Limited (the “**Issuer**”) and an instrument by way of deed poll dated 2 April 2012 executed by the Issuer (the “**Instrument**”). Copies of the Global Certificate and the Instrument are available for inspection at the specified office of the Issuer. The Inline Warrantheolders (as defined below) are entitled to the benefit of, are bound by and are deemed to have notice of all the provisions of the Global Certificate and the Instrument.
- (b) *Status.* The Inline Warrants represent general, unsecured, contractual obligations of the Issuer and of no other person and rank pari passu among themselves and (save for certain obligations required to be preferred by law) equally with all other unsecured obligations of the Issuer.
- (c) *Transfer.* Transfers of beneficial interests in the Inline Warrants may be effected only in Board Lots or integral multiples thereof in CCASS (as defined below) in accordance with the CCASS Rules (as defined below).
- (d) *Title.* Each person who is for the time being shown in the register kept by the Issuer as entitled to a particular number of Inline Warrants shall be treated by the Issuer as the absolute owner and holder of such number of Inline Warrants. The expression “**Inline Warrantheolder**” shall be construed accordingly.

2. Inline Warrant Rights and Exercise Expenses

- (a) *Inline Warrant Rights.* Every Board Lot entitles each Inline Warrantheolder, upon due exercise and compliance with Condition 4, to payment of the Cash Settlement Amount (as defined below), less any Exercise Expenses (as defined below).
- (b) *Exercise Expenses.* On exercise of the Inline Warrants, Inline Warrantheolders are required to pay Exercise Expenses. To effect such payment, an irrevocable authorisation to deduct all Exercise Expenses from the applicable Cash Settlement Amount is deemed to be given by the Inline Warrantheolder to the Issuer upon purchase of the Inline Warrants. Any Exercise Expenses which have not been determined on the Expiry Date shall be notified to the Inline Warrantheolder as soon as practicable after determination thereof by the Issuer and shall be paid by the Inline Warrantheolder immediately upon demand.

(c) *Definitions.* For the purposes of these Conditions:

“**Board Lot**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**Business Day**” means a day (excluding Saturdays) on which the Stock Exchange (as defined below) is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong;

“**Cash Settlement Amount**” means in respect of every Board Lot, an amount, converted (if applicable) into the Settlement Currency at the Exchange Rate, calculated by the Issuer as equal to:

(1) if the Closing Level is at or below the Upper Strike Level and at or above the Lower Strike Level:

Cash Settlement
Amount per Board Lot = Maximum Payoff Amount per Inline Warrant x one Board Lot

OR

(2) if the Closing Level is above the Upper Strike Level or below the Lower Strike Level:

Cash Settlement
Amount per Board Lot = Minimum Payoff Amount per Inline Warrant x one Board Lot

“**CCASS**” means the Central Clearing and Settlement System established and operated by Hong Kong Securities Clearing Company Limited (“**HKSCC**”);

“**CCASS Rules**” means the General Rules of CCASS and the CCASS Operational Procedures in effect from time to time;

“**CCASS Settlement Day**” has the meaning ascribed to the term “Settlement Day” in the General Rules of CCASS, subject to such modification and amendment prescribed by HKSCC from time to time;

“**Closing Level**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

“**Exchange Rate**” means the rate specified in the relevant Launch Announcement and Supplemental Listing Document (if applicable);

“**Exercise Expenses**” means any charges or expenses including any taxes or duties which are incurred or withheld in respect of the exercise of the Inline Warrants;

“**Expiry Date**” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Index**” means the index specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

“**Index Compiler**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“Index Exchange” means the exchange specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“Lower Strike Level” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“Market Disruption Event” means:

- (1) the occurrence or existence, on the Valuation Date during the one-half hour period that ends at the close of trading on the Index Exchange, of any of:
 - (i) the suspension or material limitation of the trading of a material number of securities that comprise the Index; or
 - (ii) the suspension or material limitation of the trading of options or futures contracts relating to the Index on any exchanges on which such contracts are traded; or
 - (iii) the imposition of any exchange controls in respect of any currencies involved in determining the Cash Settlement Amount;

for the purposes of paragraph (1), (x) the limitation of the number of hours or days of trading will not constitute a Market Disruption Event if it results from an announced change in the regular business hours of any relevant exchange, and (y) a limitation on trading imposed by reason of the movements in price exceeding the levels permitted by any relevant exchange will constitute a Market Disruption Event; or

- (2) where the Index Exchange is the Stock Exchange, the issuance of the tropical cyclone warning signal number 8 or above or a “BLACK” rainstorm signal on any day which either (i) results in the Stock Exchange being closed for trading for the entire day; or (ii) results in the Stock Exchange being closed prior to its regular time for close of trading for the relevant day (for the avoidance of doubt, in the case when the Stock Exchange is scheduled to open for the morning trading session only, closed prior to its regular time for close of trading for the morning session), PROVIDED THAT there shall be no Market Disruption Event solely by reason of the Stock Exchange opening for trading later than its regular time for opening of trading on any day as a result of the tropical cyclone warning signal number 8 or above or the “BLACK” rainstorm signal having been issued; or
- (3) a limitation or closure of the Index Exchange due to any unforeseen circumstances; or
- (4) any circumstances beyond the control of the Issuer in which the Closing Level or, if applicable, the Exchange Rate cannot be determined by the Issuer in the manner set out in these Conditions or in such other manner as the Issuer considers appropriate at such time after taking into account all the relevant circumstances;

“Minimum Payoff Amount per Inline Warrant” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“Maximum Payoff Amount per Inline Warrant” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“Settlement Currency” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“Settlement Date” means the third CCASS Settlement Day after the later of: (i) the Expiry Date; and (ii) the day on which the Closing Level is determined in accordance with these Conditions;

“Settlement Disruption Event” means an event beyond the control of the Issuer as a result of which the Issuer is unable to procure payment electronically through CCASS to the relevant bank account designated by the relevant Inline Warrantholder (**“Designated Bank Account”**);

“Stock Exchange” means The Stock Exchange of Hong Kong Limited;

“Upper Strike Level” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document; and

“Valuation Date” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document.

3. Exercise of Inline Warrants and Automatic Exercise

- (a) *Exercise of Inline Warrants.* The Inline Warrants are exercisable only on the Expiry Date.
- (b) *Automatic Exercise.* Any Inline Warrant will automatically be exercised on the Expiry Date (without notice being given to the Inline Warrantholders). The Inline Warrantholders will not be required to deliver any exercise notice and the Issuer or its agent will pay to the Inline Warrantholders the Cash Settlement Amount less any Exercise Expenses in accordance with Condition 4(d).

4. Exercise of Inline Warrants

- (a) Inline Warrants may only be exercised in a Board Lot or integral multiples thereof.
- (b) *No requirement to deliver an exercise notice.* The Inline Warrantholders will not be required to deliver an exercise notice for any purpose in relation to the Inline Warrants.
- (c) *Cancellation.* The Issuer will, with effect from the first Business Day following the Expiry Date, remove from its register the name of the person in respect of the Inline Warrants which are the subject of an exercise pursuant to automatic exercise in accordance with these Conditions, and thereby cancel the relevant Inline Warrants.
- (d) *Cash Settlement.* Subject to automatic exercise of Inline Warrants in accordance with these Conditions, the Issuer will make a payment, in respect of every Board Lot, to the relevant Inline Warrantholder equal to the Cash Settlement Amount less any Exercise Expenses. If the Cash Settlement Amount is equal to, or less than, the determined Exercise Expenses, no Cash Settlement Amount shall be payable by the Issuer.

The Cash Settlement Amount less the determined Exercise Expenses shall be despatched no later than the Settlement Date by crediting that amount in accordance with the CCASS Rules, to the Designated Bank Account.

If as a result of a Settlement Disruption Event, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Inline Warrantholder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Inline Warrantholder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the Inline Warrantholder for any interest in respect of the amount due or any loss or damage that such Inline Warrantholder may suffer as a result of the existence of the Settlement Disruption Event.

If the Issuer determines, in its sole discretion (acting in good faith and in a commercially reasonable manner), that on the Valuation Date a Market Disruption Event has occurred, then the Issuer shall determine the Closing Level or, if applicable, the Exchange Rate on the basis of its good faith estimate of the Closing Level or, if applicable, the Exchange Rate that would have prevailed on that day but for the occurrence of the Market Disruption Event provided that in the case of determining the Closing Level, the Issuer, if applicable, may, but shall not be obliged to, determine such Closing Level by having regard to the manner in which futures contracts relating to the Index are calculated.

5. Register

The Issuer will at all times maintain or arrange for the maintenance of a register in Hong Kong.

6. Adjustments to the Index

(a) *Successor Index Compiler Calculates and Reports Index.* If the Index is (i) not calculated and announced by the Index Compiler but is calculated and published by a successor to the Index Compiler (the “**Successor Index Compiler**”) acceptable to the Issuer or (ii) replaced by a successor index using, in the determination of the Issuer, the same or a substantially similar formula for and method of calculation as used in the calculation of the Index, then the Index will be deemed to be the index so calculated and announced by the Successor Index Compiler or that successor index, as the case may be.

(b) Modification and Cessation of Calculation of Index.

If:

- (i) on or prior to a Valuation Date the Index Compiler or (if applicable) the Successor Index Compiler makes a material change in the formula for or the method of calculating the Index or in any other way materially modifies the Index (other than a modification prescribed in that formula or method to maintain the Index in the event of changes in constituent stock, contracts or commodities and other routine events); or
- (ii) on a Valuation Date the Index Compiler or (if applicable) the Successor Index Compiler fails to calculate and publish the Index (other than as a result of a Market Disruption Event),

then the Issuer shall determine the Closing Level using, in lieu of a published level for the Index, the level for the Index as at that Valuation Date as determined by the Issuer in accordance with the formula for and method of calculating the Index last in effect prior to that change or failure, but using only those securities, contracts or commodities that comprised the Index immediately prior to that change or failure.

- (c) *Other Adjustments.* Without prejudice to and notwithstanding any prior adjustment(s) made pursuant to the applicable Conditions, the Issuer may (but shall not be obliged to) make such other adjustments to the terms and conditions of the Inline Warrants as appropriate where any event (including the events as contemplated in the applicable Conditions) occurs and irrespective of, in substitution for, or in addition to the provisions contemplated in the applicable Conditions, provided that such adjustment is:
- (i) not materially prejudicial to the interests of the Inline Warrantheolders generally (without considering the circumstances of any individual Inline Warrantheolder or the tax or other consequences of such adjustment in any particular jurisdiction); or
 - (ii) determined by the Issuer in good faith to be appropriate and commercially reasonable.
- (d) *Notice of Adjustments.* All determinations made by the Issuer pursuant hereto will be conclusive and binding on the Inline Warrantheolders. The Issuer will give, or procure that there is given, notice as soon as practicable of any determinations by publication in accordance with Condition 11.

7. **Illegality or Impracticability**

The Issuer is entitled to terminate the Inline Warrants if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

- (a) for it to perform its obligations under the Inline Warrants, in whole or in part, as a result of: (i) the adoption of, any change in, any relevant law or regulation (including any tax law); or (ii) the promulgation of, or any change in the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law), (each of (i) and (ii), a “**Change in Law Event**”); or
- (b) for it or any of its affiliates to maintain the Issuer’s hedging arrangements with respect to the Inline Warrants due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by applicable law or regulation, pay to each Inline Warrantheolder a cash amount that the Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each Inline Warrant held by such Inline Warrantheolder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement and any charges or expenses including any taxes or duties which are incurred or withheld as determined by the Issuer in its sole and absolute discretion (acting in good faith and in a commercially reasonable manner). Payment will be made in such manner as shall be notified to the Inline Warrantheolders in accordance with Condition 11.

8. **Purchases**

The Issuer and/or any of its subsidiaries and affiliates may at any time purchase Inline Warrants at any price in the open market or by tender or by private treaty. Any Inline Warrants so purchased may be held or resold or surrendered for cancellation.

9. Global Certificate

The Inline Warrants are represented by the Global Certificate registered in the name of HKSCC Nominees Limited and deposited with CCASS in accordance with the CCASS Rules. Inline Warrantheolders will not be entitled to definitive certificates in respect of any Inline Warrants issued or transferred to them.

10. Meetings of Inline Warrantheolders; Modification

- (a) *Meetings of Inline Warrantheolders.* The Instrument contains provisions for convening meetings of the Inline Warrantheolders to consider any matter affecting their interests, including the sanctioning by Extraordinary Resolution (as defined in the Instrument) of a modification of the provisions of the Inline Warrants or of the Global Certificate.

Any resolution to be passed in a meeting of the Inline Warrantheolders shall be decided by poll. Such a meeting may be convened by the Issuer or by Inline Warrantheolders holding not less than 10 per cent. of the Inline Warrants for the time being remaining unexercised. The quorum at any such meeting for passing an Extraordinary Resolution will be two or more persons holding or representing not less than 25 per cent. of the Inline Warrants for the time being remaining unexercised, or at any adjourned meeting two or more persons being or representing Inline Warrantheolders whatever the number of Inline Warrants so held or represented.

A resolution will be an Extraordinary Resolution when it has been passed at a duly convened meeting by not less than three-quarters of the votes cast by such Inline Warrantheolders who, being entitled to do so, vote in person or by proxy.

An Extraordinary Resolution passed at any meeting of the Inline Warrantheolders shall be binding on all the Inline Warrantheolders, whether or not they are present at the meeting.

Resolutions can be passed in writing without a meeting of the Inline Warrantheolders being held if passed unanimously.

- (b) *Modification.* The Issuer may, without the consent of the Inline Warrantheolders, effect any modification of the terms and conditions of the Inline Warrants or the Global Certificate which, in the opinion of the Issuer, is:
- (i) not materially prejudicial to the interests of the Inline Warrantheolders generally (without considering the circumstances of any individual Inline Warrantheolder or the tax or other consequences of such modification in any particular jurisdiction);
 - (ii) of a formal, minor or technical nature;
 - (iii) made to correct a manifest error; or
 - (iv) necessary in order to comply with mandatory provisions of the laws or regulations of Hong Kong.

Any such modification shall be binding on the Inline Warrantheolders and shall be notified to them by the Issuer as soon as practicable in accordance with Condition 11.

11. Notices

All notices to Inline Warrantheolders will be validly given if published in English and in Chinese on the website of Hong Kong Exchanges and Clearing Limited. Such notices shall be deemed to have been given on the date of the first such publication. If publication is not practicable, notice will be given in such other manner as the Issuer may determine.

12. Further Issues

The Issuer shall be at liberty from time to time, without the consent of the Inline Warrantheolders, to create and issue further Inline Warrants so as to form a single series with the Inline Warrants.

13. Contracts (Rights of Third Parties) Ordinance

A person who is not a party to these Conditions has no right under the Contracts (Rights of Third Parties) Ordinance (Cap. 623 of the Laws of Hong Kong) to enforce or to enjoy the benefit of any term of the Inline Warrants.

14. Governing Law

The Inline Warrants, the Global Certificate and the Instrument will be governed by and construed in accordance with the laws of the Hong Kong Special Administrative Region of the People's Republic of China ("**Hong Kong**"). The Issuer and each Inline Warrantheolder (by its purchase of the Inline Warrants) shall be deemed to have submitted for all purposes in connection with the Inline Warrants, the Global Certificate and the Instrument to the non-exclusive jurisdiction of the courts of Hong Kong.

15. Language

In the event of any inconsistency between the Chinese translation of these Conditions and the English version of these Conditions, the English version of these Conditions shall prevail.

The relevant terms and conditions will, together with the supplemental provisions contained in the relevant launch announcement and supplemental listing document and subject to completion and amendment, be endorsed on the global certificate. The applicable launch announcement and supplemental listing document in relation to the issue of any series of structured products may specify additional terms and conditions which shall, to the extent so specified or to the extent inconsistent with the relevant terms and conditions, replace or modify the relevant terms and conditions for the purpose of such series of structured products. Capitalised terms used in the relevant terms and conditions and not otherwise defined therein shall have the meaning given to them in the relevant launch announcement and supplemental listing document.

TERMS AND CONDITIONS OF THE EQUITY CALLABLE BULL/BEAR CONTRACTS (CASH SETTLED)

1. Form, Status, Transfer and Title

- (a) *Form.* The Callable Bull/Bear Contracts (the “**CBBCs**”) (which expression shall, unless the context otherwise requires, include any further CBBCs issued pursuant to Condition 13) relating to the Shares of the Company are issued in registered form subject to and with the benefit of a global certificate by way of deed poll (the “**Global Certificate**”) dated the Issue Date, made by The Hongkong and Shanghai Banking Corporation Limited (the “**Issuer**”) and an instrument by way of deed poll dated 2 April 2012 executed by the Issuer (the “**Instrument**”). Copies of the Global Certificate and the Instrument are available for inspection at the specified office of the Issuer. The CBBC Holders (as defined below) are entitled to the benefit of, are bound by and are deemed to have notice of all the provisions of the Global Certificate and the Instrument.
- (b) *Status.* The CBBCs represent general, unsecured, contractual obligations of the Issuer and of no other person and rank *pari passu* among themselves and (save for certain obligations required to be preferred by law) equally with all other unsecured obligations of the Issuer.
- (c) *Transfer.* Transfers of beneficial interests in the CBBCs may be effected only in Board Lots or integral multiples thereof in CCASS (as defined below) in accordance with the CCASS Rules (as defined below).
- (d) *Title.* Each person who is for the time being shown in the register kept by the Issuer as entitled to a particular number of CBBCs shall be treated by the Issuer as the absolute owner and holder of such number of CBBCs. The expression “**CBBC Holder**” shall be construed accordingly.

2. CBBC Rights and Exercise Expenses

- (a) *CBBC Rights.* Every Board Lot gives each CBBC Holder, (i) upon due exercise and compliance with Condition 4, the right to receive the payment of the Cash Settlement Amount, (if any) less any Exercise Expenses or (ii) upon compliance with Condition 4, the right to receive the payment of the Residual Value, (if any) less any Exercise Expenses following the occurrence of a Mandatory Call Event (all as defined below).
- (b) *Exercise Expenses.* On expiry of the CBBCs or upon the occurrence of a Mandatory Call Event, CBBC Holders are required to pay the Exercise Expenses. To effect such payment, an irrevocable authorisation to deduct the Exercise Expenses from the applicable Cash Settlement Amount or the Residual Value (as the case may be) is deemed to be given by a CBBC Holder to the Issuer upon purchase of the CBBCs. Any Exercise Expenses which have not been determined on the Expiry Date or

following the Mandatory Call Event shall be notified to the CBBC Holder as soon as practicable after determination thereof by the Issuer and shall be paid by the CBBC Holder immediately upon demand.

(c) *Definitions.* For the purposes of these Conditions:

“**Board Lot**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**Business Day**” means a day (excluding Saturdays) on which the Stock Exchange (as defined below) is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong;

“**Call Price**” means the price of the Shares specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

“**Cash Settlement Amount**” means:

(1) in the case of a series of bull CBBCs and in respect of every Board Lot, an amount in the Settlement Currency calculated by the Issuer as equal to:

$$\begin{array}{l} \text{Cash Settlement} \\ \text{Amount per} \\ \text{Board Lot} \end{array} = \frac{\text{Entitlement} \times (\text{Closing Price} - \text{Strike Price}) \times \text{one Board Lot}}{\text{Number of CBBCs per Entitlement}}$$

(2) in the case of a series of bear CBBCs and in respect of every Board Lot, an amount in the Settlement Currency calculated by the Issuer as equal to:

$$\begin{array}{l} \text{Cash Settlement} \\ \text{Amount per} \\ \text{Board Lot} \end{array} = \frac{\text{Entitlement} \times (\text{Strike Price} - \text{Closing Price}) \times \text{one Board Lot}}{\text{Number of CBBCs per Entitlement}}$$

provided that if the Cash Settlement Amount is a negative amount it shall be deemed to be zero;

“**CCASS**” means the Central Clearing and Settlement System established and operated by Hong Kong Securities Clearing Company Limited (“**HKSCC**”);

“**CCASS Rules**” means the General Rules of CCASS and the CCASS Operational Procedures in effect from time to time;

“**CCASS Settlement Day**” has the meaning ascribed to the term “Settlement Day” in the General Rules of CCASS, subject to such modification and amendment prescribed by HKSCC from time to time;

“**Closing Price**” means the official closing price of one Share (as derived from the Daily Quotation Sheet of the Stock Exchange, subject to any adjustment to such closing price as may be necessary to reflect any event as contemplated in Condition 6 such as capitalisation, rights issue, distribution or the like) on the Valuation Date (as defined below);

“**Company**” means the company specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“Entitlement” means the number specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

“Exercise Expenses” means any charges or expenses including any taxes or duties which are incurred or withheld in respect of the expiry of the CBBCs or the occurrence of a Mandatory Call Event (as the case may be);

“Expiry Date” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“IEP” means the indicative equilibrium price, as determined in accordance with the Rules and Regulations of the Stock Exchange prescribed by the Stock Exchange from time to time (the **“Trading Rules”**);

“Mandatory Call Event” occurs:

- (1) in the case of a series of bull CBBCs, if the Spot Price is at or below the Call Price at any time during a Trading Day in the Observation Period; and
- (2) in the case of a series of bear CBBCs, if the Spot Price is at or above the Call Price at any time during a Trading Day in the Observation Period;

“Market Disruption Event” means:

- (1) (i) with respect to exercise of the CBBCs, the occurrence or existence on the Valuation Date during the one-half hour period that ends at the close of trading of, or (ii) with respect to the determination of the Residual Value, the occurrence or existence during a trading session resulting in any suspension of or limitation imposed on trading (by reason of movements in price exceeding limits permitted by the Stock Exchange or otherwise) on the Stock Exchange in
 - (a) the Shares; and/or
 - (b) any options or futures contracts relating to the Shares if, in any such case, that suspension or limitation is, in the determination of the Issuer, material; or
- (2) (i) with respect to exercise of the CBBCs, the issuance of the tropical cyclone warning signal number 8 or above or a “BLACK” rainstorm signal which either results in the Stock Exchange being closed for dealings for an entire day or results in the Stock Exchange being closed prior to its regular time for close of trading on any day, provided that there shall be no Market Disruption Event solely by reason of the Stock Exchange opening later than its regular time for open of trading on any day as a result of the tropical cyclone warning signal number 8 or above or the BLACK rainstorm signal having been issued, or (ii) with respect to the determination of the Residual Value and in respect of a trading session, the issuance of the tropical cyclone warning signal number 8 or above or a BLACK rainstorm signal which results in the Stock Exchange being closed for dealings; or
- (3) a limitation or closure of the Stock Exchange due to any unforeseen circumstances;

“Maximum Trade Price” means the highest Spot Price (subject to any adjustment to such Spot Price as may be necessary to reflect any event as contemplated in Condition 6 such as capitalisation, rights issue, distribution or the like) during the MCE Valuation Period;

“MCE Valuation Period” means the period commencing from and including the moment upon which the Mandatory Call Event occurs (the trading session during which the Mandatory Call Event occurs is the **“First Session”**) and up to the end of the trading session on the Stock Exchange immediately following the First Session (the **“Second Session”**) unless, in the determination of the Issuer in good faith, the Second Session for any reason (including, without limitation, a Market Disruption Event occurring and subsisting in the Second Session) does not contain any continuous period of one hour or more than one hour during which trading in the Shares is permitted on the Stock Exchange with no limitation imposed, in which case the MCE Valuation Period shall be extended to the end of the subsequent trading session following the Second Session during which trading in the Shares is permitted on the Stock Exchange with no limitation imposed for a continuous period of at least one hour notwithstanding the existence or continuance of a Market Disruption Event in such postponed trading session, unless the Issuer determines in good faith that each trading session on each of the four Trading Days immediately following the date on which the Mandatory Call Event occurs does not contain any continuous period of one hour or more than one hour during which trading in the Shares is permitted on the Stock Exchange with no limitation imposed. In that case:

- (i) the period commencing from the First Session up to, and including, the last trading session on the Stock Exchange of the fourth Trading Day immediately following the date on which the Mandatory Call Event occurs shall be deemed to be the MCE Valuation Period; and
- (ii) the Issuer shall determine the Maximum Trade Price or the Minimum Trade Price (as the case may be) having regard to the then prevailing market conditions, the last reported Spot Price and such other factors as the Issuer may determine to be relevant in good faith.

For the avoidance of doubt, all Spot Prices available throughout the extended MCE Valuation Period shall be taken into account to determine the Maximum Trade Price or the Minimum Trade Price (as the case may be) for the calculation of the Residual Value.

For the purposes of this definition,

- (a) the pre-opening session, the morning session and, in the case of half day trading, the closing auction session (if any) of the same day; and
- (b) the afternoon session and the closing auction session (if any) of the same day,

shall each be considered as one trading session only;

“Minimum Trade Price” means the lowest Spot Price (subject to any adjustment to such Spot Price as may be necessary to reflect any event as contemplated in Condition 6 such as capitalisation, rights issue, distribution or the like) during the MCE Valuation Period;

“Observation Commencement Date” has the meaning specified in the relevant Launch Announcement and Supplemental Listing Document;

“Observation Period” means the period from the Observation Commencement Date to the Trading Day immediately preceding the Expiry Date (both dates inclusive);

“Post MCE Trades” means, subject to such modification and amendment prescribed by the Stock Exchange from time to time, (i) if the Mandatory Call Event occurs during a pre-opening session or a closing auction session (if applicable), as the case may be, of the Stock Exchange, all auction trades in the CBBCs concluded in such session and all manual trades concluded after the end of the pre-order matching period in such session; or (ii) if the Mandatory Call Event occurs during a continuous trading session of the Stock Exchange, all trades in the CBBCs concluded via auto-matching or manually after the time of the occurrence of a Mandatory Call Event;

“Price Determination Date” means the date on which the Maximum Trade Price or the Minimum Trade Price (as the case may be) is determined by the Issuer;

“Residual Value” means an amount in the Settlement Currency calculated in accordance with the formula specified below:

- (1) in the case of a series of bull CBBCs and in respect of every Board Lot:

$$\frac{\text{Entitlement} \times (\text{Minimum Trade Price} - \text{Strike Price}) \times \text{one Board Lot}}{\text{Number of CBBCs per Entitlement}}$$

- (2) in the case of a series of bear CBBCs and in respect of every Board Lot:

$$\frac{\text{Entitlement} \times (\text{Strike Price} - \text{Maximum Trade Price}) \times \text{one Board Lot}}{\text{Number of CBBCs per Entitlement}}$$

provided that if the Residual Value is a negative amount it shall be deemed to be zero;

“Settlement Currency” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“Settlement Date” means the third CCASS Settlement Day after (i) the end of the MCE Valuation Period or (ii) the later of (a) the Expiry Date; and (b) the day on which the Closing Price is determined in accordance with these Conditions (as the case may be);

“Settlement Disruption Event” means an event beyond the control of the Issuer as a result of which the Issuer is unable to procure payment electronically through CCASS to the relevant bank account designated by the relevant CBBC Holder (**“Designated Bank Account”**);

“Shares” means the shares of Company specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“Spot Price” means:

- (i) in respect of a continuous trading session of the Stock Exchange, the price per Share concluded by means of automatic order matching on the Stock Exchange as reported in the official real-time dissemination mechanism for the Stock Exchange during such continuous trading session in accordance with the Trading Rules, excluding direct business (as defined in the Trading Rules); and

- (ii) in respect of a pre-opening session or a closing auction session (if applicable) of the Stock Exchange (as the case may be), the final IEP of the Share (if any) calculated at the end of the pre-order matching period of such pre-opening session or closing auction session (if applicable) (as the case may be) in accordance with the Trading Rules, excluding direct business (as defined in the Trading Rules),

subject to such modification and amendment prescribed by the Stock Exchange from time to time;

“**Stock Exchange**” means The Stock Exchange of Hong Kong Limited;

“**Strike Price**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

“**Trading Day**” means a day on which the Stock Exchange is scheduled to be open for trading for its regular trading sessions; and

“**Valuation Date**” means the Trading Day immediately preceding the Expiry Date.

3. Exercise of CBBCs, Mandatory Call Event, Automatic Exercise and Expiry

- (a) *Exercise of CBBCs.* The CBBCs are exercisable on the Expiry Date, provided that a Mandatory Call Event has not occurred.
- (b) *Mandatory Call Event.* Any CBBC in respect of which a Mandatory Call Event has occurred will automatically expire upon the occurrence of a Mandatory Call Event and every Board Lot will entitle the CBBC Holder to receive the Residual Value (if any) less any Exercise Expenses on the Settlement Date.
- (c) *Automatic Exercise.* Any CBBC which has not automatically expired will automatically be exercised if, on the Expiry Date, the value of the Cash Settlement Amount is greater than zero (without prior notice being given to the CBBC Holders). The CBBC Holders will not be required to deliver any exercise notice and the Issuer or its agent will pay to the CBBC Holders the Cash Settlement Amount (if any) less any Exercise Expenses in accordance with Condition 4(d).
- (d) *Issuer's Obligations.* For the avoidance of doubt, where the CBBCs have been exercised on the Expiry Date or have automatically expired upon the occurrence of a Mandatory Call Event (as the case may be), payment of the Cash Settlement Amount or the Residual Value (if any) (as the case may be) less any Exercise Expenses shall constitute full and final settlement of the obligations of the Issuer with respect to the CBBCs. Subject to such payment having been made, the Issuer shall have no obligation towards the relevant CBBC Holder under the CBBCs subsequent to such Expiry Date or the date on which a Mandatory Call Event occurs (as the case may be).
- (e) *Expiry.* Any CBBC which does not automatically expire in accordance with Condition 3(b) or which has not been automatically exercised in accordance with Condition 3(c) (as the case may be) shall expire immediately without value thereafter and all rights of the CBBC Holder and obligations of the Issuer with respect to such CBBC shall cease.

4. Exercise of CBBCs, Cancellation and Payment

- (a) *Board Lots.* CBBCs may only be exercised in a Board Lot or integral multiples thereof.
- (b) *No requirement to deliver an exercise notice.* The CBBC Holders will not be required to deliver an exercise notice for any purpose in relation to the CBBCs.
- (c) *Cancellation.* The Issuer will, with effect from the first Business Day following the date on which a Mandatory Call Event occurs or the Expiry Date (as the case may be), remove from its register the name of the person in respect of the CBBCs which (i) are the subject of an occurrence of a Mandatory Call Event; (ii) are the subject of an exercise pursuant to automatic exercise in accordance with these Conditions; or (iii) have expired worthless, and thereby cancel the relevant CBBCs.
- (d) *Cash Settlement.* Subject to automatic exercise of CBBCs or the occurrence of a Mandatory Call Event in accordance with these Conditions, the Issuer will make a payment, in respect of every Board Lot, to the relevant CBBC Holder equal to the Cash Settlement Amount or the Residual Value (if any) (as the case may be) less any Exercise Expenses. If the Cash Settlement Amount or the Residual Value is equal to, or less than, the determined Exercise Expenses, no Cash Settlement Amount or Residual Value shall be payable by the Issuer.

The Cash Settlement Amount or the Residual Value (as the case may be) less the determined Exercise Expenses shall be despatched no later than the Settlement Date by crediting that amount in accordance with the CCASS Rules, to the Designated Bank Account.

If as a result of a Settlement Disruption Event, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the CBBC Holder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the CBBC Holder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the CBBC Holder for any interest in respect of the amount due or any loss or damage that such CBBC Holder may suffer as a result of the existence of the Settlement Disruption Event, nor shall the Issuer be liable under any circumstances for any acts or defaults of CCASS in relation to the performance of its duties in relation to the CBBCs.

If the Issuer determines, in its sole discretion (acting in good faith and in a commercially reasonable manner), that a Market Disruption Event has occurred on the Valuation Date, then that Valuation Date shall be postponed to the first succeeding Trading Day on which the Issuer determines that there is no Market Disruption Event, unless the Issuer determines that there is a Market Disruption Event on each of the four Trading Days immediately following the original date that, but for the Market Disruption Event, would have been the Valuation Date. In that case:

- (i) the fourth Trading Day immediately following the original date shall be deemed to be the Valuation Date, notwithstanding the Market Disruption Event; and
- (ii) the Issuer shall determine the closing price of the Shares having regard to the then prevailing market conditions, the last reported Spot Price and such other factors as the Issuer determines to be relevant in good faith.

5. Register

The Issuer will at all times maintain or arrange for the maintenance of a register in Hong Kong.

6. Adjustments

- (a) *Rights Issues*. If and whenever the Company shall, by way of Rights (as defined below), offer new Shares for subscription at a fixed subscription price to the holders of existing Shares pro rata to existing holdings (a “**Rights Offer**”), the Entitlement will be adjusted to take effect on the Business Day on which trading in the Shares of the Company becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

Where:

$$\text{Adjustment Factor} = \frac{1 + M}{1 + (R/S) \times M}$$

E: Existing Entitlement immediately prior to the Rights Offer

S: Cum-Rights Share price being the closing price of the Shares on the Stock Exchange on the last Business Day on which the Shares are traded on a cum-Rights basis

R: Subscription price per new Share as specified in the Rights Offer plus an amount equal to any dividends or other benefits foregone to exercise the Rights

M: Number of new Share(s) (whether a whole or a fraction) per existing Share each holder thereof is entitled to subscribe

Provided that if the adjustment to be made would result in the Entitlement being changed by one per cent. or less, then no adjustment will be made. In addition, the Issuer shall adjust the Call Price and/or Strike Price in accordance with the following formulas:

$$\begin{array}{l} \text{Adjusted Call Price} \\ \text{(rounded to the nearest 0.001)} \end{array} = \text{Call Price} \div \text{Adjustment Factor}$$

$$\begin{array}{l} \text{Adjusted Strike Price} \\ \text{(rounded to the nearest 0.001)} \end{array} = \text{Strike Price} \div \text{Adjustment Factor}$$

Adjustment to the Call Price and/or Strike Price shall take effect on the same day that the Entitlement is adjusted.

For the purposes of these Conditions:

“**Rights**” means the right(s) attached to each existing Share or needed to acquire one new Share (as the case may be) which are given to the holders of existing Shares to subscribe at a fixed subscription price for new Shares pursuant to the Rights Offer (whether by the exercise of one Right, a part of a Right or an aggregate number of Rights).

- (b) *Bonus Issues.* If and whenever the Company shall make an issue of Shares credited as fully paid to the holders of Shares generally by way of capitalisation of profits or reserves (other than pursuant to a scrip dividend or similar scheme for the time being operated by the Company or otherwise in lieu of a cash dividend and without any payment or other consideration being made or given by such holders) (a “**Bonus Issue**”) the Entitlement will be increased on the Business Day on which trading in the Shares of the Company becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

Where:

$$\text{Adjustment Factor} = 1 + N$$

E: Existing Entitlement immediately prior to the Bonus Issue

N: Number of additional Shares (whether a whole or a fraction) received by a holder of existing Shares for each Share held prior to the Bonus Issue

Provided that if the adjustment to be made would result in the Entitlement being changed by one per cent. or less, then no adjustment will be made. In addition, the Issuer shall adjust the Call Price and/or Strike Price in accordance with the following formulas:

$$\begin{array}{l} \text{Adjusted Call Price} \\ \text{(rounded to the nearest 0.001)} \end{array} = \text{Call Price} \div \text{Adjustment Factor}$$

$$\begin{array}{l} \text{Adjusted Strike Price} \\ \text{(rounded to the nearest 0.001)} \end{array} = \text{Strike Price} \div \text{Adjustment Factor}$$

Adjustment to the Call Price and/or Strike Price shall take effect on the same day that the Entitlement is adjusted.

- (c) *Share Subdivisions or Consolidations.* If and whenever the Company shall subdivide its Shares or any class of its outstanding share capital comprised of the Shares into a greater number of shares (a “**Subdivision**”) or consolidate the Shares or any class of its outstanding share capital comprised of the Shares into a smaller number of shares (a “**Consolidation**”), the Entitlement in effect immediately prior thereto will be increased (in the case of a Subdivision) or decreased (in the case of a Consolidation) accordingly in each case on the day on which the relevant Subdivision or Consolidation shall have taken effect. In addition, the Call Price and/or Strike Price (each of which shall be rounded to the nearest 0.001) will be decreased (in the case of a Subdivision) or increased (in the case of a Consolidation) accordingly.

Adjustment to the Call Price and/or Strike Price shall take effect on the same day that the Entitlement is adjusted.

- (d) *Merger or Consolidation.* If it is announced that the Company is to or may merge or consolidate with or into any other corporation (including becoming, by agreement or otherwise, a subsidiary of any corporation or controlled by any person or corporation) (except where the Company is the surviving corporation in a merger) or that it is to or may sell or transfer all or substantially all of its assets, the rights attaching to the CBBCs may in the absolute discretion of the Issuer (acting in good faith and in a commercially reasonable manner) be amended no later than the Business Day

preceding the consummation of such merger, consolidation, sale or transfer (each a “**Restructuring Event**”) (as determined by the Issuer in its absolute discretion (acting in good faith and in a commercially reasonable manner)).

The rights attaching to the CBBCs after the adjustment shall, after such Restructuring Event, relate to the number of shares of the corporation(s) resulting from or surviving such Restructuring Event or other securities (“**Substituted Securities**”) and/or cash offered in substitution for the affected Shares, as the case may be, to which the holder of such number of Shares to which the CBBCs related immediately before such Restructuring Event would have been entitled upon such Restructuring Event. Thereafter the provisions hereof shall apply to such Substituted Securities, provided that any Substituted Securities may, in the absolute discretion of the Issuer (acting in good faith and in a commercially reasonable manner), be deemed to be replaced by an amount in the relevant currency equal to the market value or, if no market value is available, fair value, of such Substituted Securities in each case as determined by the Issuer as soon as practicable after such Restructuring Event is effected.

For the avoidance of doubt, any remaining Shares shall not be affected by this paragraph (d) and, where cash is offered in substitution for Shares or is deemed to replace Substituted Securities as described above, references in these Conditions to the Shares shall include any such cash.

- (e) *Cash Distributions.* Generally, no adjustment will be made for an ordinary cash dividend (whether or not it is offered with a scrip alternative). For any other forms of cash distribution (each a “**Cash Distribution**”) announced by the Company, such as a cash bonus, special dividend or extraordinary dividend, no adjustment will be made unless the value of the Cash Distribution accounts for two per cent. or more of the Share’s closing price on the day of announcement by the Company.

If and whenever the Company shall make a Cash Distribution credited as fully paid to the holders of Shares generally, the Entitlement will be adjusted to take effect on the Business Day on which trading in the Shares of the Company becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

Where:

$$\text{Adjustment Factor} = \frac{S - OD}{S - OD - CD}$$

OD: Amount of the relevant ordinary cash dividend per Share, provided that OD shall be deducted from S only if the Business Day on which trading in the Shares of the Company becomes ex-entitlement with respect to the Cash Distribution and the distribution of the ordinary cash dividend by the Company falls on the same date. For the avoidance of doubt, OD shall be deemed to be zero if the ex-entitlement dates of the relevant ordinary cash dividend and the Cash Distribution are different

CD: Amount of the relevant Cash Distribution per Share

E: Existing Entitlement immediately prior to the Cash Distribution

S: Cum-Cash Distribution Share price being the closing price of the Shares on the Stock Exchange on the last Business Day on which the Shares of the Company are traded on a cum-Cash Distribution basis

In addition, the Issuer shall adjust the Call Price and/or Strike Price in accordance with the following formulas:

$$\begin{array}{l} \text{Adjusted Call Price} \\ \text{(rounded to the nearest 0.001)} \end{array} = \text{Call Price} \div \text{Adjustment Factor}$$

$$\begin{array}{l} \text{Adjusted Strike Price} \\ \text{(rounded to the nearest 0.001)} \end{array} = \text{Strike Price} \div \text{Adjustment Factor}$$

Adjustment to the Call Price and/or Strike Price shall take effect on the same day that the Entitlement is adjusted.

- (f) *Other Adjustments.* Without prejudice to and notwithstanding any prior adjustment(s) made pursuant to the applicable Conditions, the Issuer may (but shall not be obliged to) make such other adjustments to the terms and conditions of the CBBCs as appropriate where any event (including the events as contemplated in the applicable Conditions) occurs and irrespective of, in substitution for, or in addition to the provisions contemplated in the applicable Conditions, provided that such adjustment is:
- (i) not materially prejudicial to the interests of the CBBC Holders generally (without considering the circumstances of any individual CBBC Holder or the tax or other consequences of such adjustment in any particular jurisdiction); or
 - (ii) determined by the Issuer in good faith to be appropriate and commercially reasonable.

For the avoidance of doubt, such adjustments may, but need not, be determined by reference to the adjustment(s) made in respect of such event or events by an options exchange to options on the relevant Shares traded on such options exchange.

- (g) *Notice of Adjustments.* All determinations made by the Issuer pursuant hereto will be conclusive and binding on the CBBC Holders. The Issuer will give, or procure that there is given, notice as soon as practicable of any adjustment and of the date from which such adjustment is effective by publication in accordance with Condition 11.

7. Illegality or Impracticability

The Issuer is entitled to terminate the CBBCs if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

- (a) for it to perform its obligations under the CBBCs, in whole or in part, as a result of: (i) the adoption of, any change in, any relevant law or regulation (including any tax law); or (ii) the promulgation of, or any change in the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law), (each of (i) and (ii), a “**Change in Law Event**”); or
- (b) for it or any of its affiliates to maintain the Issuer’s hedging arrangements with respect to the CBBCs due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by applicable law or regulation, pay to each CBBC Holder a cash amount that the Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each CBBC held by such CBBC Holder immediately prior to such

termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement and any charges or expenses including any taxes or duties which are incurred or withheld as determined by the Issuer in its sole and absolute discretion (acting in good faith and in a commercially reasonable manner). Payment will be made in such manner as shall be notified to the CBBC Holders in accordance with Condition 11.

8. Purchases

The Issuer and/or any of its subsidiaries and affiliates may at any time purchase CBBCs at any price in the open market or by tender or by private treaty. Any CBBCs so purchased may be held or resold or surrendered for cancellation.

9. Global Certificate

The CBBCs are represented by the Global Certificate registered in the name of HKSCC Nominees Limited and deposited with CCASS in accordance with the CCASS Rules. CBBC Holders will not be entitled to definitive certificates in respect of any CBBCs issued or transferred to them.

10. Meetings of CBBC Holders; Modification

- (a) *Meetings of CBBC Holders.* The Instrument contains provisions for convening meetings of the CBBC Holders to consider any matter affecting their interests, including the sanctioning by Extraordinary Resolution (as defined in the Instrument) of a modification of the provisions of the CBBCs or of the Global Certificate.

Any resolution to be passed in a meeting of the CBBC Holders shall be decided by poll. Such a meeting may be convened by the Issuer or by CBBC Holders holding not less than 10 per cent. of the CBBCs for the time being remaining unexercised. The quorum at any such meeting for passing an Extraordinary Resolution will be two or more persons holding or representing not less than 25 per cent. of the CBBCs for the time being remaining unexercised, or at any adjourned meeting two or more persons being or representing CBBC Holders whatever the number of CBBCs so held or represented.

A resolution will be an Extraordinary Resolution when it has been passed at a duly convened meeting by not less than three-quarters of the votes cast by such CBBC Holders who, being entitled to do so, vote in person or by proxy.

An Extraordinary Resolution passed at any meeting of the CBBC Holders shall be binding on all the CBBC Holders, whether or not they are present at the meeting.

Resolutions can be passed in writing without a meeting of the CBBC Holders being held if passed unanimously.

- (b) *Modification.* The Issuer may, without the consent of the CBBC Holders, effect any modification of the terms and conditions of the CBBCs or the Global Certificate which, in the opinion of the Issuer, is:
- (i) not materially prejudicial to the interests of the CBBC Holders generally (without considering the circumstances of any individual CBBC Holder or the tax or other consequences of such modification in any particular jurisdiction);
 - (ii) of a formal, minor or technical nature;
 - (iii) made to correct a manifest error; or

- (iv) necessary in order to comply with mandatory provisions of the laws or regulations of Hong Kong.

Any such modification shall be binding on the CBBC Holders and shall be notified to them by the Issuer as soon as practicable in accordance with Condition 11.

11. Notices

All notices to CBBC Holders will be validly given if published in English and in Chinese on the website of Hong Kong Exchanges and Clearing Limited. Such notices shall be deemed to have been given on the date of the first such publication. If publication is not practicable, notice will be given in such other manner as the Issuer may determine.

12. Liquidation

In the event of a liquidation or dissolution of the Company or the appointment of a liquidator, receiver or administrator or analogous person under applicable law in respect of the whole or substantially the whole of its undertaking, property or assets, all unexercised CBBCs will lapse and shall cease to be valid for any purpose, in the case of voluntary liquidation, on the effective date of the relevant resolution and, in the case of an involuntary liquidation or dissolution, on the date of the relevant court order or, in the case of the appointment of a liquidator or receiver or administrator or analogous person under any applicable law in respect of the whole or substantially the whole of its undertaking, property or assets, on the date when such appointment is effective but subject (in any such case) to any contrary mandatory requirement of law.

13. Further Issues

The Issuer shall be at liberty from time to time, without the consent of the CBBC Holders, to create and issue further CBBCs so as to form a single series with the CBBCs.

14. Delisting

- (a) If at any time the Shares cease to be listed on the Stock Exchange, the Issuer shall give effect to these Conditions in such manner and make such adjustments to the rights attaching to the CBBCs as it shall, in its absolute discretion (acting in good faith and in a commercially reasonable manner), consider appropriate to ensure, so far as it is reasonably able to do so, that the interests of the CBBC Holders generally are not materially prejudiced as a consequence of such delisting (without considering the individual circumstances of any CBBC Holder or the tax or other consequences that may result in any particular jurisdiction).
- (b) Without prejudice to the generality of Condition 14(a), where the Shares are, or, upon the delisting, become, listed on any other stock exchange, these Conditions may, in the absolute discretion of the Issuer (acting in good faith and in a commercially reasonable manner), be amended to the extent necessary to allow for the substitution of that other stock exchange in place of the Stock Exchange and the Issuer may, without the consent of the CBBC Holders, make such adjustments to the entitlements of CBBC Holders on exercise (including, if appropriate, by converting foreign currency amounts at prevailing market rates into the relevant currency) as may be appropriate in the circumstances.
- (c) The Issuer shall determine, in its absolute discretion (acting in good faith and in a commercially reasonable manner), any adjustment or amendment and its determination shall be conclusive and binding on the CBBC Holders save in the case

of manifest error. Notice of any adjustments or amendments shall be given to the CBBC Holders in accordance with Condition 11 as soon as practicable after they are determined.

15. Contracts (Rights of Third Parties) Ordinance

A person who is not a party to these Conditions has no right under the Contracts (Rights of Third Parties) Ordinance (Cap. 623 of the Laws of Hong Kong) to enforce or to enjoy the benefit of any term of the CBBCs.

16. Governing Law

The CBBCs, the Global Certificate and the Instrument will be governed by and construed in accordance with the laws of the Hong Kong Special Administrative Region of the People's Republic of China ("**Hong Kong**"). The Issuer and each CBBC Holder (by its purchase of the CBBCs) shall be deemed to have submitted for all purposes in connection with the CBBCs, the Global Certificate and the Instrument to the non-exclusive jurisdiction of the courts of Hong Kong.

17. Language

In the event of any inconsistency between the Chinese translation of these Conditions and the English version of these Conditions, the English version of these Conditions shall prevail.

The relevant terms and conditions will, together with the supplemental provisions contained in the relevant launch announcement and supplemental listing document and subject to completion and amendment, be endorsed on the global certificate. The applicable launch announcement and supplemental listing document in relation to the issue of any series of structured products may specify additional terms and conditions which shall, to the extent so specified or to the extent inconsistent with the relevant terms and conditions, replace or modify the relevant terms and conditions for the purpose of such series of structured products. Capitalised terms used in the relevant terms and conditions and not otherwise defined therein shall have the meaning given to them in the relevant launch announcement and supplemental listing document.

TERMS AND CONDITIONS OF THE INDEX CALLABLE BULL/BEAR CONTRACTS (CASH SETTLED)

1. Form, Status, Transfer and Title

- (a) *Form.* The Callable Bull/Bear Contracts (the “**CBBCs**”) (which expression shall, unless the context otherwise requires, include any further CBBCs issued pursuant to Condition 12) relating to the Index as published by the Index Compiler are issued in registered form subject to and with the benefit of a global certificate by way of deed poll (the “**Global Certificate**”) dated the Issue Date, made by The Hongkong and Shanghai Banking Corporation Limited (the “**Issuer**”) and an instrument by way of deed poll dated 2 April 2012 executed by the Issuer (the “**Instrument**”). Copies of the Global Certificate and the Instrument are available for inspection at the specified office of the Issuer. The CBBC Holders (as defined below) are entitled to the benefit of, are bound by and are deemed to have notice of all the provisions of the Global Certificate and the Instrument.
- (b) *Status.* The CBBCs represent general, unsecured, contractual obligations of the Issuer and of no other person and rank *pari passu* among themselves and (save for certain obligations required to be preferred by law) equally with all other unsecured obligations of the Issuer.
- (c) *Transfer.* Transfers of beneficial interests in the CBBCs may be effected only in Board Lots or integral multiples thereof in CCASS (as defined below) in accordance with the CCASS Rules (as defined below).
- (d) *Title.* Each person who is for the time being shown in the register kept by the Issuer as entitled to a particular number of CBBCs shall be treated by the Issuer as the absolute owner and holder of such number of CBBCs. The expression “**CBBC Holder**” shall be construed accordingly.

2. CBBC Rights and Exercise Expenses

- (a) *CBBC Rights.* Every Board Lot entitles each CBBC Holder, (i) upon due exercise and compliance with Condition 4, the right to receive the payment of the Cash Settlement Amount, (if any) less any Exercise Expenses or (ii) upon compliance with Condition 4, the right to receive the payment of the Residual Value, (if any) less any Exercise Expenses following the occurrence of a Mandatory Call Event (all as defined below).
- (b) *Exercise Expenses.* On expiry of the CBBCs or upon the occurrence of a Mandatory Call Event, CBBC Holders are required to pay the Exercise Expenses. To effect such payment, an irrevocable authorisation to deduct the Exercise Expenses from the applicable Cash Settlement Amount or the Residual Value (as the case may be) is deemed to be given by a CBBC Holder to the Issuer upon purchase of the CBBCs. Any Exercise Expenses which have not been determined on the Expiry Date or

following the Mandatory Call Event shall be notified to the CBBC Holder as soon as practicable after determination thereof by the Issuer and shall be paid by the CBBC Holder immediately upon demand.

(c) *Definitions.* For the purposes of these Conditions:

“**Board Lot**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**Business Day**” means a day (excluding Saturdays) on which the Stock Exchange (as defined below) is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong;

“**Call Level**” means the level of the Index specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

“**Cash Settlement Amount**” means:

(1) in the case of a series of bull CBBCs and in respect of every Board Lot, an amount, converted (if applicable) into the Settlement Currency at the Exchange Rate, calculated by the Issuer as equal to:

$$\begin{array}{l} \text{Cash Settlement} \\ \text{Amount per Board} \\ \text{Lot} \end{array} = \frac{(\text{Closing Level} - \text{Strike Level}) \times \text{one Board Lot} \times \text{Index Currency Amount}}{\text{Divisor}}$$

(2) in the case of a series of bear CBBCs and in respect of every Board Lot, an amount, converted (if applicable) into the Settlement Currency at the Exchange Rate, calculated by the Issuer as equal to:

$$\begin{array}{l} \text{Cash Settlement} \\ \text{Amount per Board} \\ \text{Lot} \end{array} = \frac{(\text{Strike Level} - \text{Closing Level}) \times \text{one Board Lot} \times \text{Index Currency Amount}}{\text{Divisor}}$$

provided that if the Cash Settlement Amount is a negative amount it shall be deemed to be zero;

“**CCASS**” means the Central Clearing and Settlement System established and operated by Hong Kong Securities Clearing Company Limited (“**HKSCC**”);

“**CCASS Rules**” means the General Rules of CCASS and the CCASS Operational Procedures in effect from time to time;

“**CCASS Settlement Day**” has the meaning ascribed to the term “Settlement Day” in the General Rules of CCASS, subject to such modification and amendment prescribed by HKSCC from time to time;

“**Closing Level**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

“**Divisor**” means the number specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“Exchange Rate” means the rate specified in the relevant Launch Announcement and Supplemental Listing Document (if applicable);

“Exercise Expenses” means any charges or expenses including any taxes or duties which are incurred or withheld in respect of the expiry of the CBBCs or the occurrence of a Mandatory Call Event (as the case may be);

“Expiry Date” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“Index” means the index specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

“Index Business Day” means a day on which the Index is scheduled to be published by the Index Compiler or as the case may be, the Successor Index Compiler;

“Index Compiler” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“Index Currency Amount” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“Index Exchange” means the exchange specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“Mandatory Call Event” occurs:

- (1) in the case of a series of bull CBBCs, if the Spot Level is at or below the Call Level at any time during an Index Business Day in the Observation Period; and
- (2) in the case of a series of bear CBBCs, if the Spot Level is at or above the Call Level at any time during an Index Business Day in the Observation Period;

“Market Disruption Event” means:

- (1) (i) with respect to exercise of the CBBCs, the occurrence or existence, on the Valuation Date during the one-half hour period that ends at the close of trading on the Index Exchange, or (ii) with respect to the determination of the Residual Value, the occurrence or existence during a trading session of any:
 - (a) suspension or material limitation of the trading of a material number of securities that comprise the Index; and/or
 - (b) suspension or material limitation of the trading of options or futures contracts relating to the Index on any exchanges on which such contracts are traded; and/or
 - (c) imposition of any exchange controls in respect of any currencies involved in determining the Cash Settlement Amount or the Residual Value (as the case may be);

for the purposes of paragraph (1), (x) the limitation of the number of hours or days of trading will not constitute a Market Disruption Event if it results from an announced change in the regular business hours of any relevant exchange, and

- (y) a limitation on trading imposed by reason of the movements in price exceeding the levels permitted by any relevant exchange will constitute a Market Disruption Event; or
- (2) where the Index Exchange is the Stock Exchange, (i) with respect to the exercise of the CBBs the issuance of the tropical cyclone warning signal number 8 or above or a “BLACK” rainstorm signal which either results in the Stock Exchange being closed for dealings for an entire day or results in the Stock Exchange being closed prior to its regular time for close of trading on any day, provided that there shall be no Market Disruption Event on the Valuation Date solely by reason of the Stock Exchange opening later than its regular time for open of trading on any day as a result of the tropical cyclone warning signal number 8 or above or the “BLACK” rainstorm signal having been issued, or (ii) with respect to the determination of the Residual Value and in respect of a trading session, the issuance of the tropical cyclone warning signal number 8 or above or a “BLACK” rainstorm signal which results in the Stock Exchange being closed for dealings; or
- (3) a limitation or closure of the Index Exchange due to any unforeseen circumstances; or
- (4) any circumstances beyond the control of the Issuer in which the Closing Level or, if applicable, the Exchange Rate cannot be determined by the Issuer in the manner set out in these Conditions or in such other manner as the Issuer considers appropriate at such time after taking into account all the relevant circumstances;

“**Maximum Index Level**” means the highest Spot Level during the MCE Valuation Period;

“**MCE Valuation Period**” means the period commencing from and including the moment upon which the Mandatory Call Event occurs (the trading session during which the Mandatory Call Event occurs is the “**First Session**”) and up to the end of the trading session on the Index Exchange immediately following the First Session (the “**Second Session**”) unless, in the determination of the Issuer in good faith, the Second Session for any reason (including, without limitation, a Market Disruption Event occurring and subsisting in the Second Session) does not contain any continuous period of one hour or more than one hour during which Spot Levels are available, in which case the MCE Valuation Period shall be extended to the end of the subsequent trading session on the Index Exchange following the Second Session during which Spot Levels are available for a continuous period of at least one hour notwithstanding the existence or continuance of a Market Disruption Event in such postponed trading session, unless the Issuer determines in good faith that each trading session on each of the four Index Business Days immediately following the date on which the Mandatory Call Event occurs does not contain any continuous period of one hour or more than one hour during which Spot Levels are available. In that case:

- (i) the period commencing from the First Session up to, and including, the last trading session of the fourth Index Business Day on the Index Exchange immediately following the date on which the Mandatory Call Event occurs shall be deemed to be the MCE Valuation Period; and

- (ii) the Issuer shall determine the Maximum Index Level or the Minimum Index Level (as the case may be) having regard to the then prevailing market conditions, the last reported Spot Level of the Index and such other factors as the Issuer may determine to be relevant in good faith.

For the avoidance of doubt, all Spot Levels available throughout the extended MCE Valuation Period shall be taken into account to determine the Maximum Index Level or the Minimum Index Level (as the case may be) for the calculation of the Residual Value.

For the purposes of this definition,

- (a) the pre-opening session, the morning session and, in the case of half day trading, the closing auction session (if any) of the same day; and

- (b) the afternoon session and the closing auction session (if any) of the same day,

shall each be considered as one trading session only;

“Minimum Index Level” means the lowest Spot Level during the MCE Valuation Period;

“Observation Commencement Date” has the meaning specified in the relevant Launch Announcement and Supplemental Listing Document;

“Observation Period” means the period from the Observation Commencement Date to the Trading Day immediately preceding the Expiry Date (both dates inclusive);

“Post MCE Trades” means, subject to such modification and amendment prescribed by the Stock Exchange from time to time, (i) if the Mandatory Call Event occurs during a pre-opening session or a closing auction session (if applicable), as the case may be, of the Stock Exchange, all auction trades in the CBBCs concluded in such session and all manual trades concluded after the end of the pre-order matching period in such session; or (ii) if the Mandatory Call Event occurs during a continuous trading session of the Stock Exchange, all trades in the CBBCs concluded via auto-matching or manually after the time of the occurrence of a Mandatory Call Event;

“Price Determination Date” means the date on which the Maximum Index Level or the Minimum Index Level (as the case may be) is determined by the Issuer;

“Residual Value” means, an amount, converted (if applicable) into the Settlement Currency at the Exchange Rate, calculated in accordance with the formula specified below:

- (1) in the case of a series of bull CBBCs and in respect of every Board Lot:

$$\frac{(\text{Minimum Index Level} - \text{Strike Level}) \times \text{one Board Lot} \times \text{Index Currency Amount}}{\text{Divisor}}$$

- (2) in the case of a series of bear CBBCs and in respect of every Board Lot:

$$\frac{(\text{Strike Level} - \text{Maximum Index Level}) \times \text{one Board Lot} \times \text{Index Currency Amount}}{\text{Divisor}}$$

provided that if the Residual Value is a negative amount it shall be deemed to be zero;

“Settlement Currency” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“Settlement Date” means the third CCASS Settlement Day after (i) the end of the MCE Valuation Period or (ii) the later of (a) the Expiry Date; and (b) the day on which the Closing Level is determined in accordance with these Conditions (as the case may be);

“Settlement Disruption Event” means an event beyond the control of the Issuer as a result of which the Issuer is unable to procure payment electronically through CCASS to the relevant bank account designated by the relevant CBBC Holder (**“Designated Bank Account”**);

“Spot Level” means the spot level of the Index as compiled and published by the Index Compiler;

“Stock Exchange” means The Stock Exchange of Hong Kong Limited;

“Strike Level” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

“Trading Day” means a day on which the Index Exchange is scheduled to be open for trading for its regular trading sessions; and

“Valuation Date” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document.

3. Exercise of CBBCs, Mandatory Call Event, Automatic Exercise and Expiry

- (a) *Exercise of CBBCs.* The CBBCs are exercisable on the Expiry Date, provided that a Mandatory Call Event has not occurred.
- (b) *Mandatory Call Event.* Any CBBC in respect of which a Mandatory Call Event has occurred will automatically expire upon the occurrence of a Mandatory Call Event and every Board Lot will entitle the CBBC Holder to receive the Residual Value (if any) less any Exercise Expenses on the Settlement Date.
- (c) *Automatic Exercise.* Any CBBC which has not automatically expired will automatically be exercised if, on the Expiry Date, the value of the Cash Settlement Amount is greater than zero (without prior notice being given to the CBBC Holders). The CBBC Holders will not be required to deliver any exercise notice and the Issuer or its agent will pay to the CBBC Holders the Cash Settlement Amount (if any) less any Exercise Expenses in accordance with Condition 4(d).
- (d) *Issuer's Obligations.* For the avoidance of doubt, where the CBBCs have been exercised on the Expiry Date or have automatically expired upon the occurrence of a Mandatory Call Event (as the case may be), payment of the Cash Settlement Amount or the Residual Value (if any) (as the case may be) less any Exercise Expenses shall constitute full and final settlement of the obligations of the Issuer with respect to the CBBCs. Subject to such payment having been made, the Issuer shall have no obligation towards the relevant CBBC Holder under the CBBCs subsequent to such Expiry Date or the date on which a Mandatory Call Event occurs (as the case may be).

- (e) *Expiry.* Any CBBC which does not automatically expire in accordance with Condition 3(b) or which has not been automatically exercised in accordance with Condition 3(c) (as the case may be) shall expire immediately without value thereafter and all rights of the CBBC Holder and obligations of the Issuer with respect to such CBBC shall cease.

4. Exercise of CBBCs, Cancellation and Payment

- (a) *Board Lots.* CBBCs may only be exercised in a Board Lot or integral multiples thereof.
- (b) *No requirement to deliver an exercise notice.* The CBBC Holders will not be required to deliver an exercise notice for any purpose in relation to the CBBCs.
- (c) *Cancellation.* The Issuer will, with effect from the first Business Day following the date on which a Mandatory Call Event occurs or the Expiry Date (as the case may be), remove from its register the name of the person in respect of the CBBCs which (i) are the subject of an occurrence of a Mandatory Call Event; (ii) are the subject of an exercise pursuant to automatic exercise in accordance with these Conditions or (iii) have expired worthless, and thereby cancel the relevant CBBCs.
- (d) *Cash Settlement.* Subject to automatic exercise of CBBCs or the occurrence of a Mandatory Call Event in accordance with these Conditions, the Issuer will make a payment, in respect of every Board Lot, to the relevant CBBC Holder equal to the Cash Settlement Amount or the Residual Value (if any) (as the case may be) less any Exercise Expenses. If the Cash Settlement Amount or the Residual Value is equal to, or less than, the determined Exercise Expenses, no Cash Settlement Amount or Residual Value shall be payable by the Issuer.

The Cash Settlement Amount or the Residual Value (as the case may be) less the determined Exercise Expenses shall be despatched no later than the Settlement Date by crediting that amount in accordance with the CCASS Rules, to the Designated Bank Account.

If as a result of a Settlement Disruption Event, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the CBBC Holder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the CBBC Holder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the CBBC Holder for any interest in respect of the amount due or any loss or damage that such CBBC Holder may suffer as a result of the existence of the Settlement Disruption Event, nor shall the Issuer be liable under any circumstances for any acts or defaults of CCASS in relation to the performance of its duties in relation to the CBBCs.

If the Issuer determines, in its sole discretion (acting in good faith and in a commercially reasonable manner), that a Market Disruption Event has occurred on the Valuation Date, then the Issuer shall determine the Closing Level or, if applicable, the Exchange Rate on the basis of its good faith estimate of the Closing Level or, if applicable, the Exchange Rate that would have prevailed on that day but for the occurrence of the Market Disruption Event provided that in the case of determining the Closing Level, the Issuer, if applicable, may, but shall not be obliged to, determine such Closing Level by having regard to the manner in which futures contracts relating to the Index are calculated.

5. Register

The Issuer will at all times maintain or arrange for the maintenance of a register in Hong Kong.

6. Adjustments to the Index

(a) *Successor Index Compiler Calculates and Reports Index.* If the Index is (i) not calculated and announced by the Index Compiler but is calculated and published by a successor to the Index Compiler (the “**Successor Index Compiler**”) acceptable to the Issuer or (ii) replaced by a successor index using, in the determination of the Issuer, the same or a substantially similar formula for and method of calculation as used in the calculation of the Index, then the Index will be deemed to be the index so calculated and announced by the Successor Index Compiler or that successor index, as the case may be.

(b) *Modification and Cessation of Calculation of Index.*

If:

- (i) on or prior to a Valuation Date the Index Compiler or (if applicable) the Successor Index Compiler makes a material change in the formula for or the method of calculating the Index or in any other way materially modifies the Index (other than a modification prescribed in that formula or method to maintain the Index in the event of changes in constituent stock, contracts or commodities and other routine events); or
- (ii) on a Valuation Date the Index Compiler or (if applicable) the Successor Index Compiler fails to calculate and publish the Index (other than as a result of a Market Disruption Event),

then the Issuer shall determine the Closing Level using, in lieu of a published level for the Index, the level for the Index as at that Valuation Date as determined by the Issuer in accordance with the formula for and method of calculating the Index last in effect prior to that change or failure, but using only those securities, contracts or commodities that comprised the Index immediately prior to that change or failure.

(c) *Other Adjustments.* Without prejudice to and notwithstanding any prior adjustment(s) made pursuant to the applicable Conditions, the Issuer may (but shall not be obliged to) make such other adjustments to the terms and conditions of the CBBCs as appropriate where any event (including the events as contemplated in the applicable Conditions) occurs and irrespective of, in substitution for, or in addition to the provisions contemplated in the applicable Conditions, provided that such adjustment is:

- (i) not materially prejudicial to the interests of the CBBC Holders generally (without considering the circumstances of any individual CBBC Holder or the tax or other consequences of such adjustment in any particular jurisdiction); or
- (ii) determined by the Issuer in good faith to be appropriate and commercially reasonable.

(d) *Notice of Determinations.* All determinations made by the Issuer pursuant hereto will be conclusive and binding on the CBBC Holders. The Issuer will give, or procure that there is given, notice as soon as practicable of any determinations by publication in accordance with Condition 11.

7. Illegality or Impracticability

The Issuer is entitled to terminate the CBBCs if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

- (a) for it to perform its obligations under the CBBCs, in whole or in part, as a result of: (i) the adoption of, any change in, any relevant law or regulation (including any tax law); or (ii) the promulgation of, or any change in the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law), (each of (i) and (ii), a “**Change in Law Event**”); or
- (b) for it or any of its affiliates to maintain the Issuer’s hedging arrangements with respect to the CBBCs due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by applicable law or regulation, pay to each CBBC Holder a cash amount that the Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each CBBC held by such CBBC Holder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement and any charges or expenses including any taxes or duties which are incurred or withheld as determined by the Issuer in its sole and absolute discretion (acting in good faith and in a commercially reasonable manner). Payment will be made in such manner as shall be notified to the CBBC Holders in accordance with Condition 11.

8. Purchases

The Issuer and/or any of its subsidiaries and affiliates may at any time purchase CBBCs at any price in the open market or by tender or by private treaty. Any CBBCs so purchased may be held or resold or surrendered for cancellation.

9. Global Certificate

The CBBCs are represented by the Global Certificate registered in the name of HKSCC Nominees Limited and deposited with CCASS in accordance with the CCASS Rules. CBBC Holders will not be entitled to definitive certificates in respect of any CBBCs issued or transferred to them.

10. Meetings of CBBC Holders; Modification

- (a) *Meetings of CBBC Holders.* The Instrument contains provisions for convening meetings of the CBBC Holders to consider any matter affecting their interests, including the sanctioning by Extraordinary Resolution (as defined in the Instrument) of a modification of the provisions of the CBBCs or of the Global Certificate.

Any resolution to be passed in a meeting of the CBBC Holders shall be decided by poll. Such a meeting may be convened by the Issuer or by CBBC Holders holding not less than 10 per cent. of the CBBCs for the time being remaining unexercised. The quorum at any such meeting for passing an Extraordinary Resolution will be two or more persons holding or representing not less than 25 per cent. of the CBBCs for the time being remaining unexercised, or at any adjourned meeting two or more persons being or representing CBBC Holders whatever the number of CBBCs so held or represented.

A resolution will be an Extraordinary Resolution when it has been passed at a duly convened meeting by not less than three-quarters of the votes cast by such CBBC Holders who, being entitled to do so, vote in person or by proxy.

An Extraordinary Resolution passed at any meeting of the CBBC Holders shall be binding on all the CBBC Holders, whether or not they are present at the meeting.

Resolutions can be passed in writing without a meeting of the CBBC Holders being held if passed unanimously.

- (b) *Modification.* The Issuer may, without the consent of the CBBC Holders, effect any modification of the terms and conditions of the CBBCs or the Global Certificate which, in the opinion of the Issuer, is:
- (i) not materially prejudicial to the interests of the CBBC Holders generally (without considering the circumstances of any individual CBBC Holder or the tax or other consequences of such modification in any particular jurisdiction);
 - (ii) of a formal, minor or technical nature;
 - (iii) made to correct a manifest error; or
 - (iv) necessary in order to comply with mandatory provisions of the laws or regulations of Hong Kong.

Any such modification shall be binding on the CBBC Holders and shall be notified to them by the Issuer as soon as practicable in accordance with Condition 11.

11. Notices

All notices to CBBC Holders will be validly given if published in English and in Chinese on the website of Hong Kong Exchanges and Clearing Limited. Such notices shall be deemed to have been given on the date of the first such publication. If publication is not practicable, notice will be given in such other manner as the Issuer may determine.

12. Further Issues

The Issuer shall be at liberty from time to time, without the consent of the CBBC Holders, to create and issue further CBBCs so as to form a single series with the CBBCs.

13. Contracts (Rights of Third Parties) Ordinance

A person who is not a party to these Conditions has no right under the Contracts (Rights of Third Parties) Ordinance (Cap. 623 of the Laws of Hong Kong) to enforce or to enjoy the benefit of any term of the CBBCs.

14. Governing Law

The CBBCs, the Global Certificate and the Instrument will be governed by and construed in accordance with the laws of the Hong Kong Special Administrative Region of the People's Republic of China ("**Hong Kong**"). The Issuer and each CBBC Holder (by its purchase of the CBBCs) shall be deemed to have submitted for all purposes in connection with the CBBCs, the Global Certificate and the Instrument to the non-exclusive jurisdiction of the courts of Hong Kong.

15. Language

In the event of any inconsistency between the Chinese translation of these Conditions and the English version of these Conditions, the English version of these Conditions shall prevail.

The relevant terms and conditions will, together with the supplemental provisions contained in the relevant launch announcement and supplemental listing document and subject to completion and amendment, be endorsed on the global certificate. The applicable launch announcement and supplemental listing document in relation to the issue of any series of structured products may specify additional terms and conditions which shall, to the extent so specified or to the extent inconsistent with the relevant terms and conditions, replace or modify the relevant terms and conditions for the purpose of such series of structured products. Capitalised terms used in the relevant terms and conditions and not otherwise defined therein shall have the meaning given to them in the relevant launch announcement and supplemental listing document.

TERMS AND CONDITIONS OF THE FUND CALLABLE BULL/BEAR CONTRACTS (CASH SETTLED)

1. Form, Status, Transfer and Title

- (a) *Form.* The Callable Bull/Bear Contracts (the “**CBBCs**”) (which expression shall, unless the context otherwise requires, include any further CBBCs issued pursuant to Condition 13) relating to the Units of the Fund are issued in registered form subject to and with the benefit of a global certificate by way of deed poll (the “**Global Certificate**”) dated the Issue Date, made by The Hongkong and Shanghai Banking Corporation Limited (the “**Issuer**”) and an instrument by way of deed poll dated 2 April 2012 executed by the Issuer (the “**Instrument**”) Copies of the Global Certificate and the Instrument are available for inspection at the specified office of the Issuer. The CBBC Holders (as defined below) are entitled to the benefit of, are bound by and are deemed to have notice of all the provisions of the Global Certificate and the Instrument.
- (b) *Status.* The CBBCs represent general, unsecured, contractual obligations of the Issuer and of no other person and rank *pari passu* among themselves and (save for certain obligations required to be preferred by law) equally with all other unsecured obligations of the Issuer.
- (c) *Transfer.* Transfers of beneficial interests in the CBBCs may be effected only in Board Lots or integral multiples thereof in CCASS (as defined below) in accordance with the CCASS Rules (as defined below).
- (d) *Title.* Each person who is for the time being shown in the register kept by the Issuer as entitled to a particular number of CBBCs shall be treated by the Issuer as the absolute owner and holder of such number of CBBCs. The expression “**CBBC Holder**” shall be construed accordingly.

2. CBBC Rights and Exercise Expenses

- (a) *CBBC Rights.* Every Board Lot gives each CBBC Holder, (i) upon due exercise and compliance with Condition 4, the right to receive the payment of the Cash Settlement Amount, (if any) less any Exercise Expenses or (ii) upon compliance with Condition 4, the right to receive the payment of the Residual Value, (if any) less any Exercise Expenses following the occurrence of a Mandatory Call Event (all as defined below).
- (b) *Exercise Expenses.* On expiry of the CBBCs or upon the occurrence of a Mandatory Call Event, CBBC Holders are required to pay the Exercise Expenses. To effect such payment, an irrevocable authorisation to deduct the Exercise Expenses from the applicable Cash Settlement Amount or the Residual Value (as the case may be) is deemed to be given by a CBBC Holder to the Issuer upon purchase of the CBBCs. Any Exercise Expenses which have not been determined on the Expiry Date or

following the Mandatory Call Event shall be notified to the CBBC Holder as soon as practicable after determination thereof by the Issuer and shall be paid by the CBBC Holder immediately upon demand.

(c) *Definitions.* For the purposes of these Conditions:

“Board Lot” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“Business Day” means a day (excluding Saturdays) on which the Stock Exchange (as defined below) is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong;

“Call Price” means the price of the Units specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

“Cash Settlement Amount” means:

(1) in the case of a series of bull CBBCs and in respect of every Board Lot, an amount in the Settlement Currency calculated by the Issuer as equal to:

$$\begin{array}{l} \text{Cash Settlement} \\ \text{Amount per} \\ \text{Board Lot} \end{array} = \frac{\text{Entitlement} \times (\text{Closing Price} - \text{Strike Price}) \times \text{one Board Lot}}{\text{Number of CBBCs per Entitlement}}$$

(2) in the case of a series of bear CBBCs and in respect of every Board Lot, an amount in the Settlement Currency calculated by the Issuer as equal to:

$$\begin{array}{l} \text{Cash Settlement} \\ \text{Amount per} \\ \text{Board Lot} \end{array} = \frac{\text{Entitlement} \times (\text{Strike Price} - \text{Closing Price}) \times \text{one Board Lot}}{\text{Number of CBBCs per Entitlement}}$$

provided that if the Cash Settlement Amount is a negative amount it shall be deemed to be zero;

“CCASS” means the Central Clearing and Settlement System established and operated by Hong Kong Securities Clearing Company Limited (**“HKSCC”**);

“CCASS Rules” means the General Rules of CCASS and the CCASS Operational Procedures in effect from time to time;

“CCASS Settlement Day” has the meaning ascribed to the term “Settlement Day” in the General Rules of CCASS, subject to such modification and amendment prescribed by HKSCC from time to time;

“Closing Price” means the official closing price of one Unit (as derived from the Daily Quotation Sheet of the Stock Exchange, subject to any adjustment to such closing price as may be necessary to reflect any event as contemplated in Condition 6 such as capitalisation, rights issue, distribution or the like) on the Valuation Date (as defined below);

“Entitlement” means the number specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

“Exercise Expenses” means any charges or expenses including any taxes or duties which are incurred or withheld in respect of the expiry of the CBBCs or the occurrence of a Mandatory Call Event (as the case may be);

“Expiry Date” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“Fund” means the unit trust or exchange-traded fund (as the case may be) specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“IEP” means the indicative equilibrium price, as determined in accordance with the Rules and Regulations of the Stock Exchange prescribed by the Stock Exchange from time to time (the **“Trading Rules”**);

“Mandatory Call Event” occurs:

- (1) in the case of a series of bull CBBCs, if the Spot Price is at or below the Call Price at any time during a Trading Day in the Observation Period; and
- (2) in the case of a series of bear CBBCs, if the Spot Price is at or above the Call Price at any time during a Trading Day in the Observation Period;

“Market Disruption Event” means:

- (1) (i) with respect to exercise of the CBBCs, the occurrence or existence on the Valuation Date during the one-half hour period that ends at the close of trading of, or (ii) with respect to the determination of the Residual Value, the occurrence or existence during a trading session resulting in any suspension of or limitation imposed on trading (by reason of movements in price exceeding limits permitted by the Stock Exchange or otherwise) on the Stock Exchange in
 - (a) the Units; and/or
 - (b) any options or futures contracts relating to the Units if, in any such case, that suspension or limitation is, in the determination of the Issuer, material; or
- (2) (i) with respect to exercise of the CBBCs, the issuance of the tropical cyclone warning signal number 8 or above or a “BLACK” rainstorm signal which either results in the Stock Exchange being closed for dealings for an entire day or results in the Stock Exchange being closed prior to its regular time for close of trading on any day, provided that there shall be no Market Disruption Event solely by reason of the Stock Exchange opening later than its regular time for open of trading on any day as a result of the tropical cyclone warning signal number 8 or above or the BLACK rainstorm signal having been issued, or (ii) with respect to the determination of the Residual Value and in respect of a trading session, the issuance of the tropical cyclone warning signal number 8 or above or a BLACK rainstorm signal which results in the Stock Exchange being closed for dealings; or
- (3) a limitation or closure of the Stock Exchange due to any unforeseen circumstances;

“Maximum Trade Price” means the highest Spot Price (subject to any adjustment to such Spot Price as may be necessary to reflect any event as contemplated in Condition 6 such as capitalisation, rights issue, distribution or the like) during the MCE Valuation Period;

“MCE Valuation Period” means the period commencing from and including the moment upon which the Mandatory Call Event occurs (the trading session during which the Mandatory Call Event occurs is the **“First Session”**) and up to the end of the trading session on the Stock Exchange immediately following the First Session (the **“Second Session”**) unless, in the determination of the Issuer in good faith, the Second Session for any reason (including, without limitation, a Market Disruption Event occurring and subsisting in the Second Session) does not contain any continuous period of one hour or more than one hour during which trading in the Units is permitted on the Stock Exchange with no limitation imposed, in which case the MCE Valuation Period shall be extended to the end of the subsequent trading session following the Second Session during which trading in the Units is permitted on the Stock Exchange with no limitation imposed for a continuous period of at least one hour notwithstanding the existence or continuance of a Market Disruption Event in such postponed trading session, unless the Issuer determines in good faith that each trading session on each of the four Trading Days immediately following the date on which the Mandatory Call Event occurs does not contain any continuous period of one hour or more than one hour during which trading in the Units is permitted on the Stock Exchange with no limitation imposed. In that case:

- (i) the period commencing from the First Session up to, and including, the last trading session on the Stock Exchange of the fourth Trading Day immediately following the date on which the Mandatory Call Event occurs shall be deemed to be the MCE Valuation Period; and
- (ii) the Issuer shall determine the Maximum Trade Price or the Minimum Trade Price (as the case may be) having regard to the then prevailing market conditions, the last reported Spot Price and such other factors as the Issuer may determine to be relevant in good faith.

For the avoidance of doubt, all Spot Prices available throughout the extended MCE Valuation Period shall be taken into account to determine the Maximum Trade Price or the Minimum Trade Price (as the case may be) for the calculation of the Residual Value.

For the purposes of this definition,

- (a) the pre-opening session, the morning session and, in the case of half day trading, the closing auction session (if any) of the same day; and
- (b) the afternoon session and the closing auction session (if any) of the same day,

shall each be considered as one trading session only;

“Minimum Trade Price” means the lowest Spot Price (subject to any adjustment to such Spot Price as may be necessary to reflect any event as contemplated in Condition 6 such as capitalisation, rights issue, distribution or the like) during the MCE Valuation Period;

“Observation Commencement Date” has the meaning specified in the relevant Launch Announcement and Supplemental Listing Document;

“Observation Period” means the period from the Observation Commencement Date to the Trading Day immediately preceding the Expiry Date (both dates inclusive);

“Post MCE Trades” means, subject to such modification and amendment prescribed by the Stock Exchange from time to time, (i) if the Mandatory Call Event occurs during a pre-opening session or a closing auction session (if applicable), as the case may be, of the Stock Exchange, all auction trades in the CBBCs concluded in such session and all manual trades concluded after the end of the pre-order matching period in such session; or (ii) if the Mandatory Call Event occurs during a continuous trading session of the Stock Exchange, all trades in the CBBCs concluded via auto-matching or manually after the time of the occurrence of a Mandatory Call Event;

“Price Determination Date” means the date on which the Maximum Trade Price or the Minimum Trade Price (as the case may be) is determined by the Issuer;

“Residual Value” means an amount in the Settlement Currency calculated in accordance with the formula specified below:

- (1) in the case of a series of bull CBBCs and in respect of every Board Lot:

$$\frac{\text{Entitlement} \times (\text{Minimum Trade Price} - \text{Strike Price}) \times \text{one Board Lot}}{\text{Number of CBBCs per Entitlement}}$$

- (2) in the case of a series of bear CBBCs and in respect of every Board Lot:

$$\frac{\text{Entitlement} \times (\text{Strike Price} - \text{Maximum Trade Price}) \times \text{one Board Lot}}{\text{Number of CBBCs per Entitlement}}$$

provided that if the Residual Value is a negative amount it shall be deemed to be zero;

“Settlement Currency” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“Settlement Date” means the third CCASS Settlement Day after (i) the end of the MCE Valuation Period or (ii) the later of (a) the Expiry Date; and (b) the day on which the Closing Price is determined in accordance with these Conditions (as the case may be);

“Settlement Disruption Event” means an event beyond the control of the Issuer as a result of which the Issuer is unable to procure payment electronically through CCASS to the relevant bank account designated by the relevant CBBC Holder (**“Designated Bank Account”**);

“Spot Price” means:

- (i) in respect of a continuous trading session of the Stock Exchange, the price per Unit concluded by means of automatic order matching on the Stock Exchange as reported in the official real-time dissemination mechanism for the Stock Exchange during such continuous trading session in accordance with the Trading Rules, excluding direct business (as defined in the Trading Rules); and
- (ii) in respect of a pre-opening session or a closing auction session (if applicable) of the Stock Exchange (as the case may be), the final IEP of the Unit (if any) calculated at the end of the pre-order matching period of such pre-opening

session or closing auction session (if applicable) (as the case may be) in accordance with the Trading Rules, excluding direct business (as defined in the Trading Rules),

subject to such modification and amendment prescribed by the Stock Exchange from time to time;

“**Stock Exchange**” means The Stock Exchange of Hong Kong Limited;

“**Strike Price**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

“**Trading Day**” means a day on which the Stock Exchange is scheduled to be open for trading for its regular trading sessions;

“**Units**” means the units or shares (as the case may be) of the Fund specified as such in the relevant Launch Announcement and Supplemental Listing Document; and

“**Valuation Date**” means the Trading Day immediately preceding the Expiry Date.

3. Exercise of CBBCs, Mandatory Call Event, Automatic Exercise and Expiry

- (a) *Exercise of CBBCs.* The CBBCs are exercisable on the Expiry Date, provided that a Mandatory Call Event has not occurred.
- (b) *Mandatory Call Event.* Any CBBC in respect of which a Mandatory Call Event has occurred will automatically expire upon the occurrence of a Mandatory Call Event and every Board Lot will entitle the CBBC Holder to receive the Residual Value (if any) less any Exercise Expenses on the Settlement Date.
- (c) *Automatic Exercise.* Any CBBC which has not automatically expired will automatically be exercised if, on the Expiry Date, the value of the Cash Settlement Amount is greater than zero (without prior notice being given to the CBBC Holders). The CBBC Holders will not be required to deliver any exercise notice and the Issuer or its agent will pay to the CBBC Holders the Cash Settlement Amount (if any) less any Exercise Expenses in accordance with Condition 4(d).
- (d) *Issuer's Obligations.* For the avoidance of doubt, where the CBBCs have been exercised on the Expiry Date or have automatically expired upon the occurrence of a Mandatory Call Event (as the case may be), payment of the Cash Settlement Amount or the Residual Value (if any) (as the case may be) less any Exercise Expenses shall constitute full and final settlement of the obligations of the Issuer with respect to the CBBCs. Subject to such payment having been made, the Issuer shall have no obligation towards the relevant CBBC Holder under the CBBCs subsequent to such Expiry Date or the date on which a Mandatory Call Event occurs (as the case may be).
- (e) *Expiry.* Any CBBC which does not automatically expire in accordance with Condition 3(b) or which has not been automatically exercised in accordance with Condition 3(c) (as the case may be) shall expire immediately without value thereafter and all rights of the CBBC Holder and obligations of the Issuer with respect to such CBBC shall cease.

4. Exercise of CBBCs, Cancellation and Payment

- (a) *Board Lots.* CBBCs may only be exercised in a Board Lot or integral multiples thereof.
- (b) *No requirement to deliver an exercise notice.* The CBBC Holders will not be required to deliver an exercise notice for any purpose in relation to the CBBCs.
- (c) *Cancellation.* The Issuer will, with effect from the first Business Day following the date on which a Mandatory Call Event occurs or the Expiry Date (as the case may be), remove from its register the name of the person in respect of the CBBCs which (i) are the subject of an occurrence of a Mandatory Call Event; (ii) are the subject of an exercise pursuant to automatic exercise in accordance with these Conditions; or (iii) have expired worthless, and thereby cancel the relevant CBBCs.
- (d) *Cash Settlement.* Subject to automatic exercise of CBBCs or the occurrence of a Mandatory Call Event in accordance with these Conditions, the Issuer will make a payment, in respect of every Board Lot, to the relevant CBBC Holder equal to the Cash Settlement Amount or the Residual Value (if any) (as the case may be) less any Exercise Expenses. If the Cash Settlement Amount or the Residual Value is equal to, or less than, the determined Exercise Expenses, no Cash Settlement Amount or Residual Value shall be payable by the Issuer.

The Cash Settlement Amount or the Residual Value (as the case may be) less the determined Exercise Expenses shall be despatched no later than the Settlement Date by crediting that amount in accordance with the CCASS Rules, to the Designated Bank Account.

If as a result of a Settlement Disruption Event, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the CBBC Holder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the CBBC Holder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the CBBC Holder for any interest in respect of the amount due or any loss or damage that such CBBC Holder may suffer as a result of the existence of the Settlement Disruption Event, nor shall the Issuer be liable under any circumstances for any acts or defaults of CCASS in relation to the performance of its duties in relation to the CBBCs.

If the Issuer determines, in its sole discretion (acting in good faith and in a commercially reasonable manner), that a Market Disruption Event has occurred on the Valuation Date, then that Valuation Date shall be postponed to the first succeeding Trading Day on which the Issuer determines that there is no Market Disruption Event, unless the Issuer determines that there is a Market Disruption Event on each of the four Trading Days immediately following the original date that, but for the Market Disruption Event, would have been the Valuation Date. In that case:

- (i) the fourth Trading Day immediately following the original date shall be deemed to be the Valuation Date, notwithstanding the Market Disruption Event; and
- (ii) the Issuer shall determine the closing price of the Units having regard to the then prevailing market conditions, the last reported Spot Price and such other factors as the Issuer determines to be relevant in good faith.

5. Register

The Issuer will at all times maintain or arrange for the maintenance of a register in Hong Kong.

6. Adjustments

- (a) *Rights Issues*. If and whenever the Fund shall, by way of Rights (as defined below), offer new Units for subscription at a fixed subscription price to the holders of existing Units pro rata to existing holdings (a “**Rights Offer**”), the Entitlement will be adjusted to take effect on the Business Day on which trading in the Units of the Fund becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

Where:

$$\text{Adjustment Factor} = \frac{1 + M}{1 + (R/S) \times M}$$

E: Existing Entitlement immediately prior to the Rights Offer

S: Cum-Rights Unit price being the closing price of the Units on the Stock Exchange on the last Business Day on which the Units are traded on a cum-Rights basis

R: Subscription price per new Unit as specified in the Rights Offer plus an amount equal to any distributions or other benefits foregone to exercise the Rights

M: Number of new Unit(s) (whether a whole or a fraction) per existing Unit each holder thereof is entitled to subscribe

Provided that if the adjustment to be made would result in the Entitlement being changed by one per cent. or less, then no adjustment will be made. In addition, the Issuer shall adjust the Call Price and/or Strike Price in accordance with the following formulas:

$$\begin{array}{l} \text{Adjusted Call Price} \\ \text{(rounded to the nearest 0.001)} \end{array} = \text{Call Price} \div \text{Adjustment Factor}$$

$$\begin{array}{l} \text{Adjusted Strike Price} \\ \text{(rounded to the nearest 0.001)} \end{array} = \text{Strike Price} \div \text{Adjustment Factor}$$

Adjustment to the Call Price and/or Strike Price shall take effect on the same day that the Entitlement is adjusted.

For the purposes of these Conditions:

“**Rights**” means the right(s) attached to each existing Unit or needed to acquire one new Unit (as the case may be) which are given to the holders of existing Units to subscribe at a fixed subscription price for new Units pursuant to the Rights Offer (whether by the exercise of one Right, a part of a Right or an aggregate number of Rights).

- (b) *Bonus Issues*. If and whenever the Fund shall make an issue of Units credited as fully paid to the holders of Units generally (other than pursuant to a scrip dividend or distribution or similar scheme for the time being operated by the Fund or otherwise in lieu of a cash dividend or distribution and without any payment or other consideration

being made or given by such holders) (a “**Bonus Issue**”) the Entitlement will be increased on the Business Day on which trading in the Units of the Fund becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

Where:

$$\text{Adjustment Factor} = 1 + N$$

E: Existing Entitlement immediately prior to the Bonus Issue

N: Number of additional Units (whether a whole or a fraction) received by a holder of existing Units for each Unit held prior to the Bonus Issue

Provided that if the adjustment to be made would result in the Entitlement being changed by one per cent. or less, then no adjustment will be made. In addition, the Issuer shall adjust the Call Price and/or Strike Price in accordance with the following formulas:

$$\begin{array}{l} \text{Adjusted Call Price} \\ \text{(rounded to the nearest 0.001)} \end{array} = \text{Call Price} \div \text{Adjustment Factor}$$

$$\begin{array}{l} \text{Adjusted Strike Price} \\ \text{(rounded to the nearest 0.001)} \end{array} = \text{Strike Price} \div \text{Adjustment Factor}$$

Adjustment to the Call Price and/or Strike Price shall take effect on the same day that the Entitlement is adjusted.

- (c) *Unit Subdivisions or Consolidations.* If and whenever the Fund shall subdivide its Units or any class of its outstanding units or shares into a greater number of units or shares (a “**Subdivision**”) or consolidate the Units or any class of its outstanding units or shares into a smaller number of units or shares (a “**Consolidation**”), the Entitlement in effect immediately prior thereto will be increased (in the case of a Subdivision) or decreased (in the case of a Consolidation) accordingly in each case on the day on which the relevant Subdivision or Consolidation shall have taken effect. In addition, the Call Price and/or Strike Price (each of which shall be rounded to the nearest 0.001) will be decreased (in the case of a Subdivision) or increased (in the case of a Consolidation) accordingly.

Adjustment to the Call Price and/or Strike Price shall take effect on the same day that the Entitlement is adjusted.

- (d) *Merger or Consolidation.* If it is announced that the Fund is to or may merge or consolidate with or into any other fund or corporation (including becoming, by agreement or otherwise, controlled by any person or corporation) (except where the Fund is the surviving entity in a merger) or that it is to or may sell or transfer all or substantially all of its assets, the rights attaching to the CBBCs may in the absolute discretion of the Issuer (acting in good faith and in a commercially reasonable manner) be amended no later than the Business Day preceding the consummation of such merger, consolidation, sale or transfer (each a “**Restructuring Event**”) (as determined by the Issuer in its absolute discretion (acting in good faith and in a commercially reasonable manner)).

The rights attaching to the CBBCs after the adjustment shall, after such Restructuring Event, relate to the number of units or shares of the fund(s) or corporation(s) resulting from or surviving such Restructuring Event or other securities (“**Substituted**”).

Securities”) and/or cash offered in substitution for the affected Units, as the case may be, to which the holder of such number of Units to which the CBBCs related immediately before such Restructuring Event would have been entitled upon such Restructuring Event. Thereafter the provisions hereof shall apply to such Substituted Securities, provided that any Substituted Securities may, in the absolute discretion of the Issuer (acting in good faith and in a commercially reasonable manner), be deemed to be replaced by an amount in the relevant currency equal to the market value or, if no market value is available, fair value, of such Substituted Securities in each case as determined by the Issuer as soon as practicable after such Restructuring Event is effected.

For the avoidance of doubt, any remaining Units shall not be affected by this paragraph (d) and, where cash is offered in substitution for Units or is deemed to replace Substituted Securities as described above, references in these Conditions to the Units shall include any such cash.

- (e) *Cash Distributions.* Generally, no adjustment will be made for an ordinary cash distribution (whether or not it is offered with a scrip alternative). For any other forms of cash distribution (each a “**Cash Distribution**”) announced by the Fund, no adjustment will be made unless the value of the Cash Distribution accounts for two per cent. or more of the Unit’s closing price on the day of announcement by the Fund.

If and whenever the Fund shall make a Cash Distribution credited as fully paid to the holders of Units generally, the Entitlement will be adjusted to take effect on the Business Day on which trading in the Units of the Fund becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

Where:

$$\text{Adjustment Factor} = \frac{S - OD}{S - OD - CD}$$

OD: Amount of the relevant ordinary cash distribution per Unit, provided that OD shall be deducted from S only if the Business Day on which trading in the Units of the Fund becomes ex-entitlement with respect to the Cash Distribution and the distribution of the ordinary cash distribution by the Fund falls on the same date. For the avoidance of doubt, OD shall be deemed to be zero if the ex-entitlement dates of the relevant ordinary cash distribution and the Cash Distribution are different

CD: Amount of the relevant Cash Distribution per Unit

E: Existing Entitlement immediately prior to the Cash Distribution

S: Cum-Cash Distribution Unit price being the closing price of the Units on the Stock Exchange on the last Business Day on which the Units of the Fund are traded on a cum-Cash Distribution basis

In addition, the Issuer shall adjust the Call Price and/or Strike Price in accordance with the following formulas:

$$\begin{aligned} &\text{Adjusted Call Price} \\ &(\text{rounded to the nearest } 0.001) \end{aligned} = \text{Call Price} \div \text{Adjustment Factor}$$

$$\begin{array}{l} \text{Adjusted Strike Price} \\ \text{(rounded to the nearest 0.001)} \end{array} = \text{Strike Price} \div \text{Adjustment Factor}$$

Adjustment to the Call Price and/or Strike Price shall take effect on the same day that the Entitlement is adjusted.

- (f) *Other Adjustments.* Without prejudice to and notwithstanding any prior adjustment(s) made pursuant to the applicable Conditions, the Issuer may (but shall not be obliged to) make such other adjustments to the terms and conditions of the CBBCs as appropriate where any event (including the events as contemplated in the applicable Conditions) occurs and irrespective of, in substitution for, or in addition to the provisions contemplated in the applicable Conditions, provided that such adjustment is:
- (i) not materially prejudicial to the interests of the CBBC Holders generally (without considering the circumstances of any individual CBBC Holder or the tax or other consequences of such adjustment in any particular jurisdiction); or
 - (ii) determined by the Issuer in good faith to be appropriate and commercially reasonable.

For the avoidance of doubt, such adjustments may, but need not, be determined by reference to the adjustment(s) made in respect of such event or events by an options exchange to options on the relevant Units traded on such options exchange.

- (g) *Notice of Adjustments.* All determinations made by the Issuer pursuant hereto will be conclusive and binding on the CBBC Holders. The Issuer will give, or procure that there is given, notice as soon as practicable of any adjustment and of the date from which such adjustment is effective by publication in accordance with Condition 11.

7. Illegality or Impracticability

The Issuer is entitled to terminate the CBBCs if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

- (a) for it to perform its obligations under the CBBCs, in whole or in part, as a result of: (i) the adoption of, any change in, any relevant law or regulation (including any tax law); or (ii) the promulgation of, or any change in the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law), (each of (i) and (ii), a “**Change in Law Event**”); or
- (b) for it or any of its affiliates to maintain the Issuer’s hedging arrangements with respect to the CBBCs due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by applicable law or regulation, pay to each CBBC Holder a cash amount that the Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each CBBC held by such CBBC Holder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement and any charges or expenses including any taxes or duties which are incurred or withheld as determined by the Issuer in its sole and absolute discretion (acting in good faith and in a commercially reasonable manner). Payment will be made in such manner as shall be notified to the CBBC Holders in accordance with Condition 11.

8. Purchases

The Issuer and/or any of its subsidiaries and affiliates may at any time purchase CBBCs at any price in the open market or by tender or by private treaty. Any CBBCs so purchased may be held or resold or surrendered for cancellation.

9. Global Certificate

The CBBCs are represented by the Global Certificate registered in the name of HKSCC Nominees Limited and deposited with CCASS in accordance with the CCASS Rules. CBBC Holders will not be entitled to definitive certificates in respect of any CBBCs issued or transferred to them.

10. Meetings of CBBC Holders; Modification

- (a) *Meetings of CBBC Holders.* The Instrument contains provisions for convening meetings of the CBBC Holders to consider any matter affecting their interests, including the sanctioning by Extraordinary Resolution (as defined in the Instrument) of a modification of the provisions of the CBBCs or of the Global Certificate.

Any resolution to be passed in a meeting of the CBBC Holders shall be decided by poll. Such a meeting may be convened by the Issuer or by CBBC Holders holding not less than 10 per cent. of the CBBCs for the time being remaining unexercised. The quorum at any such meeting for passing an Extraordinary Resolution will be two or more persons holding or representing not less than 25 per cent. of the CBBCs for the time being remaining unexercised, or at any adjourned meeting two or more persons being or representing CBBC Holders whatever the number of CBBCs so held or represented.

A resolution will be an Extraordinary Resolution when it has been passed at a duly convened meeting by not less than three-quarters of the votes cast by such CBBC Holders who, being entitled to do so, vote in person or by proxy.

An Extraordinary Resolution passed at any meeting of the CBBC Holders shall be binding on all the CBBC Holders, whether or not they are present at the meeting.

Resolutions can be passed in writing without a meeting of the CBBC Holders being held if passed unanimously.

- (b) *Modification.* The Issuer may, without the consent of the CBBC Holders, effect any modification of the terms and conditions of the CBBCs or the Global Certificate which, in the opinion of the Issuer, is:
- (i) not materially prejudicial to the interests of the CBBC Holders generally (without considering the circumstances of any individual CBBC Holder or the tax or other consequences of such modification in any particular jurisdiction);
 - (ii) of a formal, minor or technical nature;
 - (iii) made to correct a manifest error; or
 - (iv) necessary in order to comply with mandatory provisions of the laws or regulations of Hong Kong.

Any such modification shall be binding on the CBBC Holders and shall be notified to them by the Issuer as soon as practicable in accordance with Condition 11.

11. Notices

All notices to CBBC Holders will be validly given if published in English and in Chinese on the website of Hong Kong Exchanges and Clearing Limited. Such notices shall be deemed to have been given on the date of the first such publication. If publication is not practicable, notice will be given in such other manner as the Issuer may determine.

12. Liquidation

In the event of (i) a liquidation, dissolution or termination of the Fund or (ii) a liquidation or dissolution of the trustee of the Fund (including any successor trustee appointed from time to time) (“Trustee”) or where applicable, the Trustee ceases to be authorised under the Fund to hold the property of the Fund in its name and perform its obligations under the trust deed constituting the Fund or (iii) the appointment of a liquidator, receiver or administrator or analogous person under applicable law in respect of the whole or substantially the whole of the Fund’s or the Trustee’s (as the case may be) undertaking, property or assets or (iv) the withdrawal of the Securities and Futures Commission’s authorisation of the Fund under the Securities and Futures Ordinance, all unexercised CBBCs will lapse and shall cease to be valid for any purpose, in the case of (i) voluntary liquidation, on the effective date of the relevant resolution, (ii) an involuntary liquidation or dissolution, on the date of the relevant court order, (iii) a termination, on the effective date of the termination, (iv) the appointment of a liquidator or receiver or administrator or analogous person under any applicable law in respect of the whole or substantially the whole of the Fund’s or the Trustee’s (as the case may be) undertaking, property or assets, on the date on which such appointment is effective, or (v) withdrawal of authorisation, on the date on which such withdrawal becomes effective, but subject (in any such case) to any contrary mandatory requirement of law.

13. Further Issues

The Issuer shall be at liberty from time to time, without the consent of the CBBC Holders, to create and issue further CBBCs so as to form a single series with the CBBCs.

14. Delisting

- (a) If at any time the Units cease to be listed on the Stock Exchange, the Issuer shall give effect to these Conditions in such manner and make such adjustments to the rights attaching to the CBBCs as it shall, in its absolute discretion (acting in good faith and in a commercially reasonable manner), consider appropriate to ensure, so far as it is reasonably able to do so, that the interests of the CBBC Holders generally are not materially prejudiced as a consequence of such delisting (without considering the individual circumstances of any CBBC Holder or the tax or other consequences that may result in any particular jurisdiction).
- (b) Without prejudice to the generality of Condition 14(a), where the Units are, or, upon the delisting, become, listed on any other stock exchange, these Conditions may, in the absolute discretion of the Issuer (acting in good faith and in a commercially reasonable manner), be amended to the extent necessary to allow for the substitution of that other stock exchange in place of the Stock Exchange and the Issuer may, without the consent of the CBBC Holders, make such adjustments to the entitlements of CBBC Holders on exercise (including, if appropriate, by converting foreign currency amounts at prevailing market rates into the relevant currency) as may be appropriate in the circumstances.
- (c) The Issuer shall determine, in its absolute discretion (acting in good faith and in a commercially reasonable manner), any adjustment or amendment and its determination shall be conclusive and binding on the CBBC Holders save in the case of manifest error. Notice of any adjustments or amendments shall be given to the CBBC Holders in accordance with Condition 11 as soon as practicable after they are determined.

15. Contracts (Rights of Third Parties) Ordinance

A person who is not a party to these Conditions has no right under the Contracts (Rights of Third Parties) Ordinance (Cap. 623 of the Laws of Hong Kong) to enforce or to enjoy the benefit of any term of the CBBCs.

16. Governing Law

The CBBCs, the Global Certificate and the Instrument will be governed by and construed in accordance with the laws of the Hong Kong Special Administrative Region of the People's Republic of China ("**Hong Kong**"). The Issuer and each CBBC Holder (by its purchase of the CBBCs) shall be deemed to have submitted for all purposes in connection with the CBBCs, the Global Certificate and the Instrument to the non-exclusive jurisdiction of the courts of Hong Kong.

17. Language

In the event of any inconsistency between the Chinese translation of these Conditions and the English version of these Conditions, the English version of these Conditions shall prevail.

INFORMATION ABOUT US

Incorporation and Business

On 14 August 1866, “The Hongkong and Shanghai Banking Corporation” was established with limited liability in the Hong Kong Special Administrative Region (the “**Hong Kong SAR**”) by The Hongkong and Shanghai Bank Ordinance 1866, as subsequently amended by The Hongkong and Shanghai Banking Corporation Limited Ordinance (Cap. 70) of Hong Kong (the “**Ordinance**”). On 6 October 1989, it was registered under the name of “The Hongkong and Shanghai Banking Corporation Limited” pursuant to Part IX of the then Companies Ordinance (Cap. 32) of Hong Kong, which is now Part 17 of the Companies Ordinance (Cap. 622) of Hong Kong with company number 263876. On 6 June 1997, Memorandum and Articles of Association (the “**M&A**”) were adopted, replacing the Ordinance in part and superseding The Hongkong and Shanghai Bank Regulations (Cap. 70A) of Hong Kong which formerly were the constitutive documents of the Bank. Subsequently, a new set of Articles of Association was adopted in substitution for and to the exclusion of the M&A on 19 May 2014. Its registered and head office is situated at 1 Queen’s Road Central, Hong Kong.

Established in Hong Kong and Shanghai in 1865, The Hongkong and Shanghai Banking Corporation Limited is the founding member of HSBC Holdings plc and its subsidiaries (the “**HSBC Group**”) – one of the world’s largest banking and financial services organisations. It is the largest bank incorporated in Hong Kong and one of Hong Kong’s three note-issuing banks. It is a wholly-owned subsidiary of HSBC Holdings plc, the holding company of the HSBC Group, which has an international network covering: Europe, Asia, Middle East and North Africa, North America and Latin America.

Directors and Secretary

As of the date of this base listing document, the Directors and Secretary of the Bank are set out below.

Names of Directors

Peter Tung Shun WONG[#], GBS, JP, *Chairman*
David Gordon ELTON[#], GBS, CBE, JP, *Deputy Chairman*
David Yi Chien LIAO, *Co-Chief Executive Officer*
Surendranath Ravi ROSHA, *Co-Chief Executive Officer*
Graham John BRADLEY*
Sonia Chi Man CHENG*
Dr Christopher Wai Chee CHENG*, GBS, OBE
Yiu Kwan CHOI*
Andrea Lisa DELLA MATTEA*
Rajnish KUMAR*
Beau Khoon Chen KUOK*
Irene Yun-lien LEE*
Victor Tzar Kuoi LI[#]
Ewen James STEVENSON[#]
Kevin Anthony WESTLEY*, BBS
Tan Sri (Sir) Francis Sock Ping YEOH*, KBE, CBE

* independent non-executive Director

[#] non-executive Director

Name of Secretary

Paul Stafford, FCG HKFCG

Main Subsidiaries

The main subsidiaries of the Bank as at 31 December 2021 are:

Name	Place of Incorporation	Principal activity	The Bank Group's interest in issued share capital/ registered or charter capital (per cent.)
Hang Seng Bank Limited	Hong Kong	Banking	62.14
HSBC Bank (China) Company Limited	People's Republic of China	Banking	100
HSBC Bank Malaysia Berhad	Malaysia	Banking	100
HSBC Bank Australia Limited ¹	Australia	Banking	100
HSBC Bank (Taiwan) Limited ¹	Taiwan	Banking	100
HSBC Bank (Singapore) Limited	Singapore	Banking	100
HSBC Life (International) Limited ¹	Bermuda	Retirement benefits and life insurance	100

Note:

1 Held indirectly

The principal places of business are the same as the places of incorporation except for HSBC Life (International) Limited which operates mainly in Hong Kong.

Share capital

The following shows the share capital of the Bank Group as at 31 December 2021:

The issued and fully paid up ordinary share capital of the Bank was HK\$172,335 million, comprising 46,440,991,798 ordinary shares, which included HK\$116,103 million paid up in HK\$ and HK\$56,232 million paid up in U.S.\$. The paid up share capital in U.S.\$ represents preference shares which were redeemed or bought back via payment out of distributable profits and for which the amount was transferred from retained earnings to share capital in accordance with the requirements of the Companies Ordinance (Cap. 622) of Hong Kong.

Total shareholders' equity

The total shareholders' equity of the Bank Group as at 31 December 2021 was HK\$923,511 million comprising HK\$172,335 million of share capital, HK\$44,615 million of other equity instruments, HK\$151,804 million of other reserves and HK\$488,055 million of retained earnings.

Subordinated liabilities

Subordinated liabilities of the Bank Group issued to third parties measured at amortised cost, as at 31 December 2021 and 2020, consisted of undated primary capital notes and other loan capital having an original term to maturity of five years or more. Subordinated liabilities issued to group entities are not included in the below.

	2021	2020
	<i>HK\$m</i>	<i>HK\$m</i>
Subordinated liabilities	4,054	4,065

Debt Securities in Issue

The debt securities in issue of the Bank Group measured at amortised cost as at 31 December 2021 were HK\$67,364 million.

SALES AND TRANSFER RESTRICTIONS

General

We have not or will not take any action that would permit a public offering of structured products or possession or distribution of any offering material in relation to the structured products in any jurisdiction where action for that purpose is required. No offers, sales or deliveries of any structured products, or distribution of any offering material relating to the structured products, may be made in or from any jurisdiction except in circumstances which will result in compliance with any applicable laws or regulations and will not impose any obligations on us. You are required to inform yourself about, and to observe, all such applicable laws and regulations.

United States of America

The structured products have not been and will not be registered under the United States Securities Act of 1933, as amended (the “**Securities Act**”), and will not be offered, sold, delivered or traded, at any time, indirectly or directly, in the United States or to, or for the account or benefit of, (a) a U.S. Person (as defined in Regulation S of the Securities Act), (b) a U.S. person as defined in 17 C.F.R. § 23.23(a)(23) (a “**CFTC U.S. Person**”) or to others for offer or sale to or for the account or benefit of any such CFTC U.S. person or (c) a “United States person” as defined in U.S. Executive Order 13959, as amended by U.S. Executive Order 14032, or in the Chinese Military-Industrial Complex Sanctions Regulations (31 C.F.R. Part 586) (“**E.O. 13959 U.S. Persons**”), to the extent that the underlyings for the relevant structured products include (i) equities whose purchase or sale by E.O. 13959 U.S. Persons is restricted under Executive Order 13959 (as amended) or (ii) provide any investment exposure to any such equities ((i) and (ii) collectively, “**E.O. 13959 Restricted Underlyings**”).

E.O. 13959 U.S. Persons are restricted from purchasing or selling the structured products with E.O. 13959 Restricted Underlyings after the effective date of the Executive Order 13959 (as amended) restrictions applicable to those underlyings and investors should seek their own independent legal advice regarding compliance with Executive Order 13959 (as amended).

European Economic Area – Prohibition of Sales to EEA Retail Investors

The structured products which are the subject of the offering contemplated by this base listing document has not been offered, sold or otherwise made available and will not be offered, sold or otherwise made available to any retail investor in the European Economic Area. For the purposes of this provision:

- (a) the expression “**retail investor**” means a person who is one (or more) of the following:
 - (i) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended, “**MiFID II**”); or
 - (ii) a customer within the meaning of Directive (EU) 2016/97 (as amended, the “**Insurance Distribution Directive**”), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or
 - (iii) not a qualified investor as defined in Regulation (EU) 2017/1129 (as amended, the “**Prospectus Regulation**”); and
- (b) the expression “**offer**” includes the communication in any form and by any means of sufficient information on the terms of the offer and the structured products to be offered so as to enable an investor to decide to purchase or subscribe for the structured products.

United Kingdom – Prohibition of Sales to UK Retail Investors

The structured products which are the subject of the offering contemplated by this base listing document has not been offered, sold or otherwise made available and will not be offered, sold or otherwise made available to any retail investor in the United Kingdom. For the purposes of this provision:

- (a) the expression “**retail investor**” means a person who is one (or more) of the following:
 - (i) a retail client, as defined in point (8) of Article 2 of Regulation (EU) No 2017/565 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018 (“**EUWA**”); or
 - (ii) a customer within the meaning of the provisions of the Financial Services and Markets Act 2000 (the “**FSMA**”) and any rules or regulations made under the FSMA to implement Directive (EU) 2016/97, where that customer would not qualify as a professional client, as defined in point (8) of Article 2(1) of Regulation (EU) No 600/2014 as it forms part of domestic law by virtue of the EUWA; or
 - (iii) not a qualified investor as defined in Article 2 of Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the EUWA; and
- (b) the expression an “**offer**” includes the communication in any form and by any means of sufficient information on the terms of the offer and the structured products to be offered so as to enable an investor to decide to purchase or subscribe for the structured products.

United Kingdom – Other Regulatory Restrictions

In respect of the United Kingdom, each dealer has further represented and agreed, and each further dealer to be appointed will be required to further represent and agree, that:

- (a) in relation to any structured products which have a maturity of less than one year, (i) it is a person whose ordinary activities involve it in acquiring, holding, managing or disposing of investments (as principal or agent) for the purposes of its business; and (ii) it has not offered or sold and will not offer or sell any structured products other than to persons whose ordinary activities involve them in acquiring, holding, managing or disposing of investments (as principal or as agent) for the purposes of their businesses or who it is reasonable to expect will acquire, hold, manage or dispose of investments (as principal or agent) for the purposes of their businesses where the issue of the structured products would otherwise constitute a contravention of Section 19 of the FSMA by the Issuer;
- (b) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA) received by it in connection with the issue or sale of any structured products in circumstances in which Section 21(1) of the FSMA does not apply to the Issuer; and
- (c) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to any structured products in, from or otherwise involving the United Kingdom.

TAXATION

The comments below are of a general nature and are only a summary of the law and practice currently applicable under the relevant law. The comments relate to the position of persons who are the absolute beneficial owners of the structured products and may not apply equally to all persons. If you are in any doubt as to your tax position on purchase, ownership, transfer or exercise of any structured product, you should consult your own tax advisers.

GENERAL

You may be required to pay stamp duties, taxes and other charges in accordance with the laws and practices of the country or territory of purchase in addition to the issue price of each structured product.

HONG KONG

Profits tax

No tax is payable in Hong Kong by way of withholding or otherwise in respect of dividends of any company or in respect of any capital gains arising on the sale of any shares or structured products, except that Hong Kong profits tax may be chargeable on any such gains in the case of certain persons carrying on a trade, profession or business in Hong Kong.

Stamp duty

Stamp duty is not chargeable on the transfer of purely cash settled structured products in Hong Kong.

UNITED STATES OF AMERICA

The following section on “U.S. Foreign Account Tax Compliance Act” is applicable to all investors. If you are uncertain about the tax consequences of investing in our structured products, you should consult your own tax adviser.

U.S. Foreign Account Tax Compliance Act

We and other financial institutions through which payments on the structured products are made may be required to withhold U.S. tax at a rate of 30 per cent. on all, or a portion of, payments made after the second anniversary of the date on which final U.S. Treasury Regulations defining the term “foreign passthru payments” are published with the U.S. Federal Register in respect of (i) any structured products characterised as obligations for U.S. federal tax purposes that are issued after (or are materially modified after) the date that is six months after the date on which final U.S. Treasury Regulations defining the term “foreign passthru payments” are filed with the U.S. Federal Register and (ii) any structured products not characterised as obligations for U.S. federal tax purposes, whenever issued, pursuant to Sections 1471 through 1474 of the U.S. Internal Revenue Code (“**FATCA**”) or similar law implementing an intergovernmental approach to FATCA.

In addition, we and other financial institutions through which payments on the structured products are made may be required to withhold U.S. tax pursuant to FATCA at a rate of 30 per cent. on payments made in respect of any structured products characterised as obligations for U.S. federal tax purposes that are issued after (or are materially modified after) the date that is six months after the date on which such products are treated as giving rise to “dividend equivalent” payments as described below under “Legislation Affecting Dividend Equivalent Payments”.

FATCA withholding tax may apply to an investor or to any non-U.S. financial institution through which payment on the structured products is made if the Investor or non-U.S. financial institution does not fulfill its obligations under FATCA, including if (i) that investor (unless otherwise exempt from FATCA) does not provide information or consent to determine whether the investor is a U.S. person or should otherwise be treated as holding a “United States account” of the Issuer or (ii) that non-U.S. financial institution does not become a Participating Foreign Financial Institution (as defined by FATCA) by entering into an agreement with the U.S. Internal Revenue Service (“IRS”) to provide the IRS with certain information in respect of its account holders and investors or is not otherwise deemed FATCA compliant or exempt from FATCA withholding tax. Structured product holders therefore may receive less settlement amount than expected. We are not required to pay any additional amounts with respect to amounts so withheld.

Each holder of structured products should consult its own tax advisor as to the application of FATCA to an investment in the structured products.

Further information on FATCA may be found at <https://www.irs.gov/corporations> under the section headed “Foreign Account Tax Compliance Act (FATCA)”. Any information appearing on such website does not form part of this base listing document.

The following section on “Legislation Affecting Dividend Equivalent Payments” is applicable to structured products that are linked to U.S. equities and to all investors of such structured products.

Legislation Affecting Dividend Equivalent Payments

U.S. Treasury Regulations under Section 871(m) of the U.S. Internal Revenue Code require withholding of up to 30% (depending on whether an income tax treaty or other exemption applies) on payments or deemed payments made to non-U.S. persons on certain financial instruments to the extent that such payments are contingent upon or determined by reference to U.S.-source dividends. These rules differentiate between “Delta-One” and “Non-Delta-One” transactions. This withholding should generally apply to structured products, but should not apply to Non-Delta-One structured products issued before 1 January 2023 (unless the Non-Delta-One structured products are “significantly modified” on or after 1 January 2023). Significant aspects of the application of these regulations to the structured products are uncertain. Payments on structured products, other than Non-Delta-One structured products that are issued before 1 January 2023, that are treated by the applicable Treasury regulations as being contingent upon, or determined by reference to, any U.S. source dividends may be subject to this withholding.

Withholding in respect of dividend equivalents amounts will generally be required when the relevant payment is made on a structured product or upon the date of maturity, lapse or other disposition by a non-U.S. investor of the structured products. Structured products may be treated as paying dividend equivalent amounts to the extent U.S. source dividends are expected to be paid on the underlying equity securities, even if no corresponding payment on the structured product is explicitly linked to such dividends and even if, upon maturity, lapse or other disposition by the non-U.S. investor, the investor realizes a loss. The regulations provide exceptions to withholding, in particular for certain instruments linked to certain broad-based indices. In the event any withholding would be required pursuant to Section 871(m) with respect to payments on the structured products, no person will be required to pay additional amounts as a result of the withholding. Prospective investors should consult their tax advisers regarding the potential application of Section 871(m) and the applicable regulations to the structured products.

GENERAL INFORMATION

Who is responsible for this base listing document?

We accept full responsibility for the accuracy of the information contained in this base listing document.

We have included references to websites to guide you to sources of freely available information. The information on these websites does not form part of our listing document. We do not accept any responsibility for the information on those websites. Such information has not been prepared for the purposes of our structured products. You should conduct your own web searches and consult publicly available information to ensure that you are viewing the most up-to-date information.

This base listing document is accurate at the date stated on the cover. You must not assume, however, that information in this base listing document is accurate at any time after the date of this base listing document.

This document has not been reviewed by the Securities and Futures Commission. You are advised to exercise caution in relation to the offer of the structured products.

The liquidity provider is not responsible in any way for ensuring the accuracy of our listing documents.

Is there any guarantee or collateral for the structured products?

No. Our obligations under the structured products are neither guaranteed by any third party, nor collateralised with any of our assets or other collaterals. When you purchase our structured products, you are relying on our creditworthiness only, and of no other person. If we become insolvent or default on our obligations under the structured products, you can only claim as an unsecured creditor of the Issuer. In such event, you may not be able to recover all or even part of the amount due under the structured products (if any).

Are we regulated by the Hong Kong Monetary Authority referred to in rule 15A.13(2) or the Securities and Futures Commission referred to in rule 15A.13(3)?

We are a licensed bank regulated by the Hong Kong Monetary Authority, and a registered institution under the Securities and Futures Ordinance (Cap. 571) of Hong Kong to carry on type 1 (Dealing in Securities), type 2 (Dealing in Futures Contracts), type 4 (Advising on Securities), type 5 (Advising on Futures Contracts), type 6 (Advising on Corporate Finance) and type 9 (Asset Management) regulated activities.

What are our credit ratings?

Our long-term debt ratings are:

Rating agency	Rating as of the day immediately preceding the date of this base listing document
Moody's Investors Service, Inc. (" Moody's ")	Aa3 (stable outlook)
S&P Global Ratings (" S&P ")	AA- (stable outlook)

The long-term debt ratings are only an assessment by the credit rating agencies of the Issuer's overall financial capacity to pay its debts.

Aa3 is among the top three major credit rating categories and is the fourth highest investment-grade of the ten investment-grade credit ratings (including 1, 2 and 3 sub-grades) assigned by Moody's.

AA- is among the top three major credit rating categories and is the fourth highest investment-grade of the ten investment-grade credit ratings (including + or - sub-grades) assigned by S&P.

Please refer to Exhibit C to this base listing document for further information on credit ratings.

Rating agencies usually receive a fee from the companies that they rate. When evaluating our creditworthiness, you should not solely rely on our credit ratings because:

- (a) a credit rating is not a recommendation to buy, sell or hold our structured products;
- (b) ratings of companies may involve difficult-to-quantify factors such as market competition, the success or failure of new products and markets and managerial competence;
- (c) a high credit rating is not necessarily indicative of low risk. Our credit ratings as of the day immediately preceding the date of this document are for reference only. Any downgrading of our ratings could result in a reduction in the value of the structured products;
- (d) a credit rating is not an indication of the liquidity or volatility of the structured products; and
- (e) a credit rating may be downgraded if the credit quality of the Issuer declines.

Our structured products are not rated.

Our credit ratings are subject to change or withdrawal at any time within each rating agency's sole discretion. You should conduct your own research using publicly available sources to obtain the latest information with respect to our ratings from time to time.

Are we subject to any litigation?

Except as set out in Exhibit A and Exhibit B of this base listing document, there are no legal or arbitration proceedings (including any such proceedings which are pending or threatened of which we are aware) which may have, or have had in the previous 12 months, a significant effect on us and our subsidiaries.

Has our financial position changed since last financial year?

Except as set out in Exhibit A and Exhibit B of this base listing document, there has been no material adverse change in our financial or trading position or prospects or indebtedness since 31 December 2021.

If, after the date of this document, you receive this document or purchase any structured products issued pursuant to this document you should not assume that there have been no changes in our affairs or financial condition since the date of this document. You should ask us if we have published any addenda to this document or any subsequent base listing document relating to our programme. Any such addenda will be available for inspection in the manner described under the section headed "*Where can you find out information about us?*" below.

Who is authorised to give information or make representations?

No person has been authorised to give any information or make any representations other than those contained in this document and the applicable launch announcement and supplemental listing document. If any person gives any such information or makes any such representations you should not rely on them as having been authorised by us.

Who are our authorised representatives?

Our authorised representatives are Martin Mrosek and Paul Hedley, both c/o The Hongkong and Shanghai Banking Corporation Limited, Level 18, HSBC Main Building, 1 Queen's Road Central, Hong Kong.

Who makes determinations and calculations?

We will make any necessary determinations or calculations in respect of the structured products.

Where can you find out information about us?

You can find out more about us on the website of the group of companies to which we belong, which is *www.hsbc.com*.

The following documents are also available on the website of the HKEX at *www.hkexnews.hk* and our website which is presently at *https://www.warrants.hsbc.com.hk/en/warrant/latest-document-and-notice* during the period in which the structured products are listed on the stock exchange:

- (a) a copy of this document and any addendum to this document (both the English version and the Chinese translation);
- (b) a copy of our latest publicly available annual report and interim report (if any); and
- (c) a copy of the consent letter from our auditor referred to in this document.

Please refer to the base listing document dated 7 April 2021 for the extract of the Annual Report and Accounts 2020 of the Issuer, including the auditor's report and the audited consolidated financial statements of the Issuer as at and for the year ended 31 December 2020.

Are there any experts/auditors involved?

Our auditor ("**Auditor**"), PricewaterhouseCoopers, has given and has not withdrawn its written consent to the inclusion of auditor's report dated 22 February 2022 on the consolidated financial statements of the Issuer as at and for the year ended 31 December 2021, and/or references to its name in this base listing document, in the form and context in which they are included. Its report was not prepared exclusively for incorporation into this base listing document. The Auditor does not own any of our shares or shares in any member of our group, nor does it have the right (whether legally enforceable or not) to subscribe for or to nominate persons to subscribe for our securities or securities in any member of our group.

Do the stock exchange and the Securities and Futures Commission charge any fees?

For each transaction effected on the stock exchange, the following trading fees and levies calculated on the value of the consideration for the relevant structured products will be payable by each of the seller and the buyer:

- (a) a trading fee of 0.005 per cent. charged by the stock exchange;
- (b) a transaction levy of 0.0027 per cent. charged by the Securities and Futures Commission; and
- (c) a transaction levy of 0.00015 per cent. charged by the Financial Reporting Council.

The levy for the investor compensation fund is currently suspended.

Under the terms and conditions of the structured products, you are required to pay all charges or expenses which are incurred or withheld in respect of the exercise of the structured products.

Your broker may charge commission or other fees. You should check with your broker what fees will be chargeable.

You should be aware that you may be required to pay taxes including stamp taxes or other documentary charges in accordance with the laws and practices of the country or territory where the structured products are transferred, or where the issuer of the underlying asset is organised or resident. Please refer to the section headed "Taxation" for further information. If you are in any doubt as to your tax position, you should consult your own independent tax advisers. You should also be aware that tax regulations and their application by the relevant taxation authorities may change from time to time.

How are the structured products transferred and settled?

Settlement of transactions between members of the stock exchange on any business day must take place on or before the second business day thereafter. Securities executed

on the stock exchange would normally be settled under the continuous net settlement system in CCASS.

Dealings in the structured products will take place in relevant board lots in the relevant settlement currency. For further details on transfers of structured products and their exercise, termination pursuant to mandatory call event or settlement, you should refer to the terms and conditions of the relevant issue of structured products.

EXHIBIT A

THE EXTRACT OF THE ANNUAL REPORT AND ACCOUNTS INCLUDING THE AUDITED CONSOLIDATED FINANCIAL STATEMENTS OF THE ISSUER AS AT AND FOR THE YEAR ENDED 31 DECEMBER 2021

The information in this Exhibit A has been extracted from the Annual Report and Accounts 2021 of the Issuer. References to page numbers (i.e. the numeric page numbers as referred to within this Exhibit A and the numeric page numbers which appear on the bottom of the pages of this base listing document) in this Exhibit A are to the page numbers of the Annual Report and Accounts 2021. The extracts set out in this Exhibit A are not complete and reference should be made to the Annual Report and Accounts 2021 which is available on the website of the HKEX at www.hkexnews.hk and our website which is presently at <https://www.warrants.hsbc.com.hk/en/warrant/latest-document-and-notice>.

References in this Exhibit A to “**HSBC**”, “**HSBC Group**” or “**the Group**” are to HSBC Holdings plc and its subsidiaries and references in this Exhibit A to “**the Bank**” are to The Hongkong and Shanghai Banking Corporation Limited and “**the group**” are to The Hongkong and Shanghai Banking Corporation Limited and its subsidiaries.

Independent Auditor's Report

To the Shareholder of The Hongkong and Shanghai Banking Corporation Limited (incorporated in Hong Kong with limited liability)

Opinion

What we have audited

The consolidated financial statements of The Hongkong and Shanghai Banking Corporation Limited (the 'Bank') and its subsidiaries (the 'group'), which are set out on pages 73 to 131, comprise:

- the consolidated balance sheet as at 31 December 2021;
- the consolidated income statement for the year then ended;
- the consolidated statement of comprehensive income for the year then ended;
- the consolidated statement of changes in equity for the year then ended;
- the consolidated statement of cash flows for the year then ended; and
- the notes¹ on the consolidated financial statements, which include significant accounting policies and other explanatory information.

¹ Certain required disclosures as described in Note 1.1(d) on the consolidated financial statements have been presented elsewhere in the Annual Report and Accounts 2021, rather than in the notes on the consolidated financial statements. These are cross-referenced from the consolidated financial statements and are identified as audited.

Our opinion

In our opinion, the consolidated financial statements give a true and fair view of the consolidated financial position of the group as at 31 December 2021, and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with Hong Kong Financial Reporting Standards ('HKFRSs') issued by the Hong Kong Institute of Certified Public Accountants ('HKICPA') and have been properly prepared in compliance with the Hong Kong Companies Ordinance.

Basis for Opinion

We conducted our audit in accordance with Hong Kong Standards on Auditing ('HKSA's') issued by the HKICPA. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We are independent of the group in accordance with the HKICPA's Code of Ethics for Professional Accountants ('the Code'), and we have fulfilled our other ethical responsibilities in accordance with the Code.

Key Audit Matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matters identified in our audit are summarised as follows:

- Allowances for expected credit losses on loans and advances to customers
- Impairment assessment of investment in associate – Bank of Communications Co., Limited ('BoCom')
- The present value of in-force long-term insurance business ('PVIF') and liabilities under non-linked life insurance contracts

Allowances for expected credit losses on loans and advances to customers

Nature of the Key Audit Matter	How our audit addressed the Key Audit Matter
<p>At 31 December 2021, the group recorded allowances for expected credit losses ('ECL') on loans and advances to customers of HK\$32.0bn.</p> <p>The determination of the ECL on loans and advances to customers requires the use of complex credit risk methodologies that are applied in models using the group's historic experience of the correlations between defaults and losses, borrower creditworthiness, segmentation of customers or portfolios and economic conditions.</p> <p>It also requires the determination of assumptions which involve estimation uncertainty. The assumptions that we focused our audit on include those with greater levels of management judgement and for which variations have the most significant impact on ECL on loans and advances to customers. Specifically, these included economic scenarios and their likelihood, as well as customer risk ratings. Likewise, there is inherent uncertainty with the consensus economic forecast data from external economists as well as the prospects of future recoverability of credit impaired wholesale exposures.</p> <p>The progression of the Covid-19 pandemic and other current macroeconomic conditions impact the inherent risk and estimation uncertainty involved in determining the ECL on loans and advances to customers.</p> <p>Management judgemental adjustments to ECL on loans and advances to customers therefore continue to be made. This includes judgemental adjustments to the ECL for certain wholesale sectors, as well as adjustments related to the retail portfolio.</p>	<p>We tested controls in place over the methodologies, their application, significant assumptions and data used to determine the ECL on loans and advances to customers. These included controls over:</p> <ul style="list-style-type: none"> • Model development, validation and monitoring; • Approval of economic scenarios; • Approval of the probability weightings assigned to economic scenarios; • Assigning customer risk ratings; • Approval of management judgemental adjustments; and • Review of input and assumptions applied in estimating the recoverability of credit-impaired wholesale exposures. <p>We performed substantive audit procedures over the compliance of ECL methodologies with the requirements of HKFRS 9. We engaged professionals with experience in ECL modelling to assess the appropriateness of changes to models during the year, and for a sample of those models, independently reperformed the modelling for certain aspects of the ECL calculation. We also assessed the appropriateness of methodologies and related models that did not change during the year.</p> <p>We further performed the following to assess the significant assumptions and data:</p> <ul style="list-style-type: none"> • We challenged the appropriateness of the significant assumptions; • We involved our economic experts in assessing the reasonableness of the severity and likelihood of certain economic scenarios; • We tested a sample of customer risk ratings assigned to wholesale exposures; and • We have independently assessed other significant assumptions and obtained corroborating evidence.
<p>Matters discussed with the Audit Committee</p> <p>We discussed the appropriateness of the methodologies, their application, significant assumptions and related disclosures with the Audit Committee, giving consideration to the current macroeconomic conditions. This included management judgemental adjustments made to derive the ECL on loans and advances to customers. We further discussed the governance and controls over the process in determining ECL on loans and advances to customers.</p>	<p>For a sample of management judgemental adjustments, we challenged the appropriateness of these and assessed the ECL determined.</p> <p>We further considered whether the judgements made in selecting the significant assumptions and determining the management judgemental adjustments would give rise to indicators of possible management bias.</p> <p>We assessed the adequacy of the disclosures in relation to ECL on loans and advances to customers made in the consolidated financial statements in the context of the applicable financial reporting framework.</p>
<p>Relevant references in the consolidated financial statements</p>	
<p>Risk: Credit Risk, as cross-referenced from the consolidated financial statements (only information identified as audited), page 29-50</p> <p>Note 1.2 (i) on the consolidated financial statements: Basis of preparation and significant accounting policies - Impairment of amortised cost and FVOCI financial assets, page 83-86</p> <p>Note 2 (e) on the consolidated financial statements: Operating profit – Change in expected credit losses and other credit impairment charges, page 91</p> <p>Note 10 on the consolidated financial statements: Loans and advances to customers, page 99</p>	

Independent Auditor's Report

Impairment assessment of investment in associate – Bank of Communications Co., Limited ('BoCom')

Nature of the Key Audit Matter	How our audit addressed the Key Audit Matter
<p>At 31 December 2021, the fair value of the investment in BoCom, based on the share price, was HK\$118.2bn lower than the carrying value ('CV') of HK\$184.8bn. This is an indicator of potential impairment. An impairment test was performed, with supporting sensitivity analysis, using a value in use ('VIU') model. The VIU was HK\$8.2bn in excess of the CV. On this basis, no impairment was recorded.</p> <p>The methodology applied in the VIU model is dependent on various assumptions, both short term and long term in nature. These assumptions, which are subject to estimation uncertainty, are derived from a combination of management's judgement, analysts' forecasts, market data or other relevant information.</p> <p>The assumptions that we focused our audit on were those with greater levels of management judgement and subjectivity, and for which variations had the most significant impact on the VIU. Specifically, these included the discount rate, operating income growth rate, long-term profit and asset growth rates, cost-income ratio, expected credit losses, effective tax rates, and capital requirements (including Capital Adequacy Ratio, Tier 1 Capital Adequacy ratio and risk-weighted assets as a percentage of total assets).</p>	<p>We tested controls in place over significant assumptions, the methodology and its application used to determine the VIU. We assessed the appropriateness of the methodology used, its application, and the mathematical accuracy of the calculations. In respect of the significant assumptions, we performed the following:</p> <ul style="list-style-type: none">• Challenged the appropriateness of the significant assumptions and, where relevant, their interrelationships;• Obtained corroborating evidence for data supporting significant assumptions that may include historic experience, external market information, third-party sources including analyst reports, information from BoCom management and historical publicly available BoCom financial information;• Determined a reasonable range for the discount rate assumption, with the assistance of our valuation experts, and compared it to the discount rate used by management; and• Assessed whether the judgements made in selecting the significant assumptions give rise to indicators of possible management bias. <p>We observed the meetings in March, May, September and November 2021 between management and BoCom management, held specifically to identify facts and circumstances impacting significant assumptions relevant to the determination of the VIU.</p> <p>Representations were obtained from the Bank that assumptions used were consistent with information currently available to the Bank.</p> <p>We assessed the adequacy of the disclosures in relation to BoCom made in the consolidated financial statements in the context of the applicable financial reporting framework.</p>
<p>Matters discussed with the Audit Committee</p> <p>We discussed the appropriateness of the methodology, its application and significant assumptions with the Audit Committee. We also discussed the disclosures made in relation to BoCom, including the use of sensitivity analysis to explain estimation uncertainty and the changes in certain assumptions that would result in the VIU being equal to the CV.</p>	
<p>Relevant references in the consolidated financial statements</p>	
<p>Note 1.2 (a) on the consolidated financial statements: Basis of preparation and significant accounting policies - Consolidated and related policies, page 80-81</p>	
<p>Note 14 on the consolidated financial statements: Interests in associates and joint ventures, page 102-105</p>	

The present value of in-force long-term insurance business ('PVIF') and liabilities under non-linked life insurance contracts

Nature of the Key Audit Matter	How our audit addressed the Key Audit Matter
<p>At 31 December 2021, the group has recorded an asset for PVIF of HK\$63.8bn and liabilities under non-linked life insurance contracts of HK\$608.5bn.</p> <p>The determination of these balances requires the use of complex actuarial methodologies that are applied in models and involves judgement about future outcomes. Specifically, judgement is required in deriving the economic and non-economic assumptions. These assumptions are subject to estimation uncertainty, both for PVIF asset and the liabilities under non-linked life insurance contracts.</p>	<p>We tested controls in place over the methodologies, their application, significant assumptions and data for PVIF asset and the liabilities under non-linked life insurance contracts. Specifically, these included controls over:</p> <ul style="list-style-type: none"> • policy data reconciliations from the policyholder administration system to the actuarial valuation system; • assumptions setting; • review and determination of methodologies used, and its application in models; and • results aggregation and analysis processes. <p>With the assistance of our actuarial experts, we performed the following additional audit procedures to assess the methodologies used, their application, significant assumptions, data and disclosures:</p>
<p>Matters discussed with the Audit Committee</p> <p>We discussed the appropriateness of the methodologies, their application, significant assumptions and related disclosures with the Audit Committee. In relation to assumptions, we focused on those for which variations had the most significant impact on the valuation of PVIF and liabilities under non-linked life insurance contracts carrying value.</p>	<ul style="list-style-type: none"> • We assessed the appropriateness of the methodologies used, their application and the mathematical accuracy of the calculations; • We challenged the appropriateness of the significant assumptions and, where relevant, their interrelationships. We have independently assessed these assumptions and obtained relevant corroborating evidence. We further considered whether the judgements made in selecting the significant assumptions would give rise to indicators of possible management bias; • We performed substantive audit procedures over critical data used in the determination of these balances to ensure these are relevant and reliable; and • We assessed the adequacy of the disclosures in relation to the asset for PVIF and liabilities under non-linked life insurance contracts made in the consolidated financial statements in the context of the applicable financial reporting framework.
<p>Relevant references in the consolidated financial statements</p>	
<p>Risk: Insurance manufacturing operations risk, as cross-referenced from the consolidated financial statements (only information identified as audited), page 62-66</p> <p>Note 1.2 (j) on the consolidated financial statements: Basis for preparation and significant accounting policies - Insurance contracts, page 87</p> <p>Note 3 on the consolidated financial statements: Insurance business, page 92</p> <p>Note 15 on the consolidated financial statements: Goodwill and intangible assets, page 105-106</p>	

Other Information

The directors of the Bank are responsible for the other information. The other information comprises all of the information included in the *Annual Report and Accounts 2021*, Banking Disclosure Statement as at 31 December 2021 and List of the directors of the Bank's subsidiary undertakings (during the period from 1 January 2021 to 22 February 2022) other than the consolidated financial statements and our auditor's report thereon. We have obtained some of the other information including Certain defined terms, Cautionary statement regarding forward-looking statements, Chinese translation, Financial Highlights, Report of the Directors, Financial Review, Risk and Statement of Directors' Responsibilities sections of the *Annual Report and Accounts 2021* prior to the date of this auditor's report. The remaining other information, including Banking Disclosure Statement as at 31 December 2021 and List of the directors of the Bank's subsidiary undertakings (during the period from 1 January 2021 to 22 February 2022), is expected to be made available to us after that date. The other information does not include the specific information presented therein that is identified as being an integral part of the consolidated financial statements and, therefore, covered by our audit opinion on the consolidated financial statements.

Our opinion on the consolidated financial statements does not cover the other information and we do not and will not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

If, based on the work we have performed on the other information that we obtained prior to the date of this auditor's report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

When we read the remaining other information, if we conclude that there is a material misstatement therein, we are required to communicate the matter to the Audit Committee and take appropriate action considering our legal rights and obligations.

Responsibilities of Directors and the Audit Committee for the Consolidated Financial Statements

The directors of the Bank are responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with HKFRSs issued by the HKICPA and the Hong Kong Companies Ordinance, and for such internal control as the directors determine is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the directors are responsible for assessing the group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the group or to cease operations, or have no realistic alternative but to do so.

The Audit Committee is responsible for overseeing the group's financial reporting process.

Independent Auditor's Report

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. We report our opinion solely to you, as a body, in accordance with Section 405 of the Hong Kong Companies Ordinance and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with HKSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with HKSAs, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.
- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the Audit Committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Audit Committee with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, actions taken to eliminate threats or safeguards applied.

From the matters communicated with the Audit Committee, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in this independent auditor's report is Lars Christian Jordy Nielsen.

PricewaterhouseCoopers

Certified Public Accountants

Hong Kong, 22 February 2022

Consolidated Financial Statements

Consolidated income statement

for the year ended 31 December

	Notes	2021 HK\$m	2020 HK\$m
Net interest income	2a	98,113	111,513
– interest income		121,382	147,376
– interest expense		(23,269)	(35,863)
Net fee income	2b	45,296	41,670
– fee income		57,819	52,370
– fee expense		(12,523)	(10,700)
Net income from financial instruments held for trading or managed on a fair value basis	2c	28,359	32,172
Net income from assets and liabilities of insurance businesses, including related derivatives, measured at fair value through profit or loss	2c	18,180	13,128
Changes in fair value of designated debts issued and related derivatives	2c	(639)	(171)
Changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss	2c	(25)	138
Gains less losses from financial investments		1,667	1,624
Net insurance premium income	3	61,722	61,563
Other operating income	2d	2,033	5,612
Total operating income		254,706	267,249
Net insurance claims and benefits paid and movement in liabilities to policyholders	3	(76,048)	(77,911)
Net operating income before change in expected credit losses and other credit impairment charges		178,658	189,338
Change in expected credit losses and other credit impairment charges	2e	(6,539)	(17,719)
Net operating income		172,119	171,619
Employee compensation and benefits	4	(39,261)	(36,183)
General and administrative expenses	2f	(52,327)	(46,304)
Depreciation and impairment of property, plant and equipment	2g	(8,891)	(9,405)
Amortisation and impairment of intangible assets		(4,397)	(3,936)
Total operating expenses		(104,876)	(95,828)
Operating profit		67,243	75,791
Share of profit in associates and joint ventures		19,320	14,405
Profit before tax		86,563	90,196
Tax expense	5	(14,015)	(14,505)
Profit for the year		72,548	75,691
Attributable to:			
– ordinary shareholders of the parent company		64,633	66,997
– other equity holders		2,715	2,450
– non-controlling interests		5,200	6,244
Profit for the year		72,548	75,691

Consolidated Financial Statements

Consolidated statement of comprehensive income

for the year ended 31 December

	2021	2020
	HK\$m	HK\$m
Profit for the year	72,548	75,691
Other comprehensive income/(expense)		
Items that will be reclassified subsequently to profit or loss when specific conditions are met:		
Debt instruments at fair value through other comprehensive income	(4,009)	2,238
– fair value gains/(losses)	(3,907)	4,642
– fair value gains transferred to the income statement	(1,276)	(1,648)
– expected credit (recoveries)/losses recognised in the income statement	(17)	112
– income taxes	1,191	(868)
Cash flow hedges	(700)	969
– fair value gains/(losses)	7,038	(4,393)
– fair value (gains)/losses reclassified to the income statement	(7,850)	5,551
– income taxes	112	(189)
Share of other comprehensive income/(expense) of associates and joint ventures	596	(726)
Exchange differences	3,973	17,891
Items that will not be reclassified subsequently to profit or loss:		
Property revaluation	4,771	(5,774)
– fair value gains/(losses)	5,643	(6,914)
– income taxes	(872)	1,140
Equity instruments designated at fair value through other comprehensive income	(3,480)	1,647
– fair value gains/(losses)	(3,478)	1,654
– income taxes	(2)	(7)
Changes in fair value of financial liabilities designated at fair value upon initial recognition arising from changes in own credit risk	522	257
– before income taxes	631	320
– income taxes	(109)	(63)
Remeasurement of defined benefit asset/liability	724	(315)
– before income taxes	885	(384)
– income taxes	(161)	69
Other comprehensive income for the year, net of tax	2,397	16,187
Total comprehensive income for the year	74,945	91,878
Attributable to:		
– ordinary shareholders of the parent company	67,148	82,738
– other equity holders	2,715	2,450
– non-controlling interests	5,082	6,690
Total comprehensive income for the year	74,945	91,878

Consolidated balance sheet

at 31 December

	Notes	2021 HK\$m	2020 HK\$m
Assets			
Cash and balances at central banks		276,857	347,999
Items in the course of collection from other banks		21,632	21,943
Hong Kong Government certificates of indebtedness		332,044	313,404
Trading assets	7	777,450	600,414
Derivatives	8	365,167	422,945
Financial assets designated and otherwise mandatorily measured at fair value through profit or loss	9	202,399	178,960
Reverse repurchase agreements – non-trading		803,775	520,344
Loans and advances to banks		432,247	403,884
Loans and advances to customers	10	3,840,939	3,668,681
Financial investments	11	2,051,575	2,175,432
Amounts due from Group companies	32	112,719	83,203
Interests in associates and joint ventures	14	188,485	168,754
Goodwill and intangible assets	15	95,181	89,968
Property, plant and equipment	16	129,827	128,537
Deferred tax assets	5	3,353	3,325
Prepayments, accrued income and other assets	17	269,743	288,610
Total assets		9,903,393	9,416,403
Liabilities			
Hong Kong currency notes in circulation		332,044	313,404
Items in the course of transmission to other banks		25,701	25,699
Repurchase agreements – non-trading		255,374	136,157
Deposits by banks		280,310	248,628
Customer accounts	18	6,177,182	5,911,396
Trading liabilities	19	92,723	60,812
Derivatives	8	355,791	428,211
Financial liabilities designated at fair value	20	138,965	167,013
Debt securities in issue	21	67,364	79,419
Retirement benefit liabilities	4	1,890	2,701
Amounts due to Group companies	32	356,233	296,308
Accruals and deferred income, other liabilities and provisions	22	219,206	215,987
Liabilities under insurance contracts	3	638,145	581,406
Current tax liabilities		2,378	2,669
Deferred tax liabilities	5	32,522	30,997
Subordinated liabilities	23	4,054	4,065
Total liabilities		8,979,882	8,504,872
Equity			
Share capital	24	172,335	172,335
Other equity instruments	25	44,615	44,615
Other reserves		151,804	149,500
Retained earnings		488,055	478,903
Total shareholders' equity		856,809	845,353
Non-controlling interests		66,702	66,178
Total equity		923,511	911,531
Total liabilities and equity		9,903,393	9,416,403

Consolidated Financial Statements

Consolidated statement of cash flows

for the year ended 31 December

	2021	2020
	HK\$m	HK\$m
Profit before tax	86,563	90,196
Adjustments for non-cash items:		
Depreciation and amortisation	13,288	13,341
Net gain from investing activities	(1,890)	(567)
Share of profits in associates and joint ventures	(19,320)	(14,405)
(Gain)/Loss on disposal of subsidiaries, businesses, associates and joint ventures	(4)	70
Change in expected credit losses gross of recoveries and other credit impairment charges	7,549	18,452
Provisions	607	114
Share-based payment expense	913	735
Other non-cash items included in profit before tax	5,416	(3,896)
Elimination of exchange differences	8,024	(22,323)
Changes in operating assets and liabilities		
Change in net trading securities and derivatives	(159,767)	(10,696)
Change in loans and advances to banks and customers	(172,484)	11,959
Change in reverse repurchase agreements – non-trading	(174,643)	(60,741)
Change in financial assets designated and otherwise mandatorily measured at fair value through profit or loss	(23,439)	(25,449)
Change in other assets	43,706	(119,373)
Change in deposits by banks and customer accounts	297,468	547,781
Change in repurchase agreements – non-trading	119,217	29,761
Change in debt securities in issue	(12,055)	(27,514)
Change in financial liabilities designated at fair value	(28,048)	6,722
Change in other liabilities	129,710	42,517
Dividends received from associates	5,525	5,053
Contributions paid to defined benefit plans	(356)	(602)
Tax paid	(12,648)	(25,466)
Net cash from operating activities	113,332	455,669
Purchase of financial investments	(1,233,472)	(875,648)
Proceeds from the sale and maturity of financial investments	1,193,780	823,410
Purchase of property, plant and equipment	(2,718)	(3,768)
Proceeds from sale of property, plant and equipment and assets held for sale	96	72
Proceeds from disposal of customer loan portfolios	2,267	6,284
Net investment in intangible assets	(10,835)	(7,331)
Net cash inflow on sale of subsidiaries	–	69
Net cash outflow on purchase of subsidiaries	(13)	–
Net cash from investing activities	(50,895)	(56,912)
Subordinated loan capital issued ¹	57,764	–
Subordinated loan capital repaid ¹	(24,102)	–
Dividends paid to shareholders of the parent company and non-controlling interests	(63,523)	(59,121)
Net cash from financing activities	(29,861)	(59,121)
Net increase in cash and cash equivalents	32,576	339,636
Cash and cash equivalents at 1 Jan	1,047,807	677,664
Exchange differences in respect of cash and cash equivalents	(25,299)	30,507
Cash and cash equivalents at 31 Dec²	1,055,084	1,047,807
Cash and cash equivalents comprise		
– cash and balances at central banks	276,857	347,999
– items in the course of collection from other banks	21,632	21,943
– loans and advances to banks of one month or less	326,691	286,356
– net settlement accounts and cash collateral	34,580	43,570
– reverse repurchase agreements with banks of one month or less	306,241	186,599
– treasury bills, other bills and certificates of deposit less than three months	114,784	187,039
– less: items in the course of transmission to other banks	(25,701)	(25,699)
Cash and cash equivalents at 31 Dec²	1,055,084	1,047,807

Interest received was HK\$133,964m (2020: HK\$160,120m), interest paid was HK\$26,553m (2020: HK\$46,104m) and dividends received were HK\$5,592m (2020: HK\$3,946m).

¹ Changes in subordinated liabilities (including those issued to group companies) during the year included amounts from issuance and repayments as presented above, and non-cash changes from foreign exchange loss of HK\$494m in 2021 (2020: exchange gain of HK\$303m) and fair value loss after hedging of HK\$7,768m in 2021 (2020: HK\$8,261m gain). These balances are presented under 'Amounts due to Group companies' in the consolidated balance sheet.

² At 31 December 2021 HK\$128,756m (2020: HK\$149,565m) was not available for use by the group, of which HK\$67,340m (2020: HK\$71,049m) related to mandatory deposits at Central banks.

Consolidated statement of changes in equity
for the year ended 31 December

	Other reserves									Total share- holders' equity	Non- controlling interests	Total equity
	Share capital ¹	Other equity instru- ments	Retained earnings	Property revaluation reserve	Financial assets at FVOCI reserve	Cash flow hedge reserve	Foreign exchange reserve	Other ²				
	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m			
At 1 Jan 2021	172,335	44,615	478,903	63,793	9,883	772	(10,688)	85,740	845,353	66,178	911,531	
Profit for the year	–	–	67,348	–	–	–	–	–	67,348	5,200	72,548	
Other comprehensive income/(expense) (net of tax)	–	–	1,160	4,359	(5,992)	(619)	3,558	49	2,515	(118)	2,397	
– debt instruments at fair value through other comprehensive income	–	–	–	–	(3,775)	–	–	–	(3,775)	(234)	(4,009)	
– equity instruments designated at fair value through other comprehensive income	–	–	–	–	(2,737)	–	–	–	(2,737)	(743)	(3,480)	
– cash flow hedges	–	–	–	–	–	(619)	–	–	(619)	(81)	(700)	
– changes in fair value of financial liabilities designated at fair value upon initial recognition arising from changes in own credit risk	–	–	521	–	–	–	–	–	521	1	522	
– property revaluation	–	–	–	4,359	–	–	–	–	4,359	412	4,771	
– remeasurement of defined benefit asset/liability	–	–	612	–	–	–	–	–	612	112	724	
– share of other comprehensive income of associates and joint ventures	–	–	27	–	520	–	–	49	596	–	596	
– exchange differences	–	–	–	–	–	–	3,558	–	3,558	415	3,973	
Total comprehensive income/ (expense) for the year	–	–	68,508	4,359	(5,992)	(619)	3,558	49	69,863	5,082	74,945	
Dividends paid ³	–	–	(59,105)	–	–	–	–	–	(59,105)	(4,418)	(63,523)	
Movement in respect of share-based payment arrangements	–	–	131	–	–	–	–	(173)	(42)	(2)	(44)	
Transfers and other movements ⁴	–	–	(382)	(3,162)	(22)	–	–	4,306	740	(138)	602	
At 31 Dec 2021	172,335	44,615	488,055	64,990	3,869	153	(7,130)	89,922	856,809	66,702	923,511	

Consolidated statement of changes in equity (continued)

for the year ended 31 December

	Other reserves								Total share-holders' equity	Non-controlling interests	Total equity
	Share capital ¹	Other equity instruments	Retained earnings	Property revaluation reserve	Financial assets at FVOCI reserve	Cash flow hedge reserve	Foreign exchange reserve	Other ²			
	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
At 1 Jan 2020	172,335	44,615	464,629	72,013	6,959	(104)	(28,118)	82,349	814,678	64,603	879,281
Profit for the year	—	—	69,447	—	—	—	—	—	69,447	6,244	75,691
Other comprehensive income/ (expense) (net of tax)	—	—	(98)	(5,286)	2,921	876	17,430	(102)	15,741	446	16,187
– debt instruments at fair value through other comprehensive income	—	—	—	—	2,203	—	—	—	2,203	35	2,238
– equity instruments designated at fair value through other comprehensive income	—	—	—	—	1,299	—	—	—	1,299	348	1,647
– cash flow hedges	—	—	—	—	—	876	—	—	876	93	969
– changes in fair value of financial liabilities designated at fair value upon initial recognition arising from changes in own credit risk	—	—	257	—	—	—	—	—	257	—	257
– property revaluation	—	—	—	(5,286)	—	—	—	—	(5,286)	(488)	(5,774)
– remeasurement of defined benefit asset/liability	—	—	(312)	—	—	—	—	—	(312)	(3)	(315)
– share of other comprehensive expense of associates and joint ventures	—	—	(43)	—	(581)	—	—	(102)	(726)	—	(726)
– exchange differences	—	—	—	—	—	—	17,430	—	17,430	461	17,891
Total comprehensive income/ (expense) for the year	—	—	69,349	(5,286)	2,921	876	17,430	(102)	85,188	6,690	91,878
Dividends paid ³	—	—	(54,268)	—	—	—	—	—	(54,268)	(4,853)	(59,121)
Movement in respect of share-based payment arrangements	—	—	120	—	—	—	—	213	333	12	345
Transfers and other movements ⁴	—	—	(927)	(2,934)	3	—	—	3,280	(578)	(274)	(852)
At 31 Dec 2020	172,335	44,615	478,903	63,793	9,883	772	(10,688)	85,740	845,353	66,178	911,531

1 Ordinary share capital includes preference shares which have been redeemed or bought back via payments out of distributable profits in previous years.

2 The other reserves mainly comprise share of associates' other reserves, purchase premium arising from transfer of business from fellow subsidiaries, property revaluation reserve relating to transfer of properties to a fellow subsidiary and the share-based payment reserve. The share-based payment reserve is used to record the amount relating to share awards and options granted to employees of the group directly by HSBC Holdings plc.

3 Including distributions paid on perpetual subordinated loans classified as equity under HKFRS.

4 The movements include transfers from retained earnings to other reserves in associates according to local regulatory requirements, and from the property revaluation reserve to retained earnings in relation to depreciation of revalued properties.

Notes on the Consolidated Financial Statements

1 Basis of preparation and significant accounting policies

1.1 Basis of preparation

(a) Compliance with Hong Kong Financial Reporting Standards

The consolidated financial statements of The Hongkong and Shanghai Banking Corporation Limited ('the Bank') and its subsidiaries (together 'the group') have been prepared in accordance with Hong Kong Financial Reporting Standards ('HKFRSs') as issued by the Hong Kong Institute of Certified Public Accountants ('HKICPA') and accounting principles generally accepted in Hong Kong. These consolidated financial statements also comply with the requirements of the Hong Kong Companies Ordinance (Cap. 622) which are applicable to the preparation of the financial statements.

Standards adopted during the year ended 31 December 2021

There were no new accounting standards or interpretations that had a significant effect on the group in 2021. Accounting policies have been consistently applied to all the years presented, unless otherwise stated.

(b) Future accounting developments

Minor amendments to HKFRSs

The HKICPA has published a number of minor amendments to HKFRSs which are effective from 1 January 2022 and 1 January 2023. The group expects they will have an insignificant effect, when adopted, on the Consolidated Financial Statements.

New HKFRSs

HKFRS 17 'Insurance Contracts'

HKFRS 17 'Insurance Contracts' was issued in January 2018, with amendments to the standard issued in October 2020. The standard sets out the requirements that an entity should apply in accounting for insurance contracts it issues and reinsurance contracts it holds. Following the amendments, HKFRS 17 is effective from 1 January 2023. The group is in the process of implementing HKFRS 17. Industry practice and interpretation of the standard are still developing. Therefore, the likely financial impact of its implementation remains uncertain. However, we have the following expectations as to the impact compared with the group's current accounting policy for insurance contracts, which is set out in Note 1.2(j) below:

- Under HKFRS 17, there will be no present value of in-force business ('PVIF') asset recognised. Instead the estimated future profit will be included in the measurement of the insurance contract liability as the contractual service margin ('CSM'), representing unearned profit, and this will be gradually recognised in revenue as services are provided over the duration of the insurance contract. While the profit over the life of an individual contract will be unchanged, its emergence will be later under HKFRS 17. The removal of the PVIF asset and the recognition of CSM, which is a liability, will reduce equity. The PVIF asset will be eliminated to equity on transition, together with other adjustments to assets and liabilities to reflect HKFRS 17 measurement requirements and any consequential amendments to financial assets in the scope of HKFRS 9.
- HKFRS 17 requires increased use of current market values in the measurement of insurance liabilities. Changes in market conditions for certain products measured under the general measurement approach are immediately recognised in profit or loss, while changes in market conditions for other products measured under the variable fee approach are included in the measurement of CSM.
- In accordance with HKFRS 17, directly attributable costs will be incorporated in the CSM and recognised in the results of insurance services as a reduction in reported revenue, as profit is recognised over the duration of insurance contracts. Costs that are not directly attributable will remain in operating expenses. This will result in a reduction in reported operating expenses compared with the current accounting policy.
- We intend to provide an update on the likely financial impacts on our insurance business in later 2022 financial reports, when we expect that this will be reasonably estimable.

(c) Foreign currencies

Items included in each of the group's entities are measured using the currency of the primary economic environment in which the entity operates (the 'functional currency'). The group's consolidated financial statements are presented in Hong Kong dollars.

Transactions in foreign currencies are recorded at the rate of exchange on the date of the transaction. Assets and liabilities denominated in foreign currencies are translated at the rate of exchange at the balance sheet date except non-monetary assets and liabilities measured at historical cost which are translated using the rate of exchange at the initial transaction date. Exchange differences are included in other comprehensive income ('OCI') or in the income statement depending on where the gain or loss on the underlying item is recognised.

In the Consolidated Financial Statements, the assets, liabilities and results of foreign operations whose functional currency is not Hong Kong dollars are translated into the group's presentation currency at the rate of exchange at the balance sheet date, while their results are translated into Hong Kong dollars at the average rates of exchange for the reporting period. Exchange differences arising are recognised in OCI. On disposal of a foreign operation, exchange differences previously recognised in OCI are reclassified to the income statement.

Notes on the Consolidated Financial Statements

(d) Presentation of information

Certain disclosures required by HKFRSs have been included in the sections marked as ('Audited') in this *Annual Report and Accounts* as follows:

- Consolidated income statement and balance sheet data by reportable segments are included in the 'Financial Review' on page 10 as specified as 'Audited'.
- Disclosures on 'Financial instruments impacted by IBOR reform' are included in the 'Top and Emerging Risks' section on page 20 as specified as 'Audited'.
- Disclosures concerning the nature and extent of risks relating to banking and insurance activities are included in the 'Risk' section on pages 29 to 59 and pages 62 to 66 as specified as 'Audited'.
- Capital disclosures are included in the 'Treasury Risk' section on pages 51 to 54 as specified as 'Audited'.

In accordance with the group's policy to provide disclosures that help investors and other stakeholders understand the group's performance, financial position and changes to them, the information provided in the Risk section goes beyond the minimum levels required by accounting standards, statutory and regulatory requirements. In addition, the group assesses good practice recommendations issued from time to time by relevant regulators and standard setters and will assess the applicability and relevance of such guidance, enhancing disclosures where appropriate.

(e) Critical accounting estimates and judgements

The preparation of financial information requires the use of estimates and judgements about future conditions. In view of the inherent uncertainties and the high level of subjectivity involved in the recognition or measurement of items highlighted as the critical accounting estimates and judgements in Note 1.2 below, it is possible that the outcomes in the next financial year could differ from those on which management's estimates are based. This could result in materially different estimates and judgements from those reached by management for the purposes of the Consolidated Financial Statements. Management's selection of the group's accounting policies that contain critical estimates and judgements reflects the materiality of the items to which the policies are applied and the high degree of judgement and estimation uncertainty involved.

(f) Segmental analysis

The group's chief operating decision-maker is the Executive Committee, which operates as a general management committee under the direct authority of the Board. Operating segments are reported in a manner consistent with the internal reporting provided to the Executive Committee.

Measurement of segmental assets, liabilities, income and expenses is in accordance with the group's accounting policies. Segmental income and expenses include transfers between segments and these transfers are conducted at arm's length. Shared costs are included in segments on the basis of the actual recharges made.

(g) Going concern

The Consolidated Financial Statements are prepared on a going concern basis, as the Directors are satisfied that the group and parent company have the resources to continue in business for the foreseeable future. In making this assessment, the Directors have considered a wide range of information relating to present and future conditions, including future projections of profitability, cash flows, capital requirements and capital resources. These considerations include stressed scenarios that reflect the uncertainty that the global Covid-19 pandemic has had on the group's operations, as well as considering potential impacts from other top and emerging risks, and the related impact on profitability, capital and liquidity.

1.2 Summary of significant accounting policies

(a) Consolidation and related policies

Investments in subsidiaries

Where an entity is governed by voting rights, the group consolidates when it holds, directly or indirectly, the necessary voting rights to pass resolutions by the governing body. In all other cases, the assessment of control is more complex and requires judgement of other factors, including having exposure to variability of returns, power to direct relevant activities and whether power is held as agent or principal.

Business combinations are accounted for using the acquisition method. The amount of non-controlling interest is measured either at fair value or at the non-controlling interest's proportionate share of the acquiree's identifiable net assets. This election is made for each business combination.

The Bank's investments in subsidiaries are stated at cost less impairment losses.

Goodwill

Goodwill is allocated to cash-generating units ('CGU') for the purpose of impairment testing, which is undertaken at the lowest level at which goodwill is monitored for internal management purposes. Impairment testing is performed at least once a year, or whenever there is an indication of impairment, by comparing the recoverable amount of a CGU with its carrying amount.

Interests in associates

The group classifies investments in entities over which it has significant influence, and that are neither subsidiaries nor joint arrangements, as associates.

Investments in associates are recognised using the equity method. The attributable share of the results and reserves of associates is included in the consolidated financial statements of the group based on either financial statements made up to 31 December or amounts adjusted for any material transactions or events occurring between the date the financial statements are available and 31 December.

Investments in associates are assessed at each reporting date and tested for impairment when there is an indication that the investment may be impaired. Goodwill on acquisitions of interests in associates is not tested separately for impairment but is assessed as part of the carrying amount of the investment.

Critical accounting estimates and judgements

The most significant critical accounting estimates relate to the assessment of impairment of our investment in Bank of Communications Co. Limited ('BoCom'), which involves estimations of value in use.

Judgements	Estimates
	<ul style="list-style-type: none"> The VIU calculation uses discounted cash flow projections based on management's best estimates of future earnings available to ordinary shareholders prepared in accordance with HKAS 36. Key assumptions are used in estimating BoCom's value in use, the sensitivity of the value in use calculations to different assumptions and a sensitivity analysis that shows the changes in key assumptions that would reduce the excess of value in use over the carrying amount (the 'headroom') to nil are described in Note 14.

(b) Income and expenses

Operating income

Interest income and expense

Interest income and expense for all financial instruments, excluding those classified as held for trading or designated at fair value are recognised in 'Interest income' and 'Interest expense' in the income statement using the effective interest method. However, as an exception to this, interest on debt instruments issued by the group for funding purposes that are designated under the fair value option to reduce an accounting mismatch and on derivatives managed in conjunction with those debt instruments is included in interest expense.

Interest on credit impaired financial assets is recognised using the rate of interest used to discount the future cash flows for the purpose of measuring the impairment loss.

Non-interest income and expense

The group generates fee income from services provided at a fixed price over time, such as account service and card fees, or when the group delivers a specific transaction at a point in time such as broking services and import/export services. With the exception of certain fund management and performance fees, all other fees are generated at a fixed price. Fund management and performance fees can be variable depending on the size of the customer portfolio and the group's performance as fund manager. Variable fees are recognised when all uncertainties are resolved. Fee income is generally earned from short term contracts with payment terms that do not include a significant financing component.

The group acts as principal in the majority of contracts with customers, with the exception of broking services. For brokerage trades where the group acts as an agent in the transaction it recognises broking income net of fees payable to other parties in the arrangement.

The group recognises fees earned on transaction-based arrangements at a point in time when it has fully provided the service to the customer. Where the contract requires services to be provided over time, income is recognised on a systematic basis over the life of the agreement.

Where the group offers a package of services that contains multiple non-distinct performance obligations, such as those included in account service packages, the promised services are treated as a single performance obligation. If a package of services contains distinct performance obligations, such as those including both account and insurance services, the corresponding transaction price is allocated to each performance obligation based on the estimated stand-alone selling prices.

Dividend income is recognised when the right to receive payment is established. This is the ex-dividend date for listed equity securities, and usually the date when shareholders approve the dividend for unlisted equity securities.

Net income/(expense) from financial instruments measured at fair value through profit or loss includes the following:

- 'Net income from financial instruments held for trading or managed on a fair value basis'. This comprises net trading income, which includes all gains and losses from changes in the fair value of financial assets and financial liabilities held for trading and other financial instruments managed on a fair value basis, together with the related interest income, expense and dividends, excluding the effect of changes in the credit risk of liabilities managed on a fair value basis. It also includes all gains and losses from changes in the fair value of derivatives that are managed in conjunction with financial assets and liabilities measured at fair value through profit or loss.
- 'Net income/(expense) from assets and liabilities of insurance businesses, including related derivatives, measured at fair value through profit or loss'. This includes interest income, interest expense and dividend income in respect of financial assets and liabilities measured at fair value through profit or loss; and those derivatives managed in conjunction with the above that can be separately identifiable from other trading derivatives.
- 'Changes in fair value of designated debt instruments and related derivatives'. Interest paid on debt instruments and interest cash flows on related derivatives is presented in interest expense where doing so reduces an accounting mismatch.
- 'Changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss'. This includes interest on instruments that fail the solely payments of principal and interest ('SPPI') test. See (d) below.

The accounting policies for insurance premium income are disclosed in Note 1.2(j).

(c) Valuation of financial instruments

All financial instruments are initially recognised at fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value of a financial instrument on initial recognition is generally its transaction price (that is, the fair value of the consideration given or received). However, if there is a difference between the transaction price and the fair value of financial instruments whose fair value is based on a quoted price in an active market or a valuation technique that uses only data from observable markets, the group recognises the difference as a trading gain or loss at inception ('a day 1 gain or loss'). In all other cases, the entire day 1 gain or loss is deferred and recognised in the income statement over the life of the transaction until the transaction matures, is closed out, the valuation inputs become observable or the group enters into an offsetting transaction.

Notes on the Consolidated Financial Statements

The fair value of financial instruments is generally measured on an individual basis. However, in cases where the group manages a group of financial assets and liabilities according to its net market or credit risk exposure, the fair value of the group of financial instruments is measured on a net basis but the underlying financial assets and liabilities are presented separately in the Consolidated Financial Statements, unless they satisfy the HKFRSs offsetting criteria.

Critical accounting estimates and judgements

The majority of valuation techniques employ only observable market data. However, certain financial instruments are classified on the basis of valuation techniques that feature one or more significant market inputs that are unobservable, and for them, the measurement of fair value is more judgemental.

Judgements	Estimates
<ul style="list-style-type: none">An instrument in its entirety is classified as valued using significant unobservable inputs if, in the opinion of management, a significant proportion of the instrument's inception profit or greater than 5% of the instrument's valuation is driven by unobservable inputs.'Unobservable' in this context means that there is little or no current market data available from which to determine the price at which an arm's length transaction would be likely to occur. It generally does not mean that there is no data available at all upon which to base a determination of fair value (consensus pricing data may, for example, be used).	<ul style="list-style-type: none">Details on the group's level 3 financial instruments and the sensitivity of their valuation to the effect of applying reasonable possible alternative assumptions in determining their fair value are set out in Note 33.

(d) Financial instruments measured at amortised cost

Financial assets that are held to collect the contractual cash flows and which contain contractual terms that give rise on specified dates to cash flows that are solely payments of principal and interest are measured at amortised cost. Such financial assets include most loans and advances to banks and customers and some debt securities. In addition, most financial liabilities are measured at amortised cost. The group accounts for regular way amortised cost financial instruments using trade date accounting. The carrying value of these financial assets at initial recognition includes any directly attributable transactions costs.

The group may commit to underwriting loans on fixed contractual terms for specified periods of time. When the loan arising from the lending commitment is expected to be held for trading, the commitment to lend is recorded as a derivative. When the group intends to hold the loan, the loan commitment is included in the impairment calculations set out below.

Non-trading reverse repurchase, repurchase and similar agreements

When debt securities are sold subject to a commitment to repurchase them at a predetermined price ('repos'), they remain on the balance sheet and a liability is recorded in respect of the consideration received. Securities purchased under commitments to resell ('reverse repos') are not recognised on the balance sheet and an asset is recorded in respect of the initial consideration paid. Non-trading repos and reverse repos are measured at amortised cost. The difference between the sale and repurchase price, or between the purchase and resale price, is treated as interest and recognised in net interest income over the life of the agreement.

Contracts that are economically equivalent to reverse repo or repo agreements (such as sales or purchases of debt securities entered into together with total return swaps with the same counterparty) are accounted for similarly to, and presented together with, reverse repo or repo agreements.

(e) Financial assets measured at fair value through other comprehensive income ('FVOCI')

Financial assets held for a business model that is achieved by both collecting contractual cash flows and selling and which contain contractual terms that give rise on specified dates to cash flows that are solely payments of principal and interest are measured at FVOCI. These comprise primarily debt securities. They are recognised on the trade date when the group enters into contractual arrangements to purchase and are normally derecognised when they are either sold or redeemed. They are subsequently remeasured at fair value and changes therein (except for those relating to impairment, interest income and foreign currency exchange gains and losses) are recognised in OCI until the assets are sold. Upon disposal, the cumulative gains or losses in OCI are recognised in the income statement as 'Gains less losses from financial instruments'. Financial assets measured at FVOCI are included in the impairment calculations set out below and impairment is recognised in the income statement.

(f) Equity securities measured at fair value with fair value movements presented in OCI

The equity securities for which fair value movements are shown in OCI are business facilitation and other similar investments where the group holds the investments other than to generate a capital return. Gains or losses on the derecognition of these equity securities are not transferred to the income statement. Dividend income is recognised in the income statement.

(g) Financial instruments designated at fair value through profit or loss

Financial instruments, other than those held for trading, are classified in this category if they meet one or more of the criteria set out below and are so designated irrevocably at inception:

- The use of the designation removes or significantly reduces an accounting mismatch.
- A group of financial assets and liabilities or a group of financial liabilities is managed and its performance is evaluated on a fair value basis, in accordance with a documented risk management or investment strategy.
- The financial liability contains one or more non-closely related embedded derivatives.

Designated financial assets are recognised when the group enters into contracts with counterparties, which is generally on trade date, and are normally derecognised when the rights to the cash flows expire or are transferred.

Designated financial liabilities are recognised when the group enters into contracts with counterparties, which is generally on settlement date, and are normally derecognised when extinguished. Subsequent changes in fair values are recognised in the income statement in 'Net income from financial instruments held for trading or managed on a fair value basis' or 'Net income/(expense) from assets and liabilities of insurance businesses, including related derivatives, measured at fair value through profit or loss' except for the effect of changes in the liabilities' credit risk which is presented in OCI, unless that treatment would create or enlarge an accounting mismatch in profit or loss.

Under the above criterion, the main classes of financial instruments designated by the group are:

- Debt instruments for funding purposes that are designated to reduce an accounting mismatch. The interest and/or foreign exchange exposure on certain fixed rate debt securities issued has been matched with the interest and/or foreign exchange exposure on certain swaps as part of a documented risk management strategy.
- Financial assets and financial liabilities under unit-linked and non-linked investment contracts. A contract under which the group does not accept significant insurance risk from another party is not classified as an insurance contract, other than investment contracts with discretionary participation features ('DPF'), but is accounted for as a financial liability. Customer liabilities under linked and certain non-linked investment contracts issued by insurance subsidiaries are determined based on the fair value of the assets held in the linked funds. If no fair value designation was made for the related assets, at least some of the assets would otherwise be measured at either fair value through OCI or amortised cost. The related financial assets and liabilities are managed and reported to management on a fair value basis. Designation at fair value of the financial assets and related liabilities allows changes in fair values to be recorded in the income statement and presented in the same line.
- Financial liabilities that contain both deposit and derivative components: These financial liabilities are managed and their performance evaluated on a fair value basis.

(h) Derivatives

Derivatives are financial instruments that derive their value from the price of underlying items such as equities, interest rates or other indices. Derivatives are recognised initially and are subsequently measured at fair value through profit or loss. Derivatives are classified as assets when their fair value is positive or as liabilities when their fair value is negative. This includes embedded derivatives in financial liabilities which are bifurcated from the host contract when they meet the definition of a derivative on a stand-alone basis.

Where the derivatives are managed with debt securities issued by the group that are designated at fair value, the contractual interest is shown in 'Interest expense' together with the interest payable on the issued debt.

Hedge accounting

When derivatives are not part of fair value designated relationships, if held for risk management purposes they are designated in hedge accounting relationships where the required criteria for documentation and hedge effectiveness are met. The group uses these derivatives or, where allowed, other non-derivative hedging instruments in fair value hedges, cash flow hedges or hedges of net investments in foreign operations as appropriate to the risk being hedged.

Fair value hedge

Fair value hedge accounting does not change the recording of gains and losses on derivatives and other hedging instruments, but results in recognising changes in the fair value of the hedged assets or liabilities attributable to the hedged risk that would not otherwise be recognised in the income statement. If a hedge relationship no longer meets the criteria for hedge accounting, hedge accounting is discontinued and the cumulative adjustment to the carrying amount of the hedged item is amortised to the income statement on a recalculated effective interest rate, unless the hedged item has been derecognised, in which case it is recognised in the income statement immediately.

Cash flow hedge

The effective portion of gains and losses on hedging instruments is recognised in OCI and the ineffective portion of the change in fair value of derivative hedging instruments that are part of a cash flow hedge relationship is recognised immediately in the income statement within 'Net income from financial instruments held for trading or managed on a fair value basis'. The accumulated gains and losses recognised in OCI are reclassified to the income statement in the same periods in which the hedged item affects profit or loss. When a hedge relationship is discontinued, or partially discontinued, any cumulative gain or loss recognised in OCI remains in equity until the forecast transaction is recognised in the income statement. When a forecast transaction is no longer expected to occur, the cumulative gain or loss previously recognised in OCI is immediately reclassified to the income statement.

Derivatives that do not qualify for hedge accounting

Non-qualifying hedges are derivatives entered into as economic hedges of assets and liabilities for which hedge accounting was not applied.

(i) Impairment of amortised cost and FVOCI financial assets

Expected credit losses ('ECL') are recognised for loans and advances to banks and customers, non-trading reverse repurchase agreements, other financial assets held at amortised cost, debt instruments measured at FVOCI, and certain loan commitments and financial guarantee contracts. At initial recognition, allowance (or provision in the case of some loan commitments and financial guarantees) is required for ECL resulting from default events that are possible within the next 12 months (or less, where the remaining life is less than 12 months) ('12-month ECL'). In the event of a significant increase in credit risk, allowance (or provision) is required for ECL resulting from all possible default events over the expected life of the financial instrument ('lifetime ECL'). Financial assets where 12-month ECL is recognised are considered to be 'stage 1'; financial assets that are considered to have experienced a significant increase in credit risk are in 'stage 2'; and financial assets for which there is objective evidence of impairment so are considered to be in default or otherwise credit-impaired are in 'stage 3'. Purchased or originated credit-impaired financial assets ('POCI') are treated differently as set out below.

Credit-impaired (stage 3)

The group determines that a financial instrument is credit-impaired and in stage 3 by considering relevant objective evidence, primarily whether:

- contractual payments of either principal or interest are past due for more than 90 days;
- there are other indications that the borrower is unlikely to pay such as when a concession has been granted to the borrower for economic or legal reasons relating to the borrower's financial condition; and
- the loan is otherwise considered to be in default.

If such unlikelihood to pay is not identified at an earlier stage, it is deemed to occur when an exposure is 90 days past due, even where regulatory rules permit default to be defined based on 180 days past due. Therefore, the definitions of credit-impaired and default are aligned as far as possible so that stage 3 represents all loans that are considered defaulted or otherwise credit-impaired.

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Interest income is recognised by applying the effective interest rate to the amortised cost amount, i.e. gross carrying amount less ECL allowance.

Write-off

Financial assets (and the related impairment allowances) are normally written off, either partially or in full, when there is no realistic prospect of recovery. Where loans are secured, this is generally after receipt of any proceeds from the realisation of security. In circumstances where the net realisable value of any collateral has been determined and there is no reasonable expectation of further recovery, write-off may be earlier.

Renegotiation

Loans are identified as renegotiated and classified as credit-impaired when we modify the contractual payment terms due to significant credit distress of the borrower. Renegotiated loans remain classified as credit-impaired until there is sufficient evidence to demonstrate a significant reduction in the risk of non-payment of future cash flows and retain the designation of renegotiated until maturity or derecognition.

A loan that is renegotiated is derecognised if the existing agreement is cancelled and a new agreement is made on substantially different terms or if the terms of an existing agreement are modified such that the renegotiated loan is a substantially different financial instrument. Any new loans that arise following derecognition events in these circumstances are considered to be POCI and will continue to be disclosed as renegotiated loans.

Other than originated credit-impaired loans, all other modified loans could be transferred out of stage 3 if they no longer exhibit any evidence of being credit-impaired and, in the case of renegotiated loans, there is sufficient evidence to demonstrate a significant reduction in the risk of non-payment of future cash flows, over the minimum observation period, and there are no other indicators of impairment. These loans could be transferred to stage 1 or 2 based on the mechanism as described below by comparing the risk of a default occurring at the reporting date (based on the modified contractual terms) and the risk of a default occurring at initial recognition (based on the original, unmodified contractual terms). Any amount written off as a result of the modification of contractual terms would not be reversed.

Loan modifications other than renegotiated loans

Loan modifications that are not identified as renegotiated are considered to be commercial restructuring. Where a commercial restructuring results in a modification (whether legalised through an amendment to the existing terms or the issuance of a new loan contract) such that the group's rights to the cash flows under the original contract have expired, the old loan is derecognised and the new loan is recognised at fair value. The rights to cash flows are generally considered to have expired if the commercial restructure is at market rates and no payment-related concession has been provided. Mandatory and general offer loan modifications that are not borrower-specific, for example market-wide customer relief programmes, have not been classified as renegotiated loans and generally have not resulted in derecognition, but their stage allocation is determined considering all available and supportable information under our ECL impairment policy. Changes made to these financial instruments that are economically equivalent and required by interest rate benchmark reform do not result in the derecognition or a change in the carrying amount of the financial instrument, but instead require the effective interest rate to be updated to reflect the change of the interest rate benchmark.

Significant increase in credit risk (stage 2)

An assessment of whether credit risk has increased significantly since initial recognition is performed at each reporting period by considering the change in the risk of default occurring over the remaining life of the financial instrument. The assessment explicitly or implicitly compares the risk of default occurring at the reporting date compared with that at initial recognition, taking into account reasonable and supportable information, including information about past events, current conditions and future economic conditions. The assessment is unbiased, probability-weighted, and to the extent relevant, uses forward-looking information consistent with that used in the measurement of ECL. The analysis of credit risk is multifactor. The determination of whether a specific factor is relevant and its weight compared with other factors depends on the type of product, the characteristics of the financial instrument and the borrower, and the geographical region. Therefore, it is not possible to provide a single set of criteria that will determine what is considered to be a significant increase in credit risk and these criteria will differ for different types of lending, particularly between retail and wholesale.

However, unless identified at an earlier stage, all financial assets are deemed to have suffered a significant increase in credit risk when 30 days past due. In addition, wholesale loans that are individually assessed, which are typically corporate and commercial customers, and included on a watch or worry list are included in stage 2.

For wholesale portfolios, the quantitative comparison assesses default risk using a lifetime probability of default ('PD') which encompasses a wide range of information including the obligor's customer risk rating ('CRR'), macroeconomic condition forecasts and credit transition probabilities. For origination CRRs up to 3.3, significant increase in credit risk is measured by comparing the average PD for the remaining term estimated at origination with the equivalent estimation at the reporting date. The quantitative measure of significance varies depending on the credit quality at origination as follows:

Origination CRR	Significance trigger – PD to increase by
0.1–1.2	15bps
2.1–3.3	30bps

For CRRs greater than 3.3 that are not impaired, a significant increase in credit risk is considered to have occurred when the origination PD has doubled. The significance of changes in PD was informed by expert credit risk judgement, referenced to historical credit migrations and to relative changes in external market rates.

For loans originated prior to the implementation of HKFRS 9, the origination PD does not include adjustments to reflect expectations of future macroeconomic conditions since these are not available without the use of hindsight. In the absence of this data, origination PD must be approximated assuming through-the-cycle ('TTC') PDs and TTC migration probabilities, consistent with the instrument's underlying modelling approach and the CRR at origination. For these loans, the quantitative comparison is supplemented with additional CRR deterioration based thresholds as set out in the table below:

Origination CRR	Additional significance criteria – Number of CRR grade notches deterioration required to identify as significant credit deterioration (stage 2) (> or equal to)
0.1	5 notches
1.1–4.2	4 notches
4.3–5.1	3 notches
5.2–7.1	2 notches
7.2–8.2	1 notch
8.3	0 notch

Further information about the 23-grade scale used for CRR can be found on page 30.

For certain portfolios of debt securities where external market ratings are available and credit ratings are not used in credit risk management, the debt securities will be in stage 2 if their credit risk increases to the extent they are no longer considered investment grade. Investment grade is where the financial instrument has a low risk of incurring losses, the structure has a strong capacity to meet its contractual cash flow obligations in the near term and adverse changes in economic and business conditions in the longer term may, but will not necessarily, reduce the ability of the borrower to fulfil their contractual cash flow obligations.

For retail portfolios, default risk is assessed using a reporting date 12-month PD derived from credit scores which incorporates all available information about the customer. This PD is adjusted for the effect of macroeconomic forecasts for periods longer than 12 months and is considered to be a reasonable approximation of a lifetime PD measure. Retail exposures are first segmented into homogeneous portfolios, generally by country, product and brand. Within each portfolio, the stage 2 accounts are defined as accounts with an adjusted 12-month PD greater than the average 12-month PD of loans in that portfolio 12 months before they become 30 days past due. The expert credit risk judgement is that no prior increase in credit risk is significant. This portfolio-specific threshold identifies loans with a PD higher than would be expected from loans that are performing as originally expected and higher than what would have been acceptable at origination. It therefore approximates a comparison of origination to reporting date PDs.

Unimpaired and without significant increase in credit risk – (stage 1)

ECL resulting from default events that are possible within the next 12 months is recognised for financial instruments that remain in stage 1.

Purchased or originated credit-impaired ('POCI')

Financial assets that are purchased or originated at a deep discount that reflects the incurred credit losses are considered to be POCI. This population includes the recognition of a new financial instrument following a renegotiation where concessions have been granted for economic or contractual reasons relating to the borrower's financial difficulty that otherwise would not have been considered. The amount of change-in-lifetime ECL is recognised in income statement until the POCI is derecognised, even if the lifetime ECL are less than the amount of ECL included in the estimated cash flows on initial recognition.

Movement between stages

Financial assets can be transferred between the different categories (other than POCI) depending on their relative increase in credit risk since initial recognition. Financial instruments are transferred out of stage 2 if their credit risk is no longer considered to be significantly increased since initial recognition based on the assessments described above. Except for renegotiated loans, financial instruments are transferred out of stage 3 when they no longer exhibit any evidence of credit impairment as described above. Renegotiated loans that are not POCI will continue to be in stage 3 until there is sufficient evidence to demonstrate a significant reduction in the risk of non-payment of future cash flows, observed over a minimum one-year period and there are no other indicators of impairment. For loans that are assessed for impairment on a portfolio basis, the evidence typically comprises a history of payment performance against the original or revised terms, as appropriate to the circumstances. For loans that are assessed for impairment on an individual basis, all available evidence is assessed on a case-by-case basis.

Measurement of ECL

The assessment of credit risk, and the estimation of ECL, are unbiased and probability-weighted, and incorporate all available information that is relevant to the assessment including information about past events, current conditions and reasonable and supportable forecasts of future events and economic conditions at the reporting date. In addition, the estimation of ECL should take into account the time value of money.

In general, the group calculates ECL using three main components, a probability of default, a loss given default ('LGD') and the exposure at default ('EAD').

The 12-month ECL is calculated by multiplying the 12-month PD, LGD and EAD. Lifetime ECL is calculated using the lifetime PD instead. The 12-month and lifetime PDs represent the probability of default occurring over the next 12 months and the remaining maturity of the instrument respectively.

The EAD represents the expected balance at default, taking into account the repayment of principal and interest from the balance sheet date to the default event together with any expected drawdowns of committed facilities. The LGD represents expected losses on the EAD given the event of default, taking into account, among other attributes, the mitigating effect of collateral value at the time it is expected to be realised and the time value of money.

The group makes use of the Basel II IRB framework where possible, with recalibration to meet the differing HKFRS 9 requirements as set out in the following table:

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Model	Regulatory capital	HKFRS 9
PD	<ul style="list-style-type: none"> Through the cycle (represents long-run average PD throughout a full economic cycle) The definition of default includes a backstop of 90+ days past due 	<ul style="list-style-type: none"> Point in time (based on current conditions, adjusted to take into account estimates of future conditions that will impact PD) Default backstop of 90+ days past due for all portfolios
EAD	<ul style="list-style-type: none"> Cannot be lower than current balance. 	<ul style="list-style-type: none"> Amortisation captured for term products
LGD	<ul style="list-style-type: none"> Downturn LGD (consistent losses expected to be suffered during a severe but plausible economic downturn) Regulatory floors may apply to mitigate risk of underestimating downturn LGD due to lack of historical data Discounted using cost of capital All collection costs included 	<ul style="list-style-type: none"> Expected LGD (based on estimate of loss given default including the expected impact of future economic conditions such as changes in value of collateral) No floors Discounted using the original effective interest rate of the loan Only costs associated with obtaining/selling collateral included
Other		<ul style="list-style-type: none"> Discounted back from point of default to balance sheet date

While 12-month PDs are re-calibrated from Basel models where possible, the lifetime PDs are determined by projecting the 12-month PD using a term structure. For the wholesale methodology, the lifetime PD also takes into account credit migration, i.e. a customer migrating through the CRR bands over its life.

The ECL for wholesale stage 3 is determined on an individual basis using a discounted cash flow ('DCF') methodology. The expected future cash flows are based on the credit risk officer's estimates as at the reporting date, reflecting reasonable and supportable assumptions and projections of future recoveries and expected future receipts of interest. Collateral is taken into account if it is likely that the recovery of the outstanding amount will include realisation of collateral based on the estimated fair value of collateral at the time of expected realisation, less costs for obtaining and selling the collateral. The cash flows are discounted at a reasonable approximation of the original effective interest rate. For significant cases, cash flows under four different scenarios are probability-weighted by reference to the economic scenarios applied more generally by the group and the judgement of the credit risk officer in relation to the likelihood of the workout strategy succeeding or receivership being required. For less significant cases, the effect of different economic scenarios and work-out strategies is approximated and applied as an adjustment to the most likely outcome.

Period over which ECL is measured

ECL is measured from the initial recognition of the financial asset. The maximum period considered when measuring ECL (be it 12-month or lifetime ECL) is the maximum contractual period over which the group is exposed to credit risk. For wholesale overdrafts, credit risk management actions are taken no less frequently than on an annual basis and therefore this period is to the expected date of the next substantive credit review. The date of the substantive credit review also represents the initial recognition of the new facility. However, where the financial instrument includes both a drawn and undrawn commitment and the contractual ability to demand repayment and cancel the undrawn commitment does not serve to limit the group's exposure to credit risk to the contractual notice period, the contractual period does not determine the maximum period considered. Instead, ECL is measured over the period the group remains exposed to credit risk that is not mitigated by credit risk management actions. This applies to retail overdrafts and credit cards, where the period is the average time taken for stage 2 exposures to default or close as performing accounts, determined on a portfolio basis and ranging from between two and six years. In addition, for these facilities it is not possible to identify the ECL on the loan commitment component separately from the financial asset component. As a result, the total ECL is recognised in the loss allowance for the financial asset unless the total ECL exceeds the gross carrying amount of the financial asset, in which case the ECL is recognised as a provision.

Forward-looking economic inputs

The group applies multiple forward-looking global economic scenarios determined with reference to external forecast distributions representative of its view of forecast economic conditions. This approach is considered sufficient to calculate unbiased expected loss in most economic environments. In certain economic environments, additional analysis may be necessary and may result in additional/ alternative scenarios or adjustments, to reflect a range of possible economic outcomes sufficient for an unbiased estimate. The detailed methodology is disclosed in 'Measurement uncertainty and sensitivity analysis of ECL estimates' on pages 35 to 39.

Critical accounting estimates and judgements

The calculation of the group's ECL under HKFRS 9 requires the group to make a number of judgements, assumptions and estimates. The most significant are set out below:

Judgements	Estimates
<ul style="list-style-type: none"> Defining what is considered to be a significant increase in credit risk Determining the lifetime and point of initial recognition of overdrafts and credit cards Selecting and calibrating the PD, LGD and EAD models, which support the calculations, including making reasonable and supportable judgements about how models react to current and future economic conditions Selecting model inputs and economic forecasts, including determining whether sufficient and appropriately weighted economic forecasts are incorporated to calculate unbiased expected loss Making management adjustments to account for late breaking events, model and data limitations and deficiencies, and expert credit judgements 	<ul style="list-style-type: none"> The sections 'Measurement uncertainty and sensitivity analysis of ECL estimates' marked as audited from pages 35 to 39, set out the assumptions used in determining ECL and provide an indication of the sensitivity of the result to the application of different weightings being applied to different economic assumptions.

(j) Insurance contracts

A contract is classified as an insurance contract where the group accepts significant insurance risk from another party by agreeing to compensate that party on the occurrence of a specified uncertain future event. An insurance contract may also transfer financial risk, but is accounted for as an insurance contract if the insurance risk is significant. In addition, the group issues investment contracts with discretionary participation features ('DPF') which are also accounted for as insurance contracts as required by HKFRS 4 'Insurance Contracts'.

Net insurance premium income

Premiums for life insurance contracts are accounted for when receivable, except in unit-linked insurance contracts where premiums are accounted for when liabilities are established.

Reinsurance premiums are accounted for in the same accounting period as the premiums for the direct insurance contracts to which they relate.

Net insurance claims and benefits paid and movements in liabilities to policyholders

Gross insurance claims for life insurance contracts reflect the total cost of claims arising during the year, including claim handling costs and any policyholder bonuses allocated in anticipation of a bonus declaration.

Maturity claims are recognised when due for payment. Surrenders are recognised when paid or at an earlier date on which, following notification, the policy ceases to be included within the calculation of the related insurance liabilities. Death claims are recognised when notified.

Reinsurance recoveries are accounted for in the same period as the related claim.

Future profit participation on insurance contracts with DPF

Where contracts provide discretionary profit participation benefits to policyholders, liabilities for these contracts include provisions for the future discretionary benefits to policyholders. These provisions reflect the actual performance of the investment portfolio to date and management's expectation of the future performance of the assets backing the contracts, as well as other experience factors such as mortality, lapses and operational efficiency, where appropriate. The benefits to policyholders may be determined by the contractual terms, regulation, or past distribution policy.

Investment contracts with DPF

While investment contracts with DPF are financial instruments, they continue to be treated as insurance contracts as required by HKFRS 4. The group therefore recognises the premiums for these contracts as revenue and recognises as an expense the resulting increase in the carrying amount of the liability.

In the case of net unrealised investment gains on these contracts, whose discretionary benefits principally reflect the actual performance of the investment portfolio, the corresponding increase in the liabilities is recognised in either the income statement or OCI, following the treatment of the unrealised gains on the relevant assets. In the case of net unrealised losses, a deferred participating asset is recognised only to the extent that its recoverability is highly probable. Movements in the liabilities arising from realised gains and losses on relevant assets are recognised in the income statement.

Liabilities under insurance contracts and Present value of in-force long-term insurance business

Liabilities under non-linked life insurance contracts are calculated by each life insurance operation based on local actuarial principles. Liabilities under unit-linked life insurance contracts are at least equivalent to the surrender or transfer value, which is calculated by reference to the value of the relevant underlying funds or indices.

The group recognises the value placed on insurance contracts and investment contracts with DPF, which are classified as long-term and in-force at the balance sheet date, as an asset. The PVIF asset is presented gross of attributable tax in the balance sheet and movements in the PVIF asset are included in 'Other operating income' on a gross of tax basis.

Critical accounting estimates and judgements

The valuation of the PVIF and insurance contract liabilities are dependent on economic assumptions (e.g. future investment returns) and non-economic assumptions (e.g. related to policyholder behaviour or demographics).

Judgements	Estimates
<ul style="list-style-type: none">The PVIF asset represents the value of the equity holders' interest in the issuing insurance companies' profits expected to emerge from these contracts written at the balance sheet date. It is determined by discounting those expected future profits using appropriate assumptions in assessing factors such as future mortality, lapse rates, investment returns and levels of expenses, and a risk discount rate that reflects the risk premium attributable to the respective contracts. The PVIF incorporates allowances for both non-market risk and the value of financial options and guarantees.Insurance contract liabilities are set in accordance with local actuarial principles in each market, aligned with local regulatory measurement frameworks. Core judgements made in applying these frameworks include demographic and behavioural assumptions, expense assumptions and investment return assumptions.	<ul style="list-style-type: none">The assumptions are reassessed at each reporting date and changes in the estimates which affect the value of PVIF and Insurance contract liabilities are reflected in the income statement. More information is included in Note 15 for PVIF and Note 3 for Liabilities under insurance contracts.The sections marked as audited on pages 62 to 66, 'Insurance manufacturing operations risk management' provide an indication of the sensitivity of the result to the application of different weightings being applied to different economic and non-economic assumptions.

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(k) Property

Land and buildings

Land and buildings held for own use are carried at their revalued amount, being the fair value at the date of the revaluation less any subsequent accumulated depreciation and impairment losses.

Revaluations are performed by professional qualified valuers, on a market basis, with sufficient regularity to ensure that the net carrying amount does not differ materially from the fair value. Surpluses arising on revaluation are credited firstly to the income statement, to the extent of any deficits arising on revaluation previously charged to the income statement in respect of the same land and buildings, and are thereafter taken to the 'Property revaluation reserve'. Deficits arising on revaluation are first set off against any previous revaluation surpluses included in the 'Property revaluation reserve' in respect of the same land and buildings, and are thereafter recognised in the income statement.

Leasehold land and buildings are depreciated on a straight-line basis over the shorter of the unexpired terms of the leases or the remaining useful lives.

The Government of Hong Kong owns all the land in Hong Kong and permits its use under leasehold arrangements. Similar arrangements exist in mainland China. The group accounts for its interests in own use leasehold land and land use rights in accordance with HKFRS 16 but discloses these as owned assets when the right of use are considered sufficient to constitute control.

Investment properties

The group holds certain properties as investments to earn rentals or for capital appreciation, or both, and those investment properties are included on balance sheet at fair value with changes in fair value being recognised in the income statement.

(l) Employee compensation and benefits

Post-employment benefit plans

The group operates a number of pension schemes including defined benefit and defined contribution, and post-employment benefit schemes.

Payments to defined contribution schemes are charged as an expense as the employees render service.

Defined benefit pension obligations are calculated using the projected unit credit method. The net charge to the income statement mainly comprises the service cost and the net interest on the net defined benefit asset or liability, and is presented in operating expenses.

Remeasurements of the net defined benefit asset or liability, which comprise actuarial gains and losses, return on plan assets excluding interest and the effect of the asset ceiling (if any, excluding interest), are recognised immediately in OCI. The net defined benefit asset or liability represents the present value of defined benefit obligations reduced by the fair value of plan assets, after applying the asset ceiling test, where the net defined benefit surplus is limited to the present value of available refunds and reductions in future contributions to the plan.

(m) Tax

Income tax comprises current tax and deferred tax. Income tax is recognised in the income statement except to the extent that it relates to items recognised in OCI or directly in equity, in which case the tax is recognised in the same statement as the related item appears.

Current tax is the tax expected to be payable on the taxable profit for the year and on any adjustment to tax payable in respect of previous years. The group provides for potential current tax liabilities that may arise on the basis of the amounts expected to be paid to the tax authorities.

Deferred tax is recognised on temporary differences between the carrying amounts of assets and liabilities in the balance sheet, and the amounts attributed to such assets and liabilities for tax purposes. Deferred tax is calculated using the tax rates expected to apply in the periods in which the assets will be realised or the liabilities settled.

Current and deferred tax are calculated based on tax rates and laws enacted, or substantively enacted, by the balance sheet date.

(n) Provisions, contingent liabilities and guarantees

Provisions

Provisions are recognised when it is probable that an outflow of economic benefits will be required to settle a present legal or constructive obligation that has arisen as a result of past events and for which a reliable estimate can be made.

Contingent liabilities and guarantees

Contingent liabilities

Contingent liabilities, which include certain guarantees and letters of credit pledged as collateral security, and contingent liabilities related to legal proceedings or regulatory matters, are not recognised in the Consolidated Financial Statements but are disclosed unless the probability of settlement is remote.

Financial guarantee contracts

Liabilities under financial guarantee contracts that are not classified as insurance contracts are recorded initially at their fair value, which is generally the fee received or present value of the fee receivable.

The Bank has issued financial guarantees and similar contracts to other group entities. The group elects to account for certain guarantees as insurance contracts in the Bank's financial statements, in which case they are measured and recognised as insurance liabilities. This election is made on a contract-by-contract basis, and is irrevocable.

(o) Impairment of non-financial assets

Software under development is tested for impairment at least annually. Other non-financial assets such as property, plant and equipment, intangible assets (excluding goodwill) and right-of-use assets are tested for impairment at the individual asset level when there is indication of impairment at that level, or at the CGU level for assets that do not have a recoverable amount at the individual asset level. In addition, impairment is also tested at the CGU level when there is indication of impairment at that level. For this purpose, CGUs are considered to be the principal operating legal entities and branches divided in a similar manner as the group's operating segments.

Impairment testing compares the carrying amount of the non-financial asset or CGU with its recoverable amount, which is the higher of the fair value less costs of disposal or the value in use. The carrying amount of a CGU comprises the carrying value of its assets and liabilities, including non-financial assets that are directly attributable to it and non-financial assets that can be allocated to it on a reasonable and consistent basis. Non-financial assets that cannot be allocated to an individual CGU are tested for impairment at an appropriate grouping of CGUs. The recoverable amount of the CGU is the higher of the fair value less costs of disposal of the CGU, which is determined by independent and qualified valuers where relevant, and the value in use, which is calculated based on appropriate inputs.

When the recoverable amount of a CGU is less than its carrying amount, an impairment loss is recognised in the income statement to the extent that the impairment can be allocated on a pro-rata basis to the non-financial assets by reducing their carrying amounts to the higher of their respective individual recoverable amount or nil. This impairment is not allocated to financial assets within a CGU.

Impairment loss recognised in prior periods for non-financial assets is reversed when there has been a change in the estimate used to determine the recoverable amount. The impairment loss is reversed to the extent that the carrying amount of the non-financial assets would not exceed the amount that would have been determined (net of amortisation or depreciation) had no impairment loss been recognised in prior periods.

2 Operating profit

(a) Net interest income

Net interest income includes:

	2021 HK\$m	2020 HK\$m
Interest income recognised on impaired financial assets	315	220
Interest income recognised on financial assets measured at amortised cost	106,916	127,178
Interest income recognised on financial assets measured at FVOCI	14,461	20,167
Interest expense on financial instruments, excluding interest on financial liabilities held for trading or designated or otherwise mandatorily measured at fair value	(20,907)	(33,135)

(b) Net fee income

Net fee income by reportable segments

	Wealth and Personal Banking ¹ HK\$m	Commercial Banking ¹ HK\$m	Global Banking ^{1,2} HK\$m	Markets and Securities Services ² HK\$m	Corporate Centre ³ HK\$m	Other (GBM- other) ² HK\$m	Total HK\$m
Account services	809	929	367	70	–	–	2,175
Funds under management	5,927	639	16	2,028	–	–	8,610
Cards	7,559	207	40	–	–	–	7,806
Credit facilities	409	1,371	1,304	62	–	–	3,146
Broking income	5,477	69	–	869	–	–	6,415
Imports/exports	–	2,462	594	–	–	–	3,056
Unit trusts	7,373	176	1	–	–	–	7,550
Underwriting	1	1	869	683	–	–	1,554
Remittances	255	1,843	715	–	–	–	2,813
Global custody	976	50	47	3,414	–	–	4,487
Insurance agency commission	1,326	114	1	–	–	–	1,441
Other	2,329	2,675	2,497	3,413	(2,156)	8	8,766
Fee income	32,441	10,536	6,451	10,539	(2,156)	8	57,819
Fee expense	(8,614)	(708)	(705)	(4,809)	2,399	(86)	(12,523)
Year ended 31 Dec 2021	23,827	9,828	5,746	5,730	243	(78)	45,296

Notes on the Consolidated Financial Statements

Net fee income by reportable segments (continued)

	Wealth and Personal Banking ¹	Commercial Banking ¹	Global Banking ^{1,2}	Markets and Securities Services ²	Corporate Centre ³	Other (GBM-other) ²	Total
	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
Account services	864	864	297	62	3	8	2,098
Funds under management	5,071	677	8	1,788	—	—	7,544
Cards	6,732	171	35	—	1	—	6,939
Credit facilities	349	1,347	1,175	—	—	—	2,871
Broking income	5,473	58	—	682	—	—	6,213
Imports/exports	—	2,176	755	—	1	—	2,932
Unit trusts	5,991	142	1	—	—	—	6,134
Underwriting	1	1	838	683	(12)	—	1,511
Remittances	290	1,630	697	—	(18)	—	2,599
Global custody	942	53	70	2,928	—	—	3,993
Insurance agency commission	1,308	107	1	—	—	—	1,416
Other	2,312	2,363	2,288	3,263	(2,121)	15	8,120
Fee income	29,333	9,589	6,165	9,406	(2,146)	23	52,370
Fee expense	(7,159)	(587)	(783)	(4,433)	2,308	(46)	(10,700)
Year ended 31 Dec 2020	22,174	9,002	5,382	4,973	162	(23)	41,670

1 In 2021, the cards acquiring business has been transferred from Commercial Banking ('CMB') and Global Banking ('GB') to Wealth and Personal Banking ('WPB') to align with the business model. Comparatives have been re-presented to conform to the current year's presentation.

2 In the second half of 2021, the reportable segments have been changed to reflect the change in the management of the Global Banking and Markets ('GBM') business, with the splitting out of GB and Markets and Securities Services ('MSS') as separate reportable segments, whilst GBM-Other (previously reported within GBM) is now reported under 'Other (GBM-other)'. Comparatives have been re-presented to conform to the current year's presentation. Further details on the change in reportable segments are set out in Note 31 'Segmental analysis' in the Consolidated Financial Statements.

3 Includes inter-segment elimination.

Net fee income includes:

	2021 HK\$m	2020 HK\$m
Fees earned on financial assets that are not at fair value through profit and loss (other than amounts included in determining the effective interest rate)	9,742	9,373
– fee income	15,173	13,850
– fee expense	(5,431)	(4,477)
Fee earned on trust and other fiduciary activities	11,242	9,745
– fee income	12,801	11,012
– fee expense	(1,559)	(1,267)

(c) Net income from financial instruments measured at fair value through profit or loss

	2021 HK\$m	2020 HK\$m
Net income/(expense) arising on:		
Net trading activities	29,888	35,141
Other instruments managed on a fair value basis	(1,529)	(2,969)
Net income from financial instruments held for trading or managed on a fair value basis	28,359	32,172
Financial assets held to meet liabilities under insurance and investment contracts	17,837	15,873
Liabilities to customers under investment contracts	343	(2,745)
Net income from assets and liabilities of insurance businesses, including related derivatives, measured at fair value through profit or loss	18,180	13,128
Change in fair value of designated debt issued and related derivatives ¹	(639)	(171)
Changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss	(25)	138
Year ended 31 Dec	45,875	45,267

1 Includes debt instruments which are issued for funding purposes and are designated under the fair value option to reduce an accounting mismatch.

(d) Other operating income

	2021 HK\$m	2020 HK\$m
Movement in present value of in-force insurance business	(1,294)	3,840
Gains/(losses) on investment properties	277	(996)
Losses on disposal of property, plant and equipment and assets held for sale	(54)	(61)
Gains/(losses) on disposal of subsidiaries, associates and business portfolios	4	(70)
Rental income from investment properties	393	370
Dividend income	198	165
Other	2,509	2,364
Year ended 31 Dec	2,033	5,612

There was a gain on disposal of loans and receivables of HK\$77m in the year (2020: loss of HK\$52m). There was a loss on disposal of financial liabilities measured at amortised cost of HK\$136m in the year (2020: nil).

(e) Change in expected credit losses and other credit impairment charges

Change in expected credit losses and other credit impairment charges arising from the following asset categories:

	2021 HK\$m	2020 HK\$m
Loans and advances to banks and customers	7,055	16,509
– new allowances net of allowance releases	8,065	17,242
– recoveries of amounts previously written off	(1,010)	(733)
Loan commitments and guarantees	(683)	654
Other financial assets	167	556
Year ended 31 Dec	6,539	17,719

Change in expected credit losses as a percentage of average gross customer advances was 0.18% for 2021 (2020: 0.44%).

(f) General and administrative expenses

	2021 HK\$m	2020 HK\$m
Premises and equipment	2,867	2,804
Marketing and advertising expenses	2,417	1,959
Other administrative expenses ¹	47,043	41,541
Year ended 31 Dec	52,327	46,304

¹ Include recharges from fellow group entities. Further details are set out in Note 32.

Included in operating expenses were direct operating expenses of HK\$37m (2020: HK\$31m) arising from investment properties that generated rental income in the year. Direct operating expenses arising from investment properties that did not generate rental income amounted to HK\$4m (2020: HK\$3m).

(g) Depreciation and impairment of property, plant and equipment

	2021 HK\$m	2020 HK\$m
Owned property, plant and equipment	6,019	6,059
Other right-of-use assets	2,872	3,346
Year ended 31 Dec	8,891	9,405

(h) Auditors' remuneration

Auditors' remuneration amounted to HK\$152m (2020: HK\$163m).

Notes on the Consolidated Financial Statements

3 Insurance business

Net insurance premium Income

	Non-linked insurance	Unit-linked	Total
	HK\$m	HK\$m	HK\$m
Gross insurance premium income	62,937	2,398	65,335
Reinsurers' share of gross insurance premium income	(3,594)	(19)	(3,613)
Year ended 31 Dec 2021	59,343	2,379	61,722
Gross insurance premium income	61,979	1,693	63,672
Reinsurers' share of gross insurance premium income	(2,091)	(18)	(2,109)
Year ended 31 Dec 2020	59,888	1,675	61,563

Net insurance claims and benefits paid and movement in liabilities to policyholders

	Non-linked insurance	Unit-linked	Total
	HK\$m	HK\$m	HK\$m
Gross claims and benefits paid and movement in liabilities to policyholders	78,159	1,898	80,057
– claims, benefits and surrenders paid	18,573	6,735	25,308
– movement in liabilities	59,586	(4,837)	54,749
Reinsurers' share of claims and benefits paid and movement in liabilities	(4,013)	4	(4,009)
– claims, benefits and surrenders paid	(2,048)	(39)	(2,087)
– movement in liabilities	(1,965)	43	(1,922)
Year ended 31 Dec 2021	74,146	1,902	76,048
Gross claims and benefits paid and movement in liabilities to policyholders	74,810	5,594	80,404
– claims, benefits and surrenders paid	25,876	5,990	31,866
– movement in liabilities	48,934	(396)	48,538
Reinsurers' share of claims and benefits paid and movement in liabilities	(2,459)	(34)	(2,493)
– claims, benefits and surrenders paid	(2,773)	(50)	(2,823)
– movement in liabilities	314	16	330
Year ended 31 Dec 2020	72,351	5,560	77,911

Liabilities under insurance contracts

	2021			2020		
	Gross HK\$m	Reinsurers' share ² HK\$m	Net HK\$m	Gross HK\$m	Reinsurers' share ² HK\$m	Net HK\$m
Non-linked insurance						
At 1 Jan	547,058	(25,361)	521,697	494,181	(26,247)	467,934
Claims and benefits paid	(18,573)	2,048	(16,525)	(25,876)	2,773	(23,103)
Increase/(decrease) in liabilities to policyholders	78,159	(4,013)	74,146	74,810	(2,459)	72,351
Exchange differences and other movements ¹	1,856	(35)	1,821	3,943	572	4,515
At 31 Dec	608,500	(27,361)	581,139	547,058	(25,361)	521,697
Unit-linked						
At 1 Jan	34,348	(4)	34,344	34,579	(35)	34,544
Claims and benefits paid	(6,735)	39	(6,696)	(5,990)	50	(5,940)
Increase/(decrease) in liabilities to policyholders	1,898	4	1,902	5,594	(34)	5,560
Exchange differences and other movements ¹	134	(44)	90	165	15	180
At 31 Dec	29,645	(5)	29,640	34,348	(4)	34,344
Total liabilities to policyholders	638,145	(27,366)	610,779	581,406	(25,365)	556,041

1 'Exchange differences and other movements' includes movements in liabilities arising from net unrealised investment gains recognised in other comprehensive income.

2 Amounts recoverable from reinsurance of liabilities under insurance contracts are included in the consolidated balance sheet in 'Prepayment, accrued income and other assets'.

The key factors contributing to the movement in liabilities to policyholders included movements in the market value of assets supporting policyholder liabilities, death claims, surrenders, lapses, liabilities to policyholders created at the initial inception of the policies, the declaration of bonuses and other amounts attributable to policyholders.

4 Employee compensation and benefits

	2021 HK\$m	2020 HK\$m
Wages and salaries ¹	35,736	33,367
Social security costs	1,344	893
Post-employment benefits	2,181	1,923
– defined contribution pension plans	1,651	1,528
– defined benefit pension plans	530	395
Year ended 31 Dec	39,261	36,183

¹ 'Wages and salaries' includes the effect of share-based payments arrangements of HK\$951m (2020: HK\$694m).

Post-employment benefit plans

The group operates a number of post-employment benefit plans for its employees. Some of these plans are defined benefit plans, of which the largest plan is The HSBC Group Hong Kong Local Staff Retirement Benefit Scheme (the 'Principal Plan').

The group's balance sheet includes the net surplus or deficit, being the difference between the fair value of plan assets and the discounted value of scheme liabilities at the balance sheet date for each plan. Surpluses are only recognised to the extent that they are recoverable through reduced contributions in the future or through potential future refunds from the schemes. In assessing whether a surplus is recoverable, the group has considered its current right to obtain a future refund or a reduction in future contributions.

Defined benefit pension plans

Net asset/(liability) under defined benefit pension plans

	Fair value of plan assets HK\$m	Present value of defined benefit obligations HK\$m	Net defined benefit liability HK\$m
At 1 Jan 2021	10,453	(13,140)	(2,687)
Service cost	–	(475)	(475)
– current service cost	–	(492)	(492)
– past service cost and gains/(losses) from settlements	–	17	17
Net interest income/(expense) on the net defined benefit asset/(liability)	79	(125)	(46)
Re-measurement effects recognised in other comprehensive income	500	385	885
– return on plan assets (excluding interest income)	500	–	500
– actuarial gains	–	385	385
Contributions by the group	356	–	356
Benefits paid	(1,340)	1,407	67
Exchange differences and other movements	27	3	30
At 31 Dec 2021	10,075	(11,945)	(1,870)
Retirement benefit liabilities recognised on the balance sheet			(1,890)
Retirement benefit assets recognised on the balance sheet (within 'Prepayment, accrued income and other assets')			20
At 1 Jan 2020	10,302	(12,848)	(2,546)
Service cost	–	(318)	(318)
– current service cost	–	(492)	(492)
– past service cost and gains/(losses) from settlements	–	174	174
Net interest income/ (expense) on the net defined benefit asset/(liability)	202	(263)	(61)
Re-measurement effects recognised in other comprehensive income	446	(830)	(384)
– return on plan assets (excluding interest income)	446	–	446
– actuarial losses	–	(830)	(830)
Contributions by the group	602	–	602
Benefits paid	(1,097)	1,153	56
Exchange differences and other movements	(2)	(34)	(36)
At 31 Dec 2020	10,453	(13,140)	(2,687)
Retirement benefit liabilities recognised on the balance sheet			(2,701)
Retirement benefit assets recognised on the balance sheet (within 'Prepayment, accrued income and other assets')			14

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Fair value of plan assets by asset classes

	At 31 Dec 2021			At 31 Dec 2020		
	Value HK\$m	Quoted market price in active market HK\$m	Thereof HSBC HK\$m	Value HK\$m	Quoted market price in active market HK\$m	Thereof HSBC HK\$m
Fair value of plan assets	10,075	10,075	257	10,453	10,453	219
– equities	1,232	1,232	–	1,547	1,547	–
– bonds	5,676	5,676	–	5,562	5,562	–
– alternative investments	2,490	2,490	–	2,838	2,838	–
– other ¹	677	677	257	506	506	219

¹ Other mainly consists of cash and cash deposits.

The Principal Plan

In Hong Kong, the HSBC Group Hong Kong Local Staff Retirement Benefit Scheme ('LSRBS'), the Principal Plan, covers employees of the group and HSBC Global Services (Hong Kong) Limited (the 'ServCo'), which is a fellow subsidiary of the Group set up in Hong Kong as part of the recovery and resolution planning to provide functional support services to the group, as well as certain other local employees of the Group. The Principal Plan comprises a funded defined benefit scheme (which provides a lump sum benefit on retirement and is now closed to new members) and a defined contribution scheme. The latter was established on 1 January 1999 for new employees, and the group has been providing defined contribution plans to all new employees. Since the defined benefit scheme of the Principal Plan is a final salary lump sum scheme, its exposure to longevity risk and interest rate risk is limited compared to a scheme that provides annuity payments.

The Principal Plan is a funded plan with assets which are held in trust funds separate from the group. The investment strategy of the defined benefit scheme of the Principal Plan is to hold the majority of assets in fixed income investments, with a smaller portion in equities. The target asset allocation for the portfolio is as follows: Fixed income investments 75% and Equity 25%. Each investment manager has been assigned a benchmark applicable to their respective asset class. The actuarial funding valuation of the Principal Plan is conducted at least on a triennial basis in accordance with the local practice and regulations. The actuarial assumptions used to conduct the actuarial funding valuation of the Principal Plan vary according to the economic conditions.

The trustee, which is a subsidiary of the Bank, assumes the overall responsibility for the Principal Plan and the group has established a management committee and a number of sub-committees to broaden the governance and manage the concomitant issues.

Both the group and ServCo participate in the Principal Plan that shares risks between the entities which are under common control of the Group. As agreed between the group and ServCo, the net defined benefit cost of the defined benefit scheme of the Principal Plan shall be charged separately. Details on the defined benefit scheme of the Principal Plan are disclosed below.

Net asset/(liability) under the defined benefit scheme of the Principal Plan

	Included within the group			Included within ServCo		
	Fair value of plan assets HK\$m	Present value of defined benefit obligations HK\$m	Net defined benefit liability HK\$m	Fair value of plan assets HK\$m	Present value of defined benefit obligations HK\$m	Net defined benefit liability HK\$m
At 1 Jan 2021	4,486	(5,330)	(844)	4,288	(5,001)	(713)
Service cost	–	(179)	(179)	–	(171)	(171)
– current service cost	–	(179)	(179)	–	(171)	(171)
Net interest income/(expense) on the net defined benefit asset/(liability)	22	(26)	(4)	21	(24)	(3)
Re-measurement effects recognised in other comprehensive income	265	118	383	250	240	490
– return on plan assets (excluding interest income)	265	–	265	250	–	250
– actuarial gains	–	118	118	–	240	240
Contributions	166	–	166	149	–	149
Benefits paid	(585)	585	–	(682)	682	–
Exchange differences and other movements	70	(83)	(13)	(81)	83	2
At 31 Dec 2021	4,424	(4,915)	(491)	3,945	(4,191)	(246)
Retirement benefit liabilities recognised on the balance sheet			(491)			(246)
At 1 Jan 2020	4,654	(5,252)	(598)	4,445	(4,960)	(515)
Service cost	–	(182)	(182)	–	(175)	(175)
– current service cost	–	(182)	(182)	–	(175)	(175)
Net interest income/(expense) on the net defined benefit asset/(liability)	80	(89)	(9)	76	(84)	(8)
Re-measurement effects recognised in other comprehensive income	114	(325)	(211)	110	(297)	(187)
– return on plan assets (excluding interest income)	114	–	114	110	–	110
– actuarial losses	–	(325)	(325)	–	(297)	(297)
Contributions	183	–	183	174	–	174
Benefits paid	(549)	549	–	(484)	484	–
Exchange differences and other movements	4	(31)	(27)	(33)	31	(2)
At 31 Dec 2020	4,486	(5,330)	(844)	4,288	(5,001)	(713)
Retirement benefit liabilities recognised on the balance sheet			(844)			(713)

The group expects to make HK\$160m of contributions to the defined benefit scheme of the Principal Plan and ServCo expects to make HK\$136m contributions to the defined benefit scheme of the Principal Plan during 2022. This is determined separately by the group and ServCo by reference to the actuarial funding valuation carried out by the Principal Plan's local actuary.

Benefits expected to be paid from the defined benefit scheme of the Principal Plan over each of the next five years, and in aggregate for the five years thereafter, are as follows:

Benefits expected to be paid from the defined benefit scheme of the Principal Plan¹

	2022	2023	2024	2025	2026	2027-2031
As reported by:	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
- The group	381	467	383	362	396	1,896
- ServCo	286	284	333	365	287	1,785

¹ The duration of the defined benefit obligation is seven years for the Principal Plan under the disclosure assumptions adopted (2020: seven years).

Fair value of plan assets of the defined benefit scheme of the Principal Plan by asset classes

	At 31 Dec 2021			At 31 Dec 2020		
	Value	Quoted market price in active market	Thereof HSBC	Value	Quoted market price in active market	Thereof HSBC
	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
Fair value of plan assets	8,369	8,369	76	8,775	8,775	124
- equities	1,839	1,839	-	2,448	2,448	-
- bonds	4,731	4,731	-	4,537	4,537	-
- alternative investments	1,723	1,723	-	1,676	1,676	-
- other ¹	76	76	76	114	114	124

¹ Other mainly consists of cash and cash deposits.

The Principal Plan's key actuarial financial assumptions

The group and ServCo determine the discount rate to be applied to the defined benefit scheme's obligations in consultation with the Principal Plan's local actuary, on the basis of the current average yields of Hong Kong Government bonds and Hong Kong Exchange Fund Notes, with maturities consistent with that of the defined benefit obligations.

The key actuarial assumptions used to calculate the group's obligations for the defined benefit scheme of the Principal Plan for the year, and used as the basis for measuring the expenses were as follows:

Key actuarial assumptions for the defined benefit scheme of the Principal Plan

	Discount rate	Rate of pay increase
	% p.a.	% p.a.
At 31 Dec 2021	1.30	3.00
At 31 Dec 2020	0.50	2% p.a. for 2020 and 2021 and 3% p.a. thereafter

Actuarial assumption sensitivities

The discount rate and rate of pay increase are sensitive to changes in market conditions arising during the reporting period. The following table shows the financial impact of assumption changes on the defined benefit scheme of the Principal Plan at year end:

The effect of changes in key assumptions on the defined benefit scheme of the Principal Plan

	Impact on HSBC Group Hong Kong Local Staff Retirement Benefit Scheme obligation			
	Financial impact of increase		Financial impact of decrease	
	2021	2020	2021	2020
	HK\$m	HK\$m	HK\$m	HK\$m
Discount rate - increase/decrease of 0.25%	(158)	(180)	162	185
Pay - increase/decrease of 0.25%	160	182	(157)	(178)

Directors' emoluments

The aggregate emoluments of the Directors of the Bank disclosed pursuant to section 4 of the Companies (Disclosure of Information about Benefits of Directors) Regulation were HK\$131m (2020: HK\$106m). This comprises fees (which represent the aggregate emoluments paid to or receivable by directors in respect of their services as a director) of HK\$30m (2020: HK\$26m) and other emoluments of HK\$101m (2020: HK\$80m) which includes contributions to pension schemes of HK\$1m (2020: nil). Non-cash benefits which are included in other emoluments mainly relate to share-based payment awards, and the provision of housing and furnishing.

Details on loans to directors are set out in Note 32.

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5 Tax

The Bank and its subsidiaries in Hong Kong have provided for Hong Kong profits tax at the rate of 16.5% (2020: 16.5%) on the profits for the year assessable in Hong Kong. Overseas branches and subsidiaries have similarly provided for tax in the countries in which they operate at the appropriate rates of tax in force in 2021. Deferred taxation is provided for in accordance with the group's accounting policy in Note 1.2(m).

Tax expense

	2021 HK\$m	2020 HK\$m
Current tax	12,489	14,279
– Hong Kong taxation – on current year profit	5,719	7,316
– Hong Kong taxation – adjustments in respect of prior years	(158)	(457)
– overseas taxation – on current year profit	7,151	7,668
– overseas taxation – adjustments in respect of prior years	(223)	(248)
Deferred tax	1,526	226
– origination and reversal of temporary differences	1,209	(414)
– effect of changes in tax rates	9	36
– adjustments in respect of prior years	308	604
Year ended 31 Dec	14,015	14,505

Tax reconciliation

The tax charged to the income statement differs from the tax charge that would apply if all profits had been taxed at the applicable tax rates in the countries concerned as follows:

Reconciliation between taxation charge and accounting profit at applicable tax rates

	2021 HK\$m	2020 HK\$m
Profit before tax	86,563	90,196
Notional tax on profit before tax, calculated at the rates applicable to profits in the countries concerned	17,463	18,058
Effects of profits in associates and joint ventures	(3,186)	(2,523)
Non-taxable income and gains	(3,181)	(3,291)
Local taxes and overseas withholding taxes	2,695	2,270
Permanent disallowables	577	523
Others	(353)	(532)
Year ended 31 Dec	14,015	14,505

Movements of deferred tax assets and liabilities

	Accelerated capital allowances HK\$m	Insurance business HK\$m	Expense provisions HK\$m	Impairment allowance on financial instruments HK\$m	Revaluation of properties HK\$m	Other ² HK\$m	Total HK\$m
Assets	102	–	1,294	2,676	–	3,088	7,160
Liabilities	(358)	(10,662)	–	–	(14,645)	(9,167)	(34,832)
At 1 Jan 2021	(256)	(10,662)	1,294	2,676	(14,645)	(6,079)	(27,672)
Exchange and other adjustments	(6)	2	(42)	(75)	(1)	(11)	(133)
Charge/(credit) to income statement	(142)	232	286	80	524	(2,506)	(1,526)
Charge/(credit) to other comprehensive income	–	–	1	(1)	(863)	1,025	162
At 31 Dec 2021	(404)	(10,428)	1,539	2,680	(14,985)	(7,571)	(29,169)
Assets ¹	176	–	1,557	2,680	–	2,106	6,519
Liabilities ¹	(580)	(10,428)	(18)	–	(14,985)	(9,677)	(35,688)
Assets	183	–	1,290	1,478	–	2,280	5,231
Liabilities	(332)	(10,140)	–	–	(16,462)	(6,007)	(32,941)
At 1 Jan 2020	(149)	(10,140)	1,290	1,478	(16,462)	(3,727)	(27,710)
Exchange and other adjustments	6	(19)	81	23	(52)	73	112
Charge/(credit) to income statement	(113)	(503)	(63)	1,176	729	(1,452)	(226)
Charge/(credit) to other comprehensive income	–	–	(14)	(1)	1,140	(973)	152
At 31 Dec 2020	(256)	(10,662)	1,294	2,676	(14,645)	(6,079)	(27,672)
Assets ¹	102	–	1,294	2,676	–	3,088	7,160
Liabilities ¹	(358)	(10,662)	–	–	(14,645)	(9,167)	(34,832)

1 After netting off balances within countries, the balances as disclosed in the Consolidated Financial Statements are as follows: deferred tax assets HK\$3,353m (2020: HK\$3,325m); and deferred tax liabilities HK\$32,522m (2020: HK\$30,997m).

2 Other included deferred tax of HK\$5,523m (2020: HK\$4,295m) provided in respect of distributable reserves or post-acquisition reserves of associates that, on distribution or sale, would attract withholding tax.

The amount of unused tax losses for which no deferred tax asset is recognised in the balance sheet is HK\$3,130m (2020: HK\$3,969m). Of this amount, HK\$733m (2020: HK\$1,917m) has no expiry date and the remaining will expire within 10 years.

Deferred tax is not recognised in respect of the group's investments in subsidiaries and branches where remittance or other realisation is not probable, and for those associates and interests in joint ventures where it has been determined that no additional tax will arise.

6 Dividends

Dividends to shareholders of the parent company

	2021		2020	
	HK\$ per share	HK\$m	HK\$ per share	HK\$m
Dividends paid on ordinary shares				
In respect of previous year:				
– fourth interim dividend	0.47	21,665	0.58	27,026
In respect of current year:				
– first interim dividend paid	0.26	12,211	0.13	5,814
– second interim dividend paid	0.24	11,153	0.19	8,915
– third interim dividend paid	0.24	11,361	0.22	10,063
Total	1.21	56,390	1.12	51,818
Distributions on other equity instruments		2,715		2,450
Dividends to shareholders		59,105		54,268

On 15 February 2022, the Directors declared a fourth interim dividend in respect of the financial year ended 31 December 2021 of HK\$0.23 per ordinary share (HK\$10,584m) (2020: HK\$0.47 per ordinary share (HK\$21,665m)). No liability was recorded in the financial statements in respect of the fourth interim dividend for 2021.

Total coupons on other equity instruments

	2021	2020
	HK\$m	HK\$m
US\$900m Fixed rate perpetual subordinated loan (interest rate fixed at 6.510%) ¹	456	454
US\$900m Fixed rate perpetual subordinated loan (interest rate fixed at 6.030%) ¹	422	420
US\$1,000m Fixed rate perpetual subordinated loan (interest rate fixed at 6.090%) ¹	474	370
US\$1,200m Fixed rate perpetual subordinated loan (interest rate fixed at 6.172%) ¹	576	445
US\$600m Fixed rate perpetual subordinated loan (interest rate fixed at 5.910%) ¹	275	249
US\$1,100m Fixed rate perpetual subordinated loan (interest rate fixed at 6.000%) ¹	512	512
Total	2,715	2,450

¹ These subordinated loans were issued in May and June 2019 and discretionary coupons are paid annually.

7 Trading assets

	2021	2020
	HK\$m	HK\$m
Treasury and other eligible bills	132,104	113,668
Debt securities	274,508	265,255
Equity securities	299,420	166,385
Other ¹	71,418	55,106
At 31 Dec	777,450	600,414

¹ 'Other' includes reverse repos, stock borrowing, term lending and other accounts with banks and customers.

8 Derivatives

Notional contract amounts and fair values of derivatives by product contract type

	Notional contract amount		Fair value – Assets			Fair value – Liabilities		
	Trading HK\$m	Hedging HK\$m	Trading HK\$m	Hedging HK\$m	Total HK\$m	Trading HK\$m	Hedging HK\$m	Total HK\$m
Foreign Exchange	17,721,333	74,732	155,110	3,401	158,511	150,034	523	150,557
Interest rate	30,392,783	218,885	368,523	4,321	372,844	372,342	1,406	373,748
Equity	845,058	–	18,611	–	18,611	14,800	–	14,800
Credit	413,340	–	3,446	–	3,446	4,437	–	4,437
Commodity and other	146,377	–	1,884	–	1,884	2,378	–	2,378
Gross total	49,518,891	293,617	547,574	7,722	555,296	543,991	1,929	545,920
Offset					(190,129)			(190,129)
At 31 Dec 2021					365,167			355,791
Foreign Exchange	18,274,306	100,371	238,746	232	238,978	261,792	2,625	264,417
Interest rate	26,906,526	304,554	357,195	6,099	363,294	327,675	6,718	334,393
Equity	591,614	–	13,810	–	13,810	19,072	–	19,072
Credit	553,790	–	5,381	–	5,381	5,955	–	5,955
Commodity and other	115,673	–	2,138	–	2,138	5,030	–	5,030
Gross total	46,441,909	404,925	617,270	6,331	623,601	619,524	9,343	628,867
Offset					(200,656)			(200,656)
At 31 Dec 2020					422,945			428,211

The notional contract amounts of derivatives held for trading purposes and derivatives designated in hedge accounting relationships indicate the nominal value of transactions outstanding at the balance sheet date. They do not represent amounts at risk.

Use of derivatives

The group transacts derivatives for three primary purposes: to create risk management solutions for clients, to manage the portfolio risk arising from client business, and to manage and hedge the group's own risks. Derivatives (except for derivatives which are designated as effective hedging instruments) are held for trading. Within the held for trading classification are two types of derivative instruments: those used in sales and trading activities, and those used for risk management purposes but which for various reasons do not meet the qualifying criteria for hedge accounting. The second category includes derivatives managed in conjunction with financial instruments designated at fair value. These activities are described more fully below.

The group's derivative activities give rise to significant open positions in portfolios of derivatives. These positions are managed constantly to ensure that they remain within acceptable risk levels. When entering into derivative transactions, the group employs the same credit risk management framework to assess and approve potential credit exposures that it uses for traditional lending.

Trading derivatives

Most of the group's derivative transactions relate to sales and trading activities. Sales activities include the structuring and marketing of derivative products to customers to enable them to take, transfer, modify or reduce current or expected risks. Trading activities include market-making and risk management. Market-making entails quoting bid and offer prices to other market participants for the purpose of generating revenues based on spread and volume. Risk management activity is undertaken to manage the risk arising from client transactions, with the principal purpose of retaining client margin. Other derivatives classified as held for trading include non-qualifying hedging derivatives.

Derivatives valued using models with unobservable inputs

Any initial gain or loss on financial instruments where the valuation is dependent on unobservable parameters is deferred over the life of the contract or until the instrument is redeemed, transferred or sold or the fair value becomes observable. All derivatives that are part of qualifying hedging relationships have valuations based on observable market parameters.

The aggregate unobservable inception profit yet to be recognised in the income statement is immaterial.

Hedge accounting derivatives

The group applies hedge accounting to manage the following risks: interest rate and foreign exchange. The group uses derivatives (principally interest rate and currency swaps) for hedging purposes in the management of its own asset and liability portfolios and structural positions. This enables the group to optimise its overall costs of accessing debt capital markets, and to mitigate the market risk which would otherwise arise from structural imbalances in the maturity and other profiles of its assets and liabilities. The accounting treatment of hedging transactions varies according to the nature of the instrument hedged and the type of hedging transaction. Derivatives may qualify as hedges for accounting purposes if they are fair value hedges, or cash flow hedges.

Fair value hedges

The group enters into fixed-for-floating-interest-rate swaps to manage the exposure to changes in fair value due to movements in market interest rates on certain fixed rate financial instruments which are not measured at fair value through profit or loss, including debt securities held and issued.

Sources of hedge ineffectiveness may arise from basis risk including but not limited to the discount rates used for calculating the fair value of derivatives, hedges using instruments with a non-zero fair value and notional and timing differences between the hedged items and hedging instruments.

For some debt securities held, the group manages interest rate risk in a dynamic risk management strategy. The assets in scope of this strategy are high quality fixed-rate debt securities, which may be sold to meet liquidity and funding requirements.

The interest rate risk of the group's fixed rate debt securities issued is managed in a non-dynamic risk management strategy.

Cash flow hedges

The group's cash flow hedging instruments consist principally of interest rate swaps and cross-currency swaps that are used to manage the variability in future interest cash flows of non-trading financial assets and liabilities, arising due to changes in market interest rates and foreign-currency basis.

The group applies macro cash flow hedging for interest-rate risk exposures on portfolios of replenishing current and forecasted issuances of non-trading assets and liabilities that bear interest at variable rates, including rolling such instruments. The amounts and timing of future cash flows, representing both principal and interest flows, are projected for each portfolio of financial assets and liabilities on the basis of their contractual terms and other relevant factors, including estimates of prepayments and defaults. The aggregate cash flows representing both principal balances and interest cash flows across all portfolios are used to determine the effectiveness and ineffectiveness. Macro cash flow hedges are considered to be dynamic hedges.

The group also hedges the variability in future cash-flows on foreign-denominated financial assets and liabilities arising due to changes in foreign exchange market rates with cross-currency swaps; these are considered non-dynamic hedges.

Interest rate benchmark reform

At 31 December 2021, HK\$99,608m (2020: HK\$192,048m) of the notional amounts of interest rate derivatives designated in hedge accounting relationships do not represent the extent of the risk exposure managed by the group but they are expected to be directly affected by market-wide Ibors reform and in scope of HKFRS Interest Rate Benchmark Reform Phase 1 amendments.

Further details regarding the impact of the market-wide benchmarks reform is set out in the 'Top and emerging risks' section on page 20 as specified as 'Audited'.

9 Financial assets designated and otherwise mandatorily measured at fair value through profit or loss

	2021			2020		
	Designated at fair value	Mandatorily measured at fair value	Total	Designated at fair value	Mandatorily measured at fair value	Total
	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
Treasury and other eligible bills	—	241	241	94	200	294
Debt securities	12,847	11,066	23,913	14,400	8,455	22,855
Equity securities	—	169,125	169,125	—	143,815	143,815
Other ¹	—	9,120	9,120	—	11,996	11,996
At 31 Dec	12,847	189,552	202,399	14,494	164,466	178,960

¹ 'Other' includes loans and advance to banks and customers, and default fund contribution.

10 Loans and advances to customers

	2021 HK\$m	2020 HK\$m
Gross loans and advances to customers	3,872,956	3,697,568
Expected credit loss allowances	(32,017)	(28,887)
At 31 Dec	3,840,939	3,668,681

The following table provides an analysis of gross loans and advances to customers by industry sector based on the Statistical Classification of economic activities in the European Community ('NACE').

Analysis of gross loans and advances to customers

	2021 HK\$m	2020 HK\$m
Residential mortgages	1,167,487	1,097,760
Credit card advances	89,005	86,735
Other personal	275,819	267,852
Total personal	1,532,311	1,452,347
Real estate	635,217	638,560
Wholesale and retail trade	428,785	394,624
Manufacturing	410,033	379,853
Transportation and storage	111,388	97,204
Other	471,988	489,737
Total corporate and commercial	2,057,411	1,999,978
Non-bank financial institutions	283,234	245,243
At 31 Dec	3,872,956	3,697,568
By geography¹		
Hong Kong	2,447,799	2,357,375
Rest of Asia Pacific	1,425,157	1,340,193

¹ The geographical information shown above is classified by the location of the principal operations of the subsidiary or the branch responsible for advancing the funds.

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Finance lease receivables and hire purchase contracts

The group leases a variety of assets to third parties under finance leases. At the end of lease terms, assets may be sold to third parties or leased for further terms. Rentals are calculated to recover the cost of assets less their residual value, and earn finance income. Loans and advances to customers include receivables under finance leases and hire purchase contracts having the characteristics of finance leases.

Net investment in finance leases and hire purchase contracts

	2021			2020		
	Total future minimum payments	Unearned finance income	Present value	Total future minimum payments	Unearned finance income	Present value
	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
Amounts receivable						
– within one year	4,205	(1,213)	2,992	3,715	(811)	2,904
– one to two years	3,543	(1,051)	2,492	3,439	(678)	2,761
– two to three years	2,757	(912)	1,845	2,717	(554)	2,163
– three to four years	2,357	(762)	1,595	2,135	(475)	1,660
– four to five years	2,200	(647)	1,553	1,913	(415)	1,498
– after five years	22,133	(3,203)	18,930	22,186	(3,014)	19,172
	37,195	(7,788)	29,407	36,105	(5,947)	30,158
Expected credit loss allowances			(378)			(392)
At 31 Dec			29,029			29,766

11 Financial investments

	2021 HK\$m	2020 HK\$m
Financial investments measured at fair value through other comprehensive income	1,549,011	1,700,406
– treasury and other eligible bills	653,245	790,627
– debt securities	888,664	899,193
– equity securities	7,102	10,586
Debt instruments measured at amortised cost	502,564	475,026
– treasury and other eligible bills	6,900	4,443
– debt securities	495,664	470,583
At 31 Dec	2,051,575	2,175,432

Equity instruments measured at fair value through other comprehensive income

Type of equity instruments	2021		2020	
	Fair value	Dividends recognised	Fair value	Dividends recognised
	HK\$m	HK\$m	HK\$m	HK\$m
Business facilitation	6,540	189	9,826	157
Investments required by central institutions	420	3	413	3
Others	142	6	347	6
At 31 Dec	7,102	198	10,586	166

12 Assets pledged, assets transferred and collateral received

Assets pledged

Financial assets pledged to secure liabilities

	2021 HK\$m	2020 HK\$m
Treasury bills and other eligible securities	57,631	46,846
Loans and advances to banks	3,211	1,830
Loans and advances to customers	30,975	28,307
Debt securities	134,747	76,913
Equity securities	47,453	17,608
Cash collateral included in other assets	75,951	86,240
Assets pledged at 31 Dec	349,968	257,744
Amount of liabilities secured	275,815	210,185

The table above shows assets where a charge has been granted to secure liabilities on a legal and contractual basis. These transactions are conducted under terms that are usual and customary to collateralised transactions including repurchase agreements, securities lending, derivative margining, and include assets pledged to cover short positions and to facilitate settlement processes with clearing houses as well as swaps of equity and debt securities. The group places both cash and non-cash collateral in relation to derivative transactions.

Hong Kong currency notes in circulation are secured by the deposit of funds in respect of which the Hong Kong Government certificates of indebtedness are held.

Financial assets pledged as collateral which the counterparty has the right to sell or repledge was HK\$85,162m (2020: HK\$30,386m).

Assets transferred

Transferred financial assets not qualifying for full derecognition and associated financial liabilities

	2021		2020	
	Carrying amount of:		Carrying amount of:	
	Transferred assets HK\$m	Associated liabilities HK\$m	Transferred assets HK\$m	Associated liabilities HK\$m
Repurchase agreements	135,994	124,663	85,715	77,322
Securities lending agreements	44,171	282	18,946	35
	180,165	124,945	104,661	77,357

The assets pledged include transfers to third parties that do not qualify for derecognition, notably secured borrowings such as debt securities held by counterparties as collateral under repurchase agreements and equity securities lent under securities lending agreements, as well as swaps of equity and debt securities. For secured borrowings, the transferred asset collateral continues to be recognised in full while a related liability, reflecting the group's obligation to repurchase the assets for a fixed price at a future date, is also recognised on the balance sheet. Where securities are swapped, the transferred asset continues to be recognised in full. There is no associated liability as the non-cash collateral received is not recognised on the balance sheet. The group is unable to use, sell or pledge the transferred assets for the duration of the transaction, and remains exposed to interest rate risk and credit risk on these pledged assets.

Collateral received

Assets accepted as collateral relate primarily to standard securities borrowing, reverse repurchase agreements, swaps of securities and derivative margining. The group is obliged to return equivalent securities. These transactions are conducted under terms that are usual and customary to standard securities borrowing, reverse repurchase agreements and derivative margining.

Fair value of collateral accepted as security for assets

	2021 HK\$m	2020 HK\$m
Fair value of collateral permitted to sell or repledge in the absence of default	1,134,296	709,091
Fair value of collateral actually sold or repledged	377,117	128,783

Notes on the Consolidated Financial Statements

13 Investments in subsidiaries

Main subsidiaries of the Bank

	Place of incorporation	Principal activity	The group's interest in issued share capital/ registered or charter capital
Hang Seng Bank Limited	Hong Kong	Banking	62.14%
HSBC Bank (China) Company Limited	People's Republic of China	Banking	100%
HSBC Bank Malaysia Berhad	Malaysia	Banking	100%
HSBC Bank Australia Limited ¹	Australia	Banking	100%
HSBC Bank (Taiwan) Limited ¹	Taiwan	Banking	100%
HSBC Bank (Singapore) Limited	Singapore	Banking	100%
HSBC Life (International) Limited ¹	Bermuda	Retirement benefits and life insurance	100%

¹ Held indirectly.

All the above subsidiaries are included in the group's consolidated financial statements. All these subsidiaries make their financial statements up to 31 December.

The principal places of business are the same as the places of incorporation except for HSBC Life (International) Limited which operates mainly in Hong Kong.

The proportion of voting rights held is the same as the proportion of ownership interest held.

The main subsidiaries are regulated banking and insurance entities in the Asia-Pacific region and, as such, are required to maintain certain minimum levels of capital and liquid assets to support their operations. The effect of these regulatory requirements is to limit the extent to which the subsidiaries may transfer funds to the Bank in the form of repayment of shareholder loans or cash dividends.

Subsidiary with significant non-controlling interest

	2021 HK\$m	2020 HK\$m
Hang Seng Bank Limited		
Proportion of ownership interests and voting rights held by non-controlling interests	37.86%	37.86%
Profit attributable to non-controlling interests	5,272	6,300
Accumulated non-controlling interests of the subsidiary	65,431	64,975
Dividends paid to non-controlling interests	4,415	4,849
Summarised financial information (before intra-group eliminations):		
– total assets	1,820,185	1,759,787
– total liabilities	1,635,769	1,576,592
– net operating income before change in expected credit losses and other credit impairment charges	33,265	35,433
– profit for the year	13,946	16,670
– other comprehensive income/(expense) for the year	(357)	1,079
– total comprehensive income for the year	13,589	17,749

14 Interests in associates and joint ventures

Associates

	2021 HK\$m	2020 HK\$m
Share of net assets	184,402	164,767
Goodwill	4,141	4,011
Impairment	(58)	(24)
At 31 Dec	188,485	168,754

The above balance represented the group's interests in associates.

Principal associate

	Place of incorporation	The group's interest in issued share capital
Bank of Communications Co., Ltd	People's Republic of China	19.03%

Bank of Communications Co., Ltd. is listed on recognised stock exchanges. The fair value represents valuation based on the quoted market price of the shares held (Level 1 in the fair value hierarchy) and amounted to HK\$66,579m at 31 December 2021 (2020: HK\$57,815m).

Bank of Communications Co., Ltd ('BoCom')

The group's investment in BoCom is classified as an associate. Significant influence in BoCom was established with consideration of all relevant factors, including representation on BoCom's Board of Directors and participation in a Resource and Experience Sharing agreement ('RES'). Under the RES, HSBC staff have been seconded to assist in the maintenance of BoCom's financial and operating policies. Investments in associates are recognised using the equity method of accounting in accordance with HKAS 28, whereby the investment is initially recognised at cost and adjusted thereafter for the post-acquisition change in the group's share of BoCom's net assets. An impairment test is required if there is any indication of impairment.

Impairment testing

At 31 December 2021, the fair value of the group's investment in BoCom had been below the carrying amount for approximately ten years. As a result, the group performed an impairment test on the carrying amount, which confirmed that there was no impairment at 31 December 2021 as the recoverable amount as determined by a value-in-use ('VIU') calculation was higher than the carrying value.

	At					
	31 Dec 2021			31 Dec 2020		
	VIU HK\$bn	Carrying value HK\$bn	Fair value HK\$bn	VIU HK\$bn	Carrying value HK\$bn	Fair value HK\$bn
BoCom	193.0	184.8	66.6	169.3	165.4	57.8

Compared with 31 December 2020, the extent to which the VIU exceeds the carrying value ('headroom') increased by HK\$4.3bn. The increase in headroom was principally due to the impact on the VIU from BoCom's actual performance, which was better than earlier estimates, revisions to management's best estimates of BoCom's future earnings in the short to medium term, and the net impact of revisions to certain long-term assumptions.

In future periods, the VIU may increase or decrease depending on the effect of changes to model inputs. The main model inputs are described below and are based on factors observed at period-end. The factors that could result in a change in the VIU and an impairment include a short-term underperformance by BoCom, a change in regulatory capital requirements or an increase in uncertainty regarding the future performance of BoCom resulting in a downgrade of the forecast of future asset growth or profitability. An increase in the discount rate could also result in a reduction of VIU and an impairment. At the point where the carrying value exceeds the VIU, impairment would be recognised.

If the group did not have significant influence in BoCom, the investment would be carried at fair value rather than the current carrying value.

Basis of recoverable amount

The impairment test was performed by comparing the recoverable amount of BoCom, determined by a VIU calculation, with its carrying amount. The VIU calculation uses discounted cash flow projections based on management's best estimates of future earnings available to ordinary shareholders prepared in accordance with HKAS 36. Significant management judgement is required in arriving at the best estimate. There are two main components to the VIU calculation. The first component is management's best estimate of BoCom's earnings, which is based on explicit forecasts over the short to medium term. This results in forecast earnings growth that is lower than recent historical actual growth and also reflects the uncertainty arising from the current economic outlook. Reflecting management's intent to continue to retain its investment, earnings beyond the short to medium term are then extrapolated into perpetuity using a long-term growth rate to derive a terminal value, which comprises the majority of the VIU. The second component is the capital maintenance charge ('CMC'), which is management's forecast of the earnings that need to be withheld in order for BoCom to meet capital requirements over the forecast period, meaning that CMC is deducted when arriving at management's estimate of future earnings available to ordinary shareholders. The principal inputs to the CMC calculation include estimates of asset growth, the ratio of risk-weighted assets to total assets and the expected capital requirements. An increase in the CMC as a result of a change to these principal inputs would reduce VIU. Additionally, management considers other qualitative factors, to ensure that the inputs to the VIU calculation remain appropriate.

Key assumptions in value-in-use calculation

We used a number of assumptions in our VIU calculation, in accordance with the requirements of HKAS 36:

- Long-term profit growth rate: 3% (2020: 3%) for periods after 2025, which does not exceed forecast GDP growth in mainland China and is consistent with forecasts by external analysts.
- Long-term asset growth rate: 3% (2020: 3%) for periods after 2025, which is the rate that assets are expected to grow to achieve long-term profit growth of 3%.
- Discount rate: 10.03% (2020: 11.37%) based on a capital asset pricing model ('CAPM'), using market data. The discount rate used is within the range of 8.7% to 10.1% (2020 equivalent range: 10.9% to 11.9%) indicated by the CAPM. The lower rate reflects the impact of a relative reduction in the volatility of Chinese banks equity prices and a decrease in mainland China's credit risk due to its relatively quick recovery from the impact of the Covid-19 outbreak. While the CAPM range sits at the lower end of the range adopted by selected external analysts of 9.9% to 13.5% (2020: 10.3% to 15.0%), we continue to regard the CAPM range as the most appropriate basis for determining this assumption.
- Expected credit losses as a percentage of customer advances ('ECLs'): ranges from 0.98% to 1.12% (2020: 0.98% to 1.22%) in the short to medium term, reflecting reported credit experience through the ongoing Covid-19 outbreak in mainland China followed by an expected reversion to recent historical levels. For periods after 2025, the ratio is 0.97% (2020: 0.88%), which is higher than BoCom's average ECLs in recent years prior to the Covid-19 outbreak.
- Risk-weighted assets as a percentage of total assets: ranges from 61.0% to 62.4% (2020: 61.0% to 62.0%) in the short to medium term, reflecting reductions that may arise from a subsequent lowering of ECLs and a continuation of the trend of strong retail loan growth. For periods after 2025, the ratio is 61.0% (2020: 61.0%). These rates are similar to BoCom's actual results in recent years and forecasts disclosed by external analysts.
- Operating income growth rate: ranges from 5.1% to 6.2% (2020: 3.5% to 6.7%) in the short to medium term, and is lower than BoCom's actual results in recent years and the forecasts disclosed by external analysts, reflecting BoCom's most recent actual results, global trade tensions and industry developments in mainland China.
- Cost-income ratio: ranges from 35.5% to 36.1% (2020: 36.3% to 36.8%) in the short to medium term. These ratios are similar to BoCom's actual results in recent years and forecasts disclosed by external analysts.
- Effective tax rate ('ETR'): ranges from 6.8% to 15.0% (2020: 7.8% to 16.5%) in the short to medium term, reflecting BoCom's actual results and an expected increase towards the long-term assumption through the forecast period. For periods after 2025, the rate is 15.0% (2020: 16.8%), which is higher than the recent historical average, and aligned to the minimum tax rate as proposed by the OECD/G20 Inclusive Framework on Base Erosion and Profit Shifting.

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- Capital requirements: capital adequacy ratio ('CAR') of 12.5% (2020: 11.5%) and tier 1 capital adequacy ratio of 9.5% (2020: 9.5%), based on BoCom's capital risk appetite and capital requirements respectively. The CAR assumption was updated to 12.5% from 11.5% following the approval of BoCom's capital management plan in March 2021.

The following table shows the change to each key assumption in the VIU calculation that on its own would reduce the headroom to nil:

Key assumption	Changes to key assumption to reduce headroom to nil
• Long-term profit growth rate	• Decrease by 26 basis points
• Long-term asset growth rate	• Increase by 22 basis points
• Discount rate	• Increase by 34 basis points
• Expected credit losses as a percentage of customer advances	• Increase by 4 basis points
• Risk-weighted assets as a percentage of total assets	• Increase by 183 basis points
• Operating income growth rate	• Decrease by 37 basis points
• Cost-income ratio	• Increase by 102 basis points
• Long-term effective tax rate	• Increase by 301 basis points
• Capital requirements – capital adequacy ratio	• Increase by 37 basis points
• Capital requirements – tier 1 capital adequacy ratio	• Increase by 193 basis points

The following table further illustrates the impact on VIU of reasonably possible changes to key assumptions. This reflects the sensitivity of the VIU to each key assumption on its own and it is possible that more than one favourable and/or unfavourable change may occur at the same time. The selected rates of reasonably possible changes to key assumptions are largely based on external analysts' forecasts which can change period to period.

	Favourable change			Unfavourable change		
	Increase in VIU bps	VIU HK\$bn	VIU HK\$bn	Decrease in VIU bps	VIU HK\$bn	VIU HK\$bn
At 31 December 2021						
Long-term profit growth rate ¹	+87	33.1	226.1	-69	(20.5)	172.5
Long-term asset growth rate ¹	-69	22.9	215.9	+87	(36.2)	156.8
Discount rate ²	-133	42.2	235.2	+207	(40.8)	152.2
Expected credit losses as a percentage of customer advances	2021 to 2025: 103 2026 onwards: 91	11.9	204.9	2021 to 2025: 121 2026 onwards: 105	(21.0)	172.0
Risk-weighted assets as a percentage of total assets	-111	2.2	195.2	+280	(15.8)	177.2
Operating income growth rate	+37	8.2	201.2	-58	(13.6)	179.4
Cost-income ratio	-152	13.6	206.6	+174	(12.7)	180.3
Long-term effective tax rate	-104	2.9	195.9	+1000	(27.4)	165.6
Capital requirements – capital adequacy ratio	–	–	193.0	+325	(77.6)	115.4
Capital requirements – tier 1 capital adequacy ratio	–	–	193.0	+364	(50.0)	143.0
At 31 December 2020						
Long-term profit growth rate ¹	–	–	169.3	-50	(10.0)	159.3
Long-term asset growth rate ¹	-50	11.0	180.3	–	–	169.3
Discount rate	-47	9.4	178.7	+53	(9.3)	160.0
Expected credit losses as a percentage of customer advances	2020 to 2024: 96 2025 onwards: 76	17.7	187.0	2020 to 2024: 122 2025 onwards: 95	(16.5)	152.8
Risk-weighted assets as a percentage of total assets	-40	0.4	169.7	+166	(6.7)	162.6
Operating income growth rate	+2	0.9	170.2	-69	(11.8)	157.5
Cost-income ratio	-149	9.9	179.2	+120	(9.6)	159.7
Long-term effective tax rate	-316	6.9	176.2	+820	(17.7)	151.6
Capital requirements – capital adequacy ratio	–	–	169.3	+297	(61.0)	108.3
Capital requirements – tier 1 capital adequacy ratio	–	–	169.3	+263	(41.5)	127.8

- The reasonably possible ranges of the long-term profit growth rate and long-term asset growth rate assumptions reflect the close relationship between these assumptions, which would result in offsetting changes to each assumption.
- The unfavourable change in the reasonably possible ranges of the discount rate assumption reflects the impact of adopting the average of the rates adopted by selected external analysts.

Considering the interrelationship of the changes set out in the table above, management estimates that the reasonably possible range of VIU is HK\$148.3bn to HK\$228.4bn (2020 equivalent range: HK\$133.4bn to HK\$199.1bn). The range is based on impacts set out in the table above arising from the favourable/unfavourable change in the earnings in the short to medium term, the long-term expected credit losses as a percentage of customer advances and a 50bps increase/decrease in the discount rate. The discount rate has been included this year reflecting the relative materiality of movements in this assumption. All other long-term assumptions, and the basis of the CMC have been kept unchanged when determining the reasonably possible range of the VIU.

Selected financial information of BoCom

The statutory accounting reference date of BoCom is 31 December. For the year ended 31 December 2021, the group included the associate's results on the basis of financial statements made up for the 12 months to 30 September 2021, but taking into account the financial effect of significant transactions or events in the period from 1 October 2021 to 31 December 2021.

Selected balance sheet information of BoCom

	At 30 Sep	
	2021 HK\$m	2020 HK\$m
Cash and balances at central banks	960,732	945,836
Loans and advances to banks and other financial institutions	771,522	832,226
Loans and advances to customers	7,751,362	6,751,280
Other financial assets	4,223,488	3,941,375
Other assets	375,073	349,120
Total assets	14,082,177	12,819,837
Deposits by banks and other financial institutions	2,238,612	2,122,220
Customer accounts	8,572,625	7,852,322
Other financial liabilities	1,779,110	1,605,846
Other liabilities	312,486	241,177
Total liabilities	12,902,833	11,821,565
Total equity	1,179,344	998,272

Reconciliation of BoCom's net assets to carrying amount in the group's consolidated financial statements

	At 30 Sep	
	2021 HK\$m	2020 HK\$m
The group's share of ordinary shareholders' equity	180,738	161,433
Goodwill	4,044	3,912
Carrying amount	184,782	165,345

Selected income statement information of BoCom

	For the 12 months ended 30 Sep	
	2021 HK\$m	2020 HK\$m
Net interest income	191,076	170,586
Net fee and commission income	55,735	49,624
Change in expected credit losses	(75,402)	(75,220)
Depreciation and amortisation	(17,851)	(16,069)
Tax expense	(8,119)	(6,656)
– profit for the year	110,370	79,585
– other comprehensive income	(2,861)	(5,965)
Total comprehensive income	107,509	73,620
Dividends received from BoCom	5,386	4,907

Using the latest period for which BoCom has disclosed this information (at 30 June 2021), the group's share of associates' contingent liabilities was HK\$432,259m (2020: HK\$356,609m).

15 Goodwill and intangible assets

Goodwill and intangible assets include goodwill arising on business combinations, the present value of in-force long-term insurance business, and other intangible assets.

	2021 HK\$m	2020 HK\$m
Goodwill	7,116	7,109
Present value of in-force long-term insurance business	63,765	65,052
Other intangible assets ¹	24,300	17,807
At 31 Dec	95,181	89,968

¹ Included within other intangible assets is internally generated software with a net carrying value of HK\$21,670m (2020: HK\$15,283m). During the year, capitalisation of internally generated software was HK\$10,681m (2020: HK\$7,241m), amortisation charge was HK\$4,115m (2020: HK\$3,233m) and impairment charge was HK\$184m (2020: HK\$603m).

The present value of in-force long-term insurance business

When calculating the present value of in-force long term ('PVIF') insurance business, expected cash flows are projected after adjusting for a variety of assumptions made by each insurance operation to reflect local market conditions and management's judgement of future trends, and uncertainty in the underlying assumptions is reflected by applying margins (as opposed to a cost of capital methodology). Variations in actual experience and changes to assumptions can contribute to volatility in the results of the insurance business.

Actuarial Control Committees of each key insurance entity meet on a quarterly basis to review and approve PVIF assumptions. All changes to non-economic assumptions, economic assumptions that are not observable and model methodology must be approved by the Actuarial Control Committee.

Notes on the Consolidated Financial Statements

Movements in PVIF

	2021	2020
	HK\$m	HK\$m
At 1 Jan	65,052	61,075
Changes in PVIF of long-term insurance business	(1,294)	3,840
– value of new business written during the year	7,381	5,360
– expected return ¹	(5,950)	(6,743)
– assumption changes and experience variances (see below)	(2,873)	5,268
– other adjustments	148	(45)
Exchange differences and other	7	137
At 31 Dec	63,765	65,052

¹ 'Expected return' represents the unwinding of the discount rate and reversal of expected cash flows for the period.

Assumption changes and experience variances

Included within this line item are:

- HK\$440m (2020: HK\$1,022m), directly offsetting interest rate-driven changes to the valuation of liabilities under insurance contracts.
- HK\$(2,519)m (2020: HK\$1,916m), reflecting the future expected sharing of returns with policyholders on contracts with discretionary participation features ('DPF'), to the extent this sharing is not already included in liabilities under insurance contracts.
- HK\$(794)m (2020: HK\$2,330m), driven by other assumptions changes and experience variances.

Key assumptions used in the computation of PVIF for the main life insurance operations

Economic assumptions are set in a way that is consistent with observable market values. The valuation of PVIF is sensitive to observed market movements. The following are the key long-term assumptions used in the computation of PVIF for Hong Kong insurance entities, being the main life insurance operations:

	2021	2020
	%	%
Weighted average risk free rate	1.40	0.71
Weighted average risk discount rate	5.20	4.96
Expense inflation	3.00	3.00

Sensitivity to changes in economic assumptions

The group sets the risk discount rate applied to the PVIF calculation by starting from a risk-free rate curve and adding explicit allowances for risks not reflected in the best-estimate cash flow modelling. Where the insurance operations provide options and guarantees to policyholders, the cost of these options and guarantees is an explicit reduction to PVIF, unless it is already allowed for as an explicit addition to the technical provisions required by regulators. See page 65 for further details of these guarantees and the impact of changes in economic assumptions on our insurance manufacturing subsidiaries.

Sensitivity to changes in non-economic assumptions

Policyholder liabilities and PVIF are determined by reference to non-economic assumptions, including mortality and/or morbidity, lapse rates and expense rates. See page 66 for further details on the impact of changes in non-economic assumptions on our insurance manufacturing operations.

16 Property, plant and equipment

	2021	2020
	HK\$m	HK\$m
Owned property, plant and equipment ¹	121,072	118,747
Other right-of-use assets	8,755	9,790
At 31 Dec	129,827	128,537

¹ Included leasehold land and buildings of HK\$110,458m (2020: HK\$108,320m) for which the right of use are considered sufficient to constitute control. They are therefore presented as owned assets.

Movement in owned property, plant and equipment

	2021				2020			
	Land and buildings HK\$m	Investment properties HK\$m	Equipment HK\$m	Total HK\$m	Land and buildings HK\$m	Investment properties HK\$m	Equipment HK\$m	Total HK\$m
Cost or valuation								
At 1 Jan	100,791	13,167	15,266	129,224	111,473	13,335	16,922	141,730
Exchange and other adjustments	(67)	16	(112)	(163)	453	31	365	849
Additions	667	2	2,049	2,718	770	635	2,363	3,768
Disposals	(58)	—	(1,456)	(1,514)	(12)	—	(4,384)	(4,396)
Transfers	—	—	—	—	—	—	—	—
Elimination of accumulated depreciation on revalued land and buildings	(4,633)	—	—	(4,633)	(4,737)	—	—	(4,737)
Surplus/(deficit) on revaluation	5,643	277	—	5,920	(6,914)	(996)	—	(7,910)
Reclassifications	24	3	—	27	(242)	162	—	(80)
At 31 Dec	102,367	13,465	15,747	131,579	100,791	13,167	15,266	129,224
Accumulated depreciation								
At 1 Jan	90	—	10,387	10,477	84	—	13,043	13,127
Exchange and other adjustments	30	—	(46)	(16)	10	—	305	315
Charge for the year	4,645	—	1,374	6,019	4,734	—	1,325	6,059
Disposals	(45)	—	(1,295)	(1,340)	(1)	—	(4,286)	(4,287)
Transfers	—	—	—	—	—	—	—	—
Elimination of accumulated depreciation on revalued land and buildings	(4,633)	—	—	(4,633)	(4,737)	—	—	(4,737)
At 31 Dec	87	—	10,420	10,507	90	—	10,387	10,477
Net book value at 31 Dec	102,280	13,465	5,327	121,072	100,701	13,167	4,879	118,747

The carrying amount of land and buildings, had they been stated at cost less accumulated depreciation, would have been as follows:

	2021 HK\$m	2020 HK\$m
Cost less accumulated depreciation	17,121	17,085

Valuation of land and buildings and investment properties

The group's land and buildings and investment properties were revalued as at 31 December 2021. The basis of valuation for land and buildings and investment properties was open market value. The resultant values are Level 3 in the fair value hierarchy. The fair values for land and buildings are determined by using a direct comparison approach which values the properties in their respective existing states and uses, assuming sale with immediate vacant possession and by making reference to comparable sales evidence. The valuations take into account the characteristics of the properties (unobservable inputs) which include the location, size, shape, view, floor level, year of completion and other factors collectively. The premium or discount applied to the characteristics of the properties is within minus 20% and plus 20%. In determining the open market value of investment properties, expected future cash flows have been discounted to their present values. The net book value of 'Land and buildings' includes HK\$6,854m (2020: HK\$7,189m) in respect of properties which were valued using the depreciated replacement cost method.

Valuation of land and buildings and investment properties in Hong Kong, Macau and mainland China were largely carried out by Cushman & Wakefield Limited, who have recent experience in the location and type of properties and who are members of the Hong Kong Institute of Surveyors. This represents 92% by value of the group's properties subject to valuation. Other properties were valued by different independent professionally qualified valuers.

17 Prepayments, accrued income and other assets

	2021 HK\$m	2020 HK\$m
Prepayments and accrued income	24,986	24,301
Bullion	52,986	61,269
Acceptances and endorsements	55,789	46,705
Reinsurers' share of liabilities under insurance contracts (Note 3)	27,366	25,365
Current tax assets	2,674	2,783
Settlement accounts	24,577	33,796
Cash collateral and margin receivables	44,177	58,584
Other assets	37,188	35,807
At 31 Dec	269,743	288,610

Prepayments, accrued income and other assets included HK\$180,757m (2020: HK\$197,362m) of financial assets, the majority of which were measured at amortised cost.

Notes on the Consolidated Financial Statements

18 Customer accounts

Customer accounts by country/territory

	2021 HK\$m	2020 HK\$m
Hong Kong	4,284,719	4,120,955
Mainland China	462,187	440,608
Singapore	448,976	427,537
Australia	220,233	227,072
India	191,116	156,615
Malaysia	128,673	124,036
Taiwan	120,744	124,375
Indonesia	46,938	40,304
Other	273,596	249,894
At 31 Dec	6,177,182	5,911,396

19 Trading liabilities

	2021 HK\$m	2020 HK\$m
Deposits by banks ¹	1,005	222
Customer accounts ¹	6,091	835
Net short positions in securities	85,627	59,755
At 31 Dec	92,723	60,812

¹ 'Deposits by banks' and 'Customer accounts' include repos, stock lending and other amounts.

20 Financial liabilities designated at fair value

	2021 HK\$m	2020 HK\$m
Deposits by banks and customer accounts	59,611	77,822
Debt securities in issue	43,928	49,673
Liabilities to customers under investment contracts	35,426	39,518
At 31 Dec	138,965	167,013

The carrying amount of financial liabilities designated at fair value was HK\$1,385m lower than the contractual amount at maturity (2020: HK\$735m higher). The cumulative loss in fair value attributable to changes in credit risk was HK\$62m (2020: HK\$25m).

21 Debt securities in issue

	2021 HK\$m	2020 HK\$m
Bonds and medium-term notes	79,852	94,894
Other debt securities in issue	31,440	34,198
Total debt securities in issue	111,292	129,092
Included within:		
– financial liabilities designated at fair value (Note 20)	(43,928)	(49,673)
At 31 Dec	67,364	79,419

22 Accruals and deferred income, other liabilities and provisions

	2021 HK\$m	2020 HK\$m
Accruals and deferred income	23,020	21,588
Acceptances and endorsements	55,824	46,775
Settlement accounts	26,158	30,056
Cash collateral and margin payables	53,541	60,714
Share-based payment liability to HSBC Holdings plc	1,431	1,124
Lease liabilities	9,165	10,057
Other liabilities ¹	48,668	43,881
Provisions for liabilities and charges	1,399	1,792
At 31 Dec	219,206	215,987

¹ Mainly includes marginal deposit on letter of credit and credit card settlement account.

Accruals and deferred income, other liabilities and provisions included HK\$209,441m (2020: HK\$207,899m) of financial liabilities which were measured at amortised cost.

Movement in provisions

	Restructuring costs	Other	Total
	HK\$m	HK\$m	HK\$m
Provisions (excluding contractual commitments)			
At 31 Dec 2020	116	419	535
Additions	357	333	690
Amounts utilised	(309)	(258)	(567)
Unused amounts reversed	(59)	(24)	(83)
Exchange and other movements	43	(4)	39
At 31 Dec 2021	148	466	614
Contractual commitments¹			
At 31 Dec 2020			1,257
Net change in expected credit loss provision and other movements			(472)
At 31 Dec 2021			785
Total Provisions at 31 Dec 2021			1,399
At 31 Dec 2019	208	812	1,020
Additions	222	296	518
Amounts utilised	(269)	(356)	(625)
Unused amounts reversed	(42)	(361)	(403)
Exchange and other movements	(3)	28	25
At 31 Dec 2020	116	419	535
Contractual commitments			
At 31 Dec 2019			776
Net change in expected credit loss provision and other movements			481
At 31 Dec 2019			1,257
Total Provisions at 31 Dec 2020			1,792

¹ Contractual commitments include provisions for contingent liabilities measured under HKFRS 9 'Financial Instruments' in respect of financial guarantees and expected credit loss provisions in relation to off-balance sheet guarantees and commitments.

23 Subordinated liabilities

Subordinated liabilities issued to third parties measured at amortised cost consist of undated primary capital notes and other loan capital having an original term to maturity of five years or more. Subordinated liabilities issued to Group entities are not included in the table below.

	2021	2020
	HK\$m	HK\$m
US\$400m Undated floating rate primary capital notes	3,119	3,101
MYR500m Fixed rate (5.050%) subordinated bonds due 2027, callable from 2022 ¹	935	964
At 31 Dec	4,054	4,065

¹ The interest rate on the MYR500m 5.05% callable subordinated bonds due 2027 will increase by 1% from November 2022.

24 Share capital

	2021	2020
	HK\$m	HK\$m
Paid up share capital in HK\$	116,103	116,103
Paid up share capital in US\$ ¹	56,232	56,232
At 31 Dec	172,335	172,335

Ordinary shares issued and fully paid

	2021		2020	
	HK\$m	Number	HK\$m	Number
At 31 Dec	172,335	46,440,991,798	172,335	46,440,991,798

¹ Paid up share capital in US\$ represents preference shares which were redeemed or bought back via payment out of distributable profits and for which the amount was transferred from retained earnings to share capital in accordance with the requirements of the Companies Ordinance.

There were no new ordinary shares issued in 2021 (2020: nil). The holder of the ordinary shares is entitled to receive dividends as declared from time to time, rank equally with regard to the Bank's residual assets and are entitled to one vote per share at shareholder meetings of the Bank.

25 Other equity instruments

Other equity instruments comprise additional tier 1 capital instruments in issue which are accounted for as equity.

	2021	2020
	HK\$m	HK\$m
US\$1,000m Fixed rate perpetual subordinated loan, callable from Mar 2025 ¹	7,834	7,834
US\$900m Fixed rate perpetual subordinated loan, callable from Sep 2026 ²	7,063	7,063
US\$700m Fixed rate perpetual subordinated loan, callable from Mar 2025 ³	5,467	5,467
US\$500m Fixed rate perpetual subordinated loan, callable from Mar 2025 ³	3,905	3,905
US\$600m Fixed rate perpetual subordinated loan, callable from May 2027 ⁴	4,685	4,685
US\$900m Fixed rate perpetual subordinated loan, callable from Sep 2024 ⁵	7,044	7,044
US\$1,100m Fixed rate perpetual subordinated loan, callable from Jun 2024 ⁶	8,617	8,617
At 31 Dec	44,615	44,615

1 Interest rate fixed at 6.090%.

2 Interest rate fixed at 6.510%.

3 Interest rate fixed at 6.172%.

4 Interest rate fixed at 5.910%.

5 Interest rate fixed at 6.030%.

6 Interest rate fixed at 6.000%.

The additional tier 1 capital instruments are perpetual subordinated loans on which coupon payments may be cancelled at the sole discretion of the Bank. The subordinated loans will be written down at the point of non-viability on the occurrence of a trigger event as defined in the Banking (Capital) Rules. They rank higher than ordinary shares in the event of a wind-up.

26 Maturity analysis of assets and liabilities

The following tables provide an analysis of consolidated total assets and liabilities by residual contractual maturity at the balance sheet date. These balances are included in the maturity analysis as follows:

- Trading assets and liabilities (including trading derivatives but excluding reverse repos, repos and debt securities in issue) are included in the 'Due not more than 1 month' time bucket, because trading balances are typically held for short periods of time.
- Financial assets and liabilities with no contractual maturity (such as equity securities) are included in the 'Due over 5 years' time bucket. Undated or perpetual instruments are classified based on the contractual notice period which the counterparty of the instrument is entitled to give. Where there is no contractual notice period, undated or perpetual contracts are included in the 'Due over 5 years' time bucket.
- Non-financial assets and liabilities with no contractual maturity are included in the 'Due over 5 years' time bucket.
- Liabilities under insurance contracts are irrespective of contractual maturity included in the 'Due over 5 years' time bucket in the maturity table provided below. An analysis of the expected maturity of liabilities under insurance contracts based on undiscounted cash flows is provided on page 65. Liabilities under investment contracts are classified in accordance with their contractual maturity. Undated investment contracts are included in the 'Due over 5 years' time bucket, however, such contracts are subject to surrender and transfer options by the policyholders.

Maturity analysis of assets and liabilities

	Due not more than 1 month	Due over 1 month but not more than 3 months	Due over 3 months but not more than 6 months	Due over 6 months but not more than 9 months	Due over 9 months but not more than 1 year	Due over 1 year but not more than 2 years	Due over 2 years but not more than 5 years	Due over 5 years	Total
	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
Financial assets									
Cash and balances at central banks	276,857	–	–	–	–	–	–	–	276,857
Items in the course of collection from other banks	21,632	–	–	–	–	–	–	–	21,632
Hong Kong Government certificates of indebtedness	332,044	–	–	–	–	–	–	–	332,044
Trading assets	768,376	7,082	208	431	–	815	538	–	777,450
Derivatives	361,447	1,079	466	769	131	441	713	121	365,167
Financial assets designated and otherwise mandatorily measured at fair value through profit or loss	5,880	172	1,636	884	1,561	3,781	11,244	177,241	202,399
Reverse repurchase agreements – non-trading	528,832	223,041	34,435	5,081	1,865	9,384	1,137	–	803,775
Loans and advances to banks	277,060	80,547	20,767	7,667	7,532	20,248	17,908	518	432,247
Loans and advances to customers	605,216	402,921	312,336	177,577	171,989	410,594	731,226	1,029,080	3,840,939
Financial investments	247,163	405,109	187,038	107,329	118,029	232,350	307,753	446,804	2,051,575
Amounts due from Group companies	84,688	1,302	1,189	2,227	2,441	6,138	5,857	17	103,859
Accrued income and other financial assets	119,499	31,449	19,062	3,708	2,034	805	750	3,450	180,757
Financial assets at 31 Dec 2021	3,628,694	1,152,702	577,137	305,673	305,582	684,556	1,077,126	1,657,231	9,388,701
Non-financial assets	–	–	–	–	–	–	–	514,692	514,692
Total assets at 31 Dec 2021	3,628,694	1,152,702	577,137	305,673	305,582	684,556	1,077,126	2,171,923	9,903,393
Financial liabilities									
Hong Kong currency notes in circulation	332,044	–	–	–	–	–	–	–	332,044
Items in the course of transmission to other banks	25,701	–	–	–	–	–	–	–	25,701
Repurchase agreements – non-trading	231,463	4,713	368	–	1,104	7,570	2,904	7,252	255,374
Deposits by banks	269,405	2,140	6,780	1,019	526	440	–	–	280,310
Customer accounts	5,722,470	272,462	88,483	34,813	32,417	11,792	14,741	4	6,177,182
Trading liabilities	92,723	–	–	–	–	–	–	–	92,723
Derivatives	354,567	304	74	212	79	241	274	40	355,791
Financial liabilities designated at fair value	32,086	21,849	11,059	4,967	5,574	8,789	18,899	35,742	138,965
Debt securities in issue	4,304	5,509	17,363	12,374	3,963	9,320	12,324	2,207	67,364
Amounts due to Group companies	114,388	17,504	1,401	222	223	21,699	66,205	134,534	356,176
Accruals and other financial liabilities	124,346	40,286	24,070	5,135	3,820	4,802	5,197	1,785	209,441
Subordinated liabilities ¹	–	–	–	–	–	–	–	4,054	4,054
Total financial liabilities at 31 Dec 2021	7,303,497	364,767	149,598	58,742	47,706	64,653	120,544	185,618	8,295,125
Non-financial liabilities	–	–	–	–	–	–	–	684,757	684,757
Total liabilities at 31 Dec 2021	7,303,497	364,767	149,598	58,742	47,706	64,653	120,544	870,375	8,979,882

Notes on the Consolidated Financial Statements

Maturity analysis of assets and liabilities (continued)

	Due not more than 1 month	Due over 1 month but not more than 3 months	Due over 3 months but not more than 6 months	Due over 6 months but not more than 9 months	Due over 9 months but not more than 1 year	Due over 1 year but not more than 2 years	Due over 2 years but not more than 5 years	Due over 5 years	Total
	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
Financial assets									
Cash and balances at central banks	347,999	—	—	—	—	—	—	—	347,999
Items in the course of collection from other banks	21,943	—	—	—	—	—	—	—	21,943
Hong Kong Government certificates of indebtedness	313,404	—	—	—	—	—	—	—	313,404
Trading assets	594,141	4,561	476	431	—	805	—	—	600,414
Derivatives	422,692	23	16	13	26	101	74	—	422,945
Financial assets designated and otherwise mandatorily measured at fair value through profit or loss	7,318	1,240	1,334	1,214	1,033	4,648	11,967	150,206	178,960
Reverse repurchase agreements – non-trading	372,199	113,000	19,150	2,869	1,000	4,143	7,983	—	520,344
Loans and advances to banks	239,097	81,318	22,587	19,576	16,278	8,792	15,186	1,050	403,884
Loans and advances to customers	641,990	313,288	277,385	180,152	159,612	411,350	693,898	991,006	3,668,681
Financial investments	248,651	488,129	251,982	75,127	127,736	218,219	330,863	434,725	2,175,432
Amounts due from Group companies	72,856	3,741	464	2	—	3,814	2,326	—	83,203
Accrued income and other financial assets	140,788	30,145	16,209	2,754	1,748	797	431	4,490	197,362
Financial assets at 31 Dec 2020	3,423,078	1,035,445	589,603	282,138	307,433	652,669	1,062,728	1,581,477	8,934,571
Non-financial assets	—	—	—	—	—	—	—	481,832	481,832
Total assets at 31 Dec 2020	3,423,078	1,035,445	589,603	282,138	307,433	652,669	1,062,728	2,063,309	9,416,403
Financial liabilities									
Hong Kong currency notes in circulation	313,404	—	—	—	—	—	—	—	313,404
Items in the course of transmission to other banks	25,699	—	—	—	—	—	—	—	25,699
Repurchase agreements – non-trading	109,062	4,816	—	1,187	5,223	—	8,024	7,845	136,157
Deposits by banks	237,905	3,157	2,782	3,621	76	1,087	—	—	248,628
Customer accounts	5,396,286	332,854	89,287	39,727	27,186	18,676	7,376	4	5,911,396
Trading liabilities	60,812	—	—	—	—	—	—	—	60,812
Derivatives	421,829	1,566	1,207	176	404	1,281	1,436	312	428,211
Financial liabilities designated at fair value	40,325	28,300	11,481	7,517	7,176	8,930	17,024	46,260	167,013
Debt securities in issue	5,056	11,234	12,556	13,611	3,991	16,025	14,374	2,572	79,419
Amounts due to Group companies	78,046	20,135	766	33	332	24,397	55,860	116,705	296,274
Accruals and other financial liabilities	128,880	37,418	20,038	3,326	4,565	4,516	5,357	3,799	207,899
Subordinated liabilities ¹	—	—	—	—	—	—	—	4,065	4,065
Financial liabilities at 31 Dec 2020	6,817,304	439,480	138,117	69,198	48,953	74,912	109,451	181,562	7,878,977
Non-financial liabilities	—	—	—	—	—	—	—	625,895	625,895
Total liabilities at 31 Dec 2020	6,817,304	439,480	138,117	69,198	48,953	74,912	109,451	807,457	8,504,872

¹ The maturity for subordinated liabilities is based on the earliest date on which the group is required to pay, i.e. the callable date.

27 Analysis of cash flows payable under financial liabilities by remaining contractual maturities

	Due not more than 1 month HK\$m	Due over 1 month but not more than 3 months HK\$m	Due between 3 and 12 months HK\$m	Due between 1 and 5 years HK\$m	Due after 5 years HK\$m	Total HK\$m
At 31 Dec 2021						
Hong Kong currency notes in circulation	332,044	–	–	–	–	332,044
Items in the course of transmission to other banks	25,701	–	–	–	–	25,701
Repurchase agreements – non-trading	231,531	4,714	1,517	10,530	7,289	255,581
Deposits by banks	269,681	2,140	8,341	451	–	280,613
Customer accounts	5,723,441	273,282	157,735	28,638	4	6,183,100
Trading liabilities	92,723	–	–	–	–	92,723
Derivatives	354,584	416	384	621	40	356,045
Financial liabilities designated at fair value	33,288	22,323	21,903	28,536	35,768	141,818
Debt securities in issue	4,336	5,667	34,629	22,632	2,370	69,634
Amounts due to Group companies	113,944	19,523	7,301	108,035	147,000	395,803
Other financial liabilities	123,460	39,607	31,486	10,630	1,854	207,037
Subordinated liabilities	–	15	44	236	4,207	4,502
	7,304,733	367,687	263,340	210,309	198,532	8,344,601
Loan and other credit-related commitments	2,945,560	–	–	–	–	2,945,560
Financial guarantees	41,843	–	–	–	–	41,843
	10,292,136	367,687	263,340	210,309	198,532	11,332,004
Proportion of cash flows payable in period	91%	3%	2%	2%	2%	
At 31 Dec 2020						
Hong Kong currency notes in circulation	313,404	–	–	–	–	313,404
Items in the course of transmission to other banks	25,699	–	–	–	–	25,699
Repurchase agreements – non-trading	109,090	4,818	6,602	8,076	7,885	136,471
Deposits by banks	238,153	3,263	6,630	1,238	–	249,284
Customer accounts	5,397,993	333,682	158,267	28,007	16	5,917,965
Trading liabilities	60,812	–	–	–	–	60,812
Derivatives	421,811	1,462	1,561	2,840	312	427,986
Financial liabilities designated at fair value	40,602	29,077	26,457	26,549	46,371	169,056
Debt securities in issue	5,121	11,445	31,445	31,699	2,686	82,396
Amounts due to Group companies	78,063	21,920	5,873	97,021	122,569	325,446
Other financial liabilities	127,644	36,648	26,098	9,208	3,792	203,390
Subordinated liabilities	–	16	47	249	5,225	5,537
	6,818,392	442,331	262,980	204,887	188,856	7,917,446
Loan and other credit-related commitments	2,815,447	–	–	136	–	2,815,583
Financial guarantees	39,923	–	–	–	–	39,923
	9,673,762	442,331	262,980	205,023	188,856	10,772,952
Proportion of cash flows payable in period	90%	4%	2%	2%	2%	

The balances in the above tables incorporate all cash flows relating to principal and future coupon payments on an undiscounted basis. Trading liabilities and trading derivatives have been included in the 'On demand' time bucket as they are typically held for short periods of time. The undiscounted cash flows payable under hedging derivative liabilities are classified according to their contractual maturity. Investment contract liabilities have been included in financial liabilities designated at fair value, whereby the policyholders have the options to surrender or transfer at any time, and are reported in the 'Due after 5 years' time bucket. A maturity analysis prepared on the basis of the earliest possible contractual repayment date (assuming that all surrender and transfer options are exercised) would result in all investment contracts being presented as falling due within one year or less. The undiscounted cash flows potentially payable under loan commitments and financial guarantee contracts are classified on the basis of the earliest date they can be called. Cash flows payable in respect of customer accounts are primarily contractually repayable on demand or at short notice.

28 Contingent liabilities, contractual commitments and guarantees

	2021 HK\$m	2020 HK\$m
Guarantees and contingent liabilities:		
– financial guarantees ¹	41,843	39,923
– performance and other guarantees ²	335,849	286,139
– other contingent liabilities	1,751	3,644
At 31 Dec	379,443	329,706
Commitments ³ :		
– documentary credits and short-term trade-related transactions	32,284	29,581
– forward asset purchases and forward deposits placed	40,745	38,246
– undrawn formal standby facilities, credit lines and other commitments to lend	2,872,531	2,747,756
At 31 Dec	2,945,560	2,815,583

- 1 Financial guarantees are contracts that require the issuer to make specified payments to reimburse the holder for a loss incurred because a specified debtor fails to make payment when due in accordance with the original or modified terms of a debt instrument.
- 2 Performance and other guarantees include re-insurance letters of credit related to particular transactions, trade-related letters of credit issued without provision for the issuing entity to retain title to the underlying shipment, performance bonds, bid bonds, standby letters of credit and other transaction-related guarantees.
- 3 Includes HK\$1,826,335m of commitments at 31 December 2021 (2020: HK\$1,725,963m) to which the impairment requirements in HKFRS 9 are applied where the group has become party to an irrevocable commitment.

The above table discloses the nominal principal amounts of commitments (excluding other commitments as disclosed in Note 29), guarantees and other contingent liabilities, which represent the amounts at risk should contracts be fully drawn upon and clients default. The amount of the commitments shown above reflects, where relevant, the expected level of take-up of pre-approved facilities. As a significant proportion of guarantees and commitments are expected to expire without being drawn upon, the total of the nominal principal amounts is not representative of future liquidity requirements.

It also reflects the group's maximum exposure under a large number of individual guarantee undertakings. The risks and exposures from guarantees are captured and managed in accordance with HSBC's overall credit risk management policies and procedures. Guarantees are subject to an annual credit review process.

Other contingent liabilities at 31 December 2021 included amounts in relation to legal and regulatory matters as set out in Note 37.

29 Other commitments

Capital commitments

At 31 December 2021, capital commitments, mainly related to the commitment for purchase of properties, were HK\$4,826m (2020: HK\$8,531m).

30 Offsetting of financial assets and financial liabilities

Financial assets and financial liabilities are offset and the net amount is reported in the balance sheet when there is a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis, or realise the asset and settle the liability simultaneously ('the offset criteria').

The 'Amounts not set off in the balance sheet' include transactions where:

- the counterparty has an offsetting exposure with the group and a master netting or similar arrangement is in place with a right to set off only in the event of default, insolvency or bankruptcy, or the offset criteria are otherwise not satisfied; and
- in the case of derivatives and reverse repurchase/repurchase, stock borrowing/lending and similar agreements, cash and non-cash collateral has been received/pledged.

For risk management purposes, the net amounts of loans and advances to customers are subject to limits, which are monitored and the relevant customer agreements are subject to review and updated, as necessary, to ensure that the legal right to set off remains appropriate.

Offsetting of financial assets and financial liabilities

	Amounts subject to enforceable netting arrangements								
	Gross amounts HK\$m	Amounts offset HK\$m	Net amounts reported in the balance sheet HK\$m	Amounts not offset in the balance sheet			Net amount HK\$m	Amounts not subject to enforceable netting arrangements ¹ HK\$m	Balance sheet total HK\$m
				Financial instruments HK\$m	Non-cash collateral HK\$m	Cash collateral HK\$m			
At 31 Dec 2021									
Financial assets²									
Derivatives	524,603	(190,129)	334,474	(267,072)	(12,886)	(36,005)	18,511	30,693	365,167
Reverse repos, stock borrowing and similar agreements classified as:	867,597	(71,412)	796,185	–	(794,195)	(749)	1,241	90,247	886,432
– trading assets	60,417	(79)	60,338	–	(59,771)	(552)	15	7,393	67,731
– non-trading assets ⁴	807,180	(71,333)	735,847	–	(734,424)	(197)	1,226	82,854	818,701
	1,392,200	(261,541)	1,130,659	(267,072)	(807,081)	(36,754)	19,752	120,940	1,251,599
Financial liabilities³									
Derivatives	516,525	(190,129)	326,396	(267,072)	(10,552)	(27,837)	20,935	29,395	355,791
Repos, stock lending and similar agreements classified as:	330,366	(71,412)	258,954	–	(258,523)	(3)	428	68,664	327,618
– trading liabilities	6,807	(79)	6,728	–	(6,721)	–	7	–	6,728
– non-trading liabilities ⁵	323,559	(71,333)	252,226	–	(251,802)	(3)	421	68,664	320,890
	846,891	(261,541)	585,350	(267,072)	(269,075)	(27,840)	21,363	98,059	683,409
At 31 Dec 2020									
Financial assets²									
Derivatives	583,241	(200,656)	382,585	(290,517)	(11,009)	(45,001)	36,058	40,360	422,945
Reverse repos, stock borrowing and similar agreements classified as:	532,974	(19,276)	513,698	–	(513,476)	(166)	56	61,715	575,413
– trading assets	46,922	–	46,922	–	(46,892)	–	30	4,680	51,602
– non-trading assets ⁴	486,052	(19,276)	466,776	–	(466,584)	(166)	26	57,035	523,811
	1,116,215	(219,932)	896,283	(290,517)	(524,485)	(45,167)	36,114	102,075	998,358
Financial liabilities³									
Derivatives	584,214	(200,656)	383,558	(290,517)	(15,977)	(47,483)	29,581	44,653	428,211
Repos, stock lending and similar agreements classified as:	146,768	(19,276)	127,492	–	(127,281)	(21)	190	51,205	178,697
– trading liabilities	1,605	–	1,605	–	(1,595)	–	10	–	1,605
– non-trading liabilities ⁵	145,163	(19,276)	125,887	–	(125,686)	(21)	180	51,205	177,092
	730,982	(219,932)	511,050	(290,517)	(143,258)	(47,504)	29,771	95,858	606,908

1 These exposures continue to be secured by financial collateral, but the group may not have sought or been able to obtain a legal opinion evidencing enforceability of the offsetting right.

2 Amounts presented in the balance sheet included balances due from Group companies of HK\$167,054m (2020: HK\$79,027m).

3 Amounts presented in the balance sheet included balances due to Group companies of HK\$217,572m (2020: HK\$129,230m).

4 Amounts presented in the balance sheet included reverse repos with third parties of HK\$803,775m (2020: HK\$520,344m).

5 Amounts presented in the balance sheet included repos with third parties of HK\$255,374m (2020: HK\$136,157m).

31 Segmental analysis

The Executive Committee ('EXCO') is considered the Chief Operating Decision Maker ('CODM') for the purpose of identifying the group's operating segments. Operating segment results are assessed by the CODM on the basis of performance measured in accordance with HKFRSs. Although the CODM reviews information on a number of bases, business performance is assessed and capital resources are allocated by operating segments, and the segmental analysis is presented based on reportable segments as assessed under HKFRS 8 'Operating Segments'.

Our operations are closely integrated and, accordingly, the presentation of data includes internal allocations of certain items of income and expenses. These allocations include the costs of certain support services and global functions to the extent that they can be meaningfully attributed to operational business lines and geographical regions. While such allocations have been made on a systematic and consistent basis, they necessarily involve a degree of subjectivity. Costs which are not allocated to other operating segments are included in the 'Corporate Centre'.

Where relevant, income and expense amounts presented include the results of inter-segment funding along with inter-company and inter-business line transactions. All such transactions are undertaken on arm's length terms. The intra-group elimination items for the operating segments are presented in the Corporate Centre.

Change in operating and reportable segments

Effective from the second half of 2021, the operating and reportable segments have been changed to reflect the change in management of the Global Banking and Markets business, with the splitting out of Global Banking, Markets and Securities Services and Global Banking and Markets – Other as separate operating segments following realignments within our internal reporting to the CODM. Global Banking and Markets and Securities Services are separate reportable segments. Global Banking and Markets – Other, which mainly comprises of business activities which are jointly managed by GB and MSS, is reported under 'Other (GBM-other)'. Comparatives have been re-presented to conform to the current year's presentation.

Notes on the Consolidated Financial Statements

Our global businesses and reportable segments

The group provides a comprehensive range of banking and related financial services to our customers in our global businesses: Wealth and Personal Banking ('WPB'), Commercial Banking ('CMB') and Global Banking and Markets ('GBM'). The products and services offered to customers are organised by these global businesses.

- WPB provides a full range of retail banking and wealth products to our customers from personal banking to ultra high net worth individuals. Typically, customer offerings include retail banking products, such as current and savings accounts, mortgages and personal loans, credit cards, debit cards and local and international payment services. We also provide wealth management services, including insurance and investment products, global asset management services, investment management and Private Wealth Solutions for customers with more sophisticated and international requirements.
- CMB offers a broad range of products and services to serve the needs of our commercial customers, including small and medium-sized enterprises, mid-market enterprises and corporates. These include credit and lending, international trade and receivables finance, treasury management and liquidity solutions (payments and cash management and commercial cards), commercial insurance and investments. CMB also offers its customers access to products and services offered by other global businesses, such as GBM, which include foreign exchange products, raising capital on debt and equity markets and advisory services.
- GBM comprises of two separate reportable segments: Global Banking ('GB') and Markets and Securities Services ('MSS'). GB provides tailored financial solutions to major government, corporate and institutional clients and private investors worldwide. The client-focused business lines deliver a full range of banking capabilities including financing, advisory and transaction services. MSS provides services in credit, rates, foreign exchange, equities, money markets and securities services, and principal investment activities.
- Corporate Centre includes strategic investments such as our investment in BoCom, Central Treasury revenue, and costs which are not allocated to global businesses, mainly in relation to investments in technology.

Performance by reportable segments is presented in the 'Financial Review' on page 10 as specified as 'Audited'.

Information by geographical region

	Hong Kong HK\$m	Rest of Asia-Pacific HK\$m	Intra-segment elimination HK\$m	Total HK\$m
For the year ended 31 Dec 2021				
Total operating income	174,859	79,067	780	254,706
Profit before tax	41,043	45,520	—	86,563
At 31 Dec 2021				
Total assets	7,035,497	3,696,064	(828,168)	9,903,393
Total liabilities	6,559,271	3,248,779	(828,168)	8,979,882
Credit commitments and contingent liabilities (contract amounts)	1,792,675	1,532,328	—	3,325,003
For the year ended 31 Dec 2020				
Total operating income	190,128	76,955	166	267,249
Profit before tax	57,937	32,259	—	90,196
At 31 Dec 2020				
Total assets	6,636,693	3,487,821	(708,111)	9,416,403
Total liabilities	6,141,296	3,071,687	(708,111)	8,504,872
Credit commitments and contingent liabilities (contract amounts)	1,727,502	1,417,787	—	3,145,289

Information by country/territory

	Revenue ¹		Non-current assets ²	
	For the year ended 31 Dec		At 31 Dec	
	2021 HK\$m	2020 HK\$m	2021 HK\$m	2020 HK\$m
Hong Kong	106,966	120,873	134,400	126,286
Mainland China	19,381	16,974	196,477	176,462
Australia	7,351	6,665	1,837	2,229
India	10,614	10,296	2,534	2,241
Indonesia	3,242	3,649	3,584	3,701
Malaysia	5,174	5,415	2,022	1,932
Singapore	10,671	9,924	2,933	3,040
Taiwan	3,124	2,932	2,802	2,687
Other	12,135	12,610	3,140	3,627
Total	178,658	189,338	349,729	322,205

1 Revenue (defined as 'Net operating income before change in expected credit losses and other impairment charges') is attributable to countries based on the location of the principal operations of the branch, subsidiary, associate or joint venture.

2 Non-current assets consist of property, plant and equipment, goodwill, other intangible assets, interests in associates and joint ventures and certain other assets.

32 Related party transactions

The group's related parties include the parent, fellow subsidiaries, associates, joint ventures, post-employment benefit plans for the group's employees, Key Management Personnel ('KMP') as defined by HKAS 24, close family members of KMP and entities that are controlled or jointly controlled by KMP or their close family members.

Particulars of transactions with related parties are set out below.

(a) Inter-company

The group is wholly owned by HSBC Asia Holdings Limited, which in turn is a wholly-owned subsidiary of HSBC Holdings plc (incorporated in England).

The group entered into transactions with its fellow subsidiaries in the normal course of business, including the acceptance and placement of interbank deposits, correspondent banking transactions and off-balance sheet transactions. The Bank also acted as agent for the distribution of retail investment funds for fellow subsidiaries and paid professional fees for services provided by fellow subsidiaries.

The group shared the costs of certain IT projects and also used certain processing services of fellow subsidiaries. These costs are reported under 'General and administrative expenses – other administrative expenses in the income statement.

The aggregate amount of income and expenses arising from these transactions during the year and the balances of amounts due to and from the relevant parties at the year end were as follows:

	2021			2020		
	Immediate holding company HK\$m	Ultimate holding company HK\$m	Fellow subsidiaries HK\$m	Immediate holding company HK\$m	Ultimate holding company HK\$m	Fellow subsidiaries HK\$m
Income and expenses for the year						
Interest income	–	–	220	–	–	480
Interest expense ¹	6,773	(651)	(286)	6,489	(339)	39
Fee income	–	–	2,538	–	–	2,744
Fee expense	–	1	1,428	–	–	1,272
Net income from financial instruments held for trading or managed on a fair value basis	–	1	(19)	–	2	18
Net insurance premium income	–	–	249	–	–	–
Other operating income	–	129	1,770	–	787	916
Net insurance claims and benefits paid and movement in liabilities to policyholders	–	–	(179)	–	–	–
General and administrative expenses ²	–	(141)	47,842	–	5,270	33,632
At 31 Dec						
Assets	9	1,147	260,256	–	2,707	157,916
– trading assets ³	–	22	4,232	–	14	159
– derivative assets	–	989	147,704	–	2,488	74,932
– other assets ^{3,6}	9	136	108,320	–	205	82,825
Liabilities	223,565	1,069	283,630	198,211	3,676	182,145
– trading liabilities ³	–	–	25	–	11	572
– financial liabilities designated at fair value ^{3,4}	175,655	–	7	131,370	–	8
– derivative liabilities	–	18	152,013	–	–	87,724
– other liabilities ^{3,6}	1,388	980	131,585	1,448	3,593	93,841
– subordinated liabilities ^{3,5,6}	46,522	71	–	65,393	72	–
Guarantees	–	–	22,815	–	–	19,907
Commitments	–	–	2,076	–	–	2,189

1 The amount includes interest expenses on debt instruments issued by the group for funding purposes that are designated under the fair value option to reduce an accounting mismatch, and interest expenses/(income) on derivatives managed in conjunction with those debt instruments. Comparatives have been re-presented to conform to the current year's presentation.

2 This includes reimbursement of amount from ultimate holding company in accordance to the billing arrangement of the Group.

3 These balances are presented under 'Amounts due from/to Group companies' in the consolidated balance sheet.

4 The balance at 31 December 2021 included subordinated liabilities of HK\$175,655m to meet Total Loss Absorbing Capacity ('TLAC') requirements (2020: HK\$131,370m). During the year, there were repayment of HK\$4,437m and issuance of HK\$54,460m (2020: no movement). The carrying amount of financial liabilities designated at fair value was HK\$7,211m higher than the contractual amount at maturity (2020: HK\$12,518m). The cumulative loss in fair value attributable to changes in credit risk was HK\$1,815m (2020: HK\$2,490m). The balances are largely under Level 2.

5 The balance at 31 December 2021 included subordinated liabilities of HK\$46,522m to meet TLAC requirements (2020: HK\$65,393m). During the year, there were repayment of HK\$19,665m and issuance of HK\$3,304m (2020: no movement).

6 The fair value hierarchy of assets and liabilities at amortised cost are under level 2 and the fair value has no material difference with carrying value.

The above outstanding balances arose in the ordinary course of business and on substantially the same terms, including interest rates and security, as for comparable transactions with third-party counterparties.

Notes on the Consolidated Financial Statements

(b) Share option and share award schemes

The group participates in various share option and share plans operated by HSBC whereby share options or shares of HSBC are granted to employees of the group. The group recognises an expense in respect of these share options and share awards. The cost borne by the ultimate holding company in respect of share options is treated as a capital contribution and is recorded within 'Other reserves'. In respect of share awards, the group recognises a liability to the ultimate holding company over the vesting period. This liability is measured at the fair value of the shares at each reporting date, with changes since the award dates adjusted through the capital contribution account within 'Other reserves'. The balances of the capital contribution and the liability at 31 December 2021 amounted to HK\$3,436m and HK\$1,431m respectively (2020: HK\$3,609m and HK\$1,124m respectively).

(c) Post-employment benefit plans

At 31 December 2021, HK\$9.2bn (2020: HK\$9.3bn) of the group's post-employment plan assets were under management by group companies, earning management fees of HK\$65m in 2021 (2020: HK\$59m). At 31 December 2021, the group's post-employment benefit plans had placed deposits of HK\$783m (2020: HK\$641m) with its banking subsidiaries, earning interest payable to the schemes of HK\$0.5m (2020: HK\$0.2m). The above outstanding balances arose from the ordinary course of business and on substantially the same terms, including interest rates and security, as comparable transactions with third-party counterparties.

(d) Associates and joint ventures

The group provides certain banking and financial services to associates and joint ventures, including loans, overdrafts, interest and non-interest bearing deposits and current accounts. Details of interests in associates and joint ventures are set out in Note 14.

The disclosure of the year-end balance and the highest amounts outstanding during the year is considered to be the most meaningful information to represent the amount of transactions and outstanding balances during the year.

Transactions and balances during the year with associates and joint ventures

	2021		2020	
	Highest balance during the year	Balance at 31 December	Highest balance during the year	Balance at 31 December
	HK\$m	HK\$m	HK\$m	HK\$m
Amounts due from associates – unsecured	35,304	32,663	33,577	22,811
Amounts due to associates	26,490	8,348	42,377	17,263
Commitments	4,722	1,479	1	1

The above outstanding balances arose in the ordinary course of business and on substantially the same terms, including interest rates and security, as comparable transactions with third-party counterparties.

(e) Key Management Personnel

Key Management Personnel are defined as those persons having authority and responsibility for planning, directing and controlling the activities of the Bank and the group. It includes members of the Board of Directors and Executive Committee of the Bank and the Board of Directors and Group Executive Committee members of HSBC Holdings plc.

Compensation of Key Management Personnel

	2021	2020
	HK\$m	HK\$m
Salaries and other short-term benefits	314	315
Post employment benefits	9	9
Termination benefits	5	4
Share-based payments	123	103
Total	451	431

Transactions, arrangements and agreements involving Key Management Personnel

	2021	2020
	HK\$m	HK\$m
During the year		
Highest average assets ¹	107,317	100,834
Highest average liabilities ¹	71,516	71,488
Contribution to group's profit before tax	1,510	1,733
At the year end		
Guarantees	13,263	12,452
Commitments	13,624	16,701

¹ The disclosure of the highest average balance during the year is considered the most meaningful information to represent transactions during the year.

Transactions, arrangements and agreements are entered into by the group with companies that may be controlled by Key Management Personnel of the group and their immediate relatives. These transactions are primarily loans and deposits, and were entered into in the ordinary course of business and on substantially the same terms, including interest rates and security, as comparable transactions with persons or companies of a similar standing or, where applicable, with other employees. The transactions did not involve more than the normal risk of repayment or present other unfavourable features. Change in expected credit losses recognised for the year, and expected credit loss allowances against balances outstanding at the end of the year, in respect of Key Management Personnel were insignificant (2020: insignificant).

On 8 October 2019, the group acted as Joint Global Co-ordinator and Underwriter on aggregated EUR4.25bn and GBP800m Senior Note issuances for CK Hutchison Group Telecom Finance S.A. in 6 tranches, with tenors of 4 to 15 years and coupon rates of 0.375% to 2.625%. CK Hutchison Group Telecom Finance S.A. is a wholly-owned subsidiary of an associated body corporate (CK Hutchison Holdings Limited) of Mr Victor Li, a non-executive Director of the Bank.

(f) Loans to directors

Directors are defined as the Directors of the Bank, its ultimate holding company, HSBC Holdings plc and intermediate holding companies. Loans to directors also include loans to companies that are controlled by, and entities that are connected with these directors. Particulars of loans to directors disclosed pursuant to section 17 of the Companies (Disclosure of Information about Benefits of Directors) Regulation are as follows:

	Aggregate amount outstanding at 31 Dec		Maximum aggregate amount outstanding during the year	
	2021 HK\$m	2020 HK\$m	2021 HK\$m	2020 HK\$m
By the Bank	3,755	2,690	3,967	4,291
By subsidiaries	13	4	14	9
	3,768	2,694	3,981	4,300

These amounts include principal and interest, and the maximum liability that may be incurred under guarantees.

33 Fair values of financial instruments carried at fair value

Control framework

Fair values are subject to a control framework designed to ensure that they are either determined, or validated, by a function independent of the risk taker.

Where fair values are determined by reference to externally quoted prices or observable pricing inputs to models, independent price determination or validation is utilised. For inactive markets, the group sources alternative market information, with greater weight given to information that is considered to be more relevant and reliable. Examples of the factors considered are price observability, instrument comparability, consistency of data sources, underlying data accuracy and timing of prices.

Fair value of investment funds are sourced from the underlying fund managers which are based upon an assessment of the underlying investees' financial positions, results, risk profile and prospects.

For fair values determined using valuation models, the control framework includes development or validation by independent support functions of the model logic, inputs, model outputs and adjustments. Valuation models are subject to a process of due diligence before becoming operational and are calibrated against external market data on an ongoing basis.

Changes in fair value are generally subject to a profit and loss analysis process and are disaggregated into high-level categories including portfolio changes, market movements and other fair value adjustments.

The majority of financial instruments measured at fair value are in MSS and Insurance. The group's fair value governance structure comprises its Finance function and Valuation Committees. Finance is responsible for establishing procedures governing valuation and ensuring fair values are in compliance with accounting standards. The fair values are reviewed by the group's relevant Valuation Committees, which consist of independent support functions. Within MSS and Insurance, these Committees are overseen by the Group's Valuation Committee Review Group and the Group Insurance Valuation and Impairment Committee respectively. These two Group Committees considers all material subjective valuations.

Financial liabilities measured at fair value

In certain circumstances, the group records its own debt in issue at fair value, based on quoted prices in an active market for the specific instrument. When quoted market prices are unavailable, the own debt in issue is valued using valuation techniques, the inputs for which are either based on quoted prices in an inactive market for the instrument or are estimated by comparison with quoted prices in an active market for similar instruments. In both cases, the fair value includes the effect of applying the credit spread which is appropriate to the group's liabilities. The change in fair value of issued debt securities attributable to the group's own credit spread is computed as follows: for each security at each reporting date, an externally verifiable price is obtained or a price is derived using credit spreads for similar securities for the same issuer. Then, using discounted cash flow, each security is valued using a Libor-based discount curve. The difference in the valuations is attributable to the group's own credit spread. This methodology is applied consistently across all securities.

Structured notes issued and certain other hybrid instruments are included within 'Financial liabilities designated at fair value' and are measured at fair value. The credit spread applied to these instruments is derived from the spreads at which the group issues structured notes.

Gains and losses arising from changes in the credit spread of liabilities issued by the group reverse over the contractual life of the debt, provided that the debt is not repaid at a premium or a discount.

Notes on the Consolidated Financial Statements

Fair value hierarchy

Fair values of financial assets and liabilities are determined according to the following hierarchy:

- Level 1 – valuation technique using quoted market price: financial instruments with quoted prices for identical instruments in active markets that the group can access at the measurement date.
- Level 2 – valuation technique using observable inputs: financial instruments with quoted prices for similar instruments in active markets or quoted prices for identical or similar instruments in inactive markets and financial instruments valued using models where all significant inputs are observable.
- Level 3 – valuation technique with significant unobservable inputs: financial instruments valued using valuation techniques where one or more significant inputs are unobservable.

Financial instruments carried at fair value and bases of valuation

	Fair Value Hierarchy			Third-party total HK\$m	Inter-company ² HK\$m	Total HK\$m
	Level 1 HK\$m	Level 2 HK\$m	Level 3 HK\$m			
At 31 Dec 2021						
Assets						
Trading assets ¹	537,816	236,388	3,246	777,450	–	777,450
Derivatives	440	212,740	3,294	216,474	148,693	365,167
Financial assets designated and otherwise mandatorily measured at fair value through profit or loss	93,544	34,203	74,652	202,399	–	202,399
Financial investments	1,153,521	391,816	3,674	1,549,011	–	1,549,011
Liabilities						
Trading liabilities ¹	73,647	19,076	–	92,723	–	92,723
Derivatives	963	200,667	2,130	203,760	152,031	355,791
Financial liabilities designated at fair value ¹	–	118,516	20,449	138,965	–	138,965

At 31 Dec 2020

Assets						
Trading assets ¹	403,730	195,447	1,237	600,414	–	600,414
Derivatives	2,140	342,357	1,028	345,525	77,420	422,945
Financial assets designated and otherwise mandatorily measured at fair value through profit or loss	97,590	31,836	49,534	178,960	–	178,960
Financial investments	1,315,696	378,075	6,635	1,700,406	–	1,700,406
Liabilities						
Trading liabilities ¹	52,504	8,308	–	60,812	–	60,812
Derivatives	2,015	334,934	3,538	340,487	87,724	428,211
Financial liabilities designated at fair value ¹	–	146,529	20,484	167,013	–	167,013

¹ Amounts with HSBC Group entities are not reflected here.

² Derivatives balances with HSBC Group entities are largely under 'Level 2'.

Transfers between Level 1 and Level 2 fair values

	Assets				Liabilities		
	Financial investments HK\$m	Trading assets HK\$m	Designated and otherwise mandatorily measured at fair value HK\$m	Derivatives HK\$m	Trading liabilities HK\$m	Designated at fair value HK\$m	Derivatives HK\$m
At 31 Dec 2021							
Transfers from Level 1 to Level 2	57,471	29,852	1,970	802	1,012	–	1,652
Transfers from Level 2 to Level 1	36,073	20,948	1,679	–	3,452	–	–
At 31 Dec 2020							
Transfers from Level 1 to Level 2	31,809	20,534	1,901	–	236	–	–
Transfers from Level 2 to Level 1	37,387	26,796	1,860	5	191	–	–

Transfers between levels of the fair value hierarchy are deemed to occur at the end of each Group's quarterly reporting period. Transfers into and out of levels of the fair value hierarchy are primarily attributable to changes in observability of valuation inputs and price transparency.

Fair value adjustments

Fair value adjustments are adopted when the group determines there are additional factors considered by market participants that are not incorporated within the valuation model. Movements in the level of fair value adjustments do not necessarily result in the recognition of profits or losses within the income statement, such as when models are enhanced and therefore fair value adjustments may no longer be required.

Bid-offer

HKFRS 13 requires use of the price within the bid-offer spread that is most representative of fair value. Valuation models will typically generate mid-market values. The bid-offer adjustment reflects the extent to which bid-offer costs would be incurred if substantially all residual net portfolio market risks were closed using available hedging instruments or by disposing of, or unwinding the position.

Uncertainty

Certain model inputs may be less readily determinable from market data, and/or the choice of model itself may be more subjective. In these circumstances, an adjustment may be necessary to reflect the likelihood that market participants would adopt more conservative values for uncertain parameters and/or model assumptions, than those used in the group's valuation model.

Credit valuation adjustment ('CVA') and debit valuation adjustment ('DVA')

The CVA is an adjustment to the valuation of over-the-counter ('OTC') derivative contracts to reflect the possibility that the counterparty may default and the group may not receive the full market value of the transactions.

The DVA is an adjustment to the valuation of OTC derivative contracts to reflect the possibility that the group may default, and that the group may not pay the full market value of the transactions.

The group calculates a separate CVA and DVA for each legal entity, and for each counterparty to which the entity has exposure. With the exception of central clearing parties, all third-party counterparties are included in the CVA and DVA calculations, and these adjustments are not netted across group entities.

The group calculates the CVA by applying the probability of default ('PD') of the counterparty, conditional on the non-default of the group, to the group's expected positive exposure to the counterparty and multiplying the result by the loss expected in the event of default. Conversely, the group calculates the DVA by applying the PD of the group, conditional on the non-default of the counterparty, to the expected positive exposure of the counterparty to the group and multiplying the result by the loss expected in the event of default. Both calculations are performed over the life of the potential exposure.

For most products the group uses a simulation methodology, which incorporates a range of potential exposures over the life of the portfolio, to calculate the expected positive exposure to a counterparty. The simulation methodology includes credit mitigants, such as counterparty netting agreements and collateral agreements with the counterparty.

The methodologies do not, in general, account for 'wrong-way risk' which arises when the underlying value of the derivative prior to any CVA is positively correlated to the PD of the counterparty. When there is significant wrong-way risk, a trade-specific approach is applied to reflect this risk in the valuation.

Funding fair value adjustment ('FFVA')

The FFVA is calculated by applying future market funding spreads to the expected future funding exposure of any uncollateralised component of the OTC derivative portfolio. The expected future funding exposure is calculated by a simulation methodology, where available and is adjusted for events that may terminate the exposure, such as the default of the group or the counterparty. The FFVA and DVA are calculated independently.

Model limitation

Models used for portfolio valuation purposes may be based upon a simplifying set of assumptions that do not capture all material market characteristics. In these circumstances, model limitation adjustments are adopted.

Inception profit (Day 1 profit or loss reserves)

Inception profit adjustments are adopted when the fair value estimated by a valuation model is based on one or more significant unobservable inputs.

Effects of changes in significant unobservable assumptions to reasonably possible alternatives

The key unobservable inputs to Level 3 financial instruments include volatility and correlation for structured notes and deposits valued using option models, bid quotes for corporate bonds valued using approaches that take into account market comparables, and multiple items for private equity and related investments. In the absence of an active market, the fair value of private equity and strategic investments is estimated on the basis of an analysis of the investee's financial position and results, risk profile, prospects and other factors, as well as by reference to market valuations for similar entities quoted in an active market, or the price at which similar companies have changed ownership. The change in fair values due to changes in reasonably possible alternative assumptions for these unobservable inputs is not significant.

Favourable and unfavourable changes are determined on the basis of sensitivity analysis. The sensitivity analysis aims to measure a range of fair values consistent with the application of a 95% confidence interval. Methodologies take account of the nature of the valuation technique employed, the availability and reliability of observable proxies and historical data. When the available data is not amenable to statistical analysis, the quantification of uncertainty is judgemental, but remains guided by the 95% confidence interval. The sensitivity of Level 3 fair values to reasonably possible alternative assumptions is not significant.

Notes on the Consolidated Financial Statements

Fair value valuation bases

Financial instruments measured at fair value using a valuation technique with significant unobservable inputs – Level 3

	Assets					Liabilities		
	Financial investments	Trading assets	Designated and otherwise mandatorily measured at fair value through profit or loss	Derivatives	Total	Designated at fair value	Derivatives	Total
Private equity and related investments	3,121	4	74,295	–	77,420	–	–	–
Structured notes	–	–	–	–	–	20,449	–	20,449
Others	553	3,242	357	3,294	7,446	–	2,130	2,130
At 31 Dec 2021	3,674	3,246	74,652	3,294	84,866	20,449	2,130	22,579
Private equity and related investments	6,167	–	49,274	–	55,441	–	–	–
Structured notes	–	–	–	–	–	20,484	–	20,484
Others	468	1,237	260	1,028	2,993	–	3,538	3,538
At 31 Dec 2020	6,635	1,237	49,534	1,028	58,434	20,484	3,538	24,022

Private equity and related investments

The fair value of a private equity investment (including private equity, infrastructure and private credit, primarily held to support our Insurance business, and strategic investments) is estimated on the basis of an analysis of the investee's financial position and results, risk profile, prospects and other factors; by reference to market valuations for similar entities quoted in an active market; the price at which similar companies have changed ownership; or from published net asset values ('NAV's) received. If necessary, adjustments are made to the NAV of funds to obtain the best estimate of fair value.

Structured notes

The fair value of Level 3 structured notes is derived from the fair value of the underlying debt security, and the fair value of the embedded derivative is determined as described in the paragraph below on derivatives. These structured notes comprise principally equity-linked notes issued by HSBC, which provide the counterparty with a return linked to the performance of equity securities and other portfolios.

Examples of the unobservable parameters include long-dated equity volatilities and correlations between equity prices, and interest and foreign exchange rates.

Derivatives

OTC derivative valuation models calculate the present value of expected future cash flows, based upon 'no arbitrage' principles. For many vanilla derivative products, the modelling approaches used are standard across the industry. For more complex derivative products, there may be some differences in market practice. Inputs to valuation models are determined from observable market data wherever possible, including prices available from exchanges, dealers, brokers or providers of consensus pricing. Certain inputs may not be observable in the market directly, but can be determined from observable prices via model calibration procedures or estimated from historical data or other sources.

Reconciliation of fair value measurements in Level 3 of the fair value hierarchy

Movement in Level 3 financial instruments

	Assets				Liabilities	
	Financial investments HK\$m	Trading assets HK\$m	Designated and otherwise mandatorily measured at fair value through profit or loss HK\$m	Derivatives HK\$m	Designated at fair value HK\$m	Derivatives HK\$m
At 1 Jan 2021	6,635	1,237	49,534	1,028	20,484	3,538
Total gains/(losses) recognised in profit or loss	(7)	(2,211)	11,700	4,002	(3,207)	3,082
– net income/(losses) from financial instruments held for trading or managed on a fair value basis	–	(2,211)	–	4,002	–	3,082
– changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss	–	–	11,700	–	(3,207)	–
– gains less losses from financial investments at fair value through other comprehensive income	(7)	–	–	–	–	–
Total gains recognised in other comprehensive income ('OCI')	(3,013)	10	11	18	386	23
– financial investments: fair value (losses)	(3,002)	–	–	–	(3)	–
– exchange differences	(11)	10	11	18	389	23
Purchases	1,383	5,082	22,232	–	–	–
New issuances	–	–	–	–	9,196	–
Sales	(35)	(561)	(6)	–	–	–
Settlements	(1,289)	(87)	(7,898)	(1,247)	(7,165)	(4,060)
Transfers out	–	(691)	(921)	(614)	(2,895)	(878)
Transfers in	–	467	–	107	3,650	425
At 31 Dec 2021	3,674	3,246	74,652	3,294	20,449	2,130
Unrealised gains/(losses) recognised in profit or loss relating to assets and liabilities held at 31 Dec 2021	–	(2,278)	11,236	2,686	113	(34)
– net income/(losses) from financial instruments held for trading or managed on a fair value basis	–	(2,278)	–	2,686	–	(34)
– changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss	–	–	11,236	–	113	–
At 1 Jan 2020	5,622	557	32,291	833	20,571	2,422
Total gains/(losses) recognised in profit or loss	–	43	3,205	2,627	(2,113)	3,401
– net income from financial instruments held for trading or managed on a fair value basis	–	43	–	2,627	–	3,401
– changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss	–	–	3,205	–	(2,113)	–
– gains less losses from financial investments at fair value through other comprehensive income	–	–	–	–	–	–
Total gains/(losses) recognised in other comprehensive income ('OCI')	1,529	(2)	(6)	6	857	–
– financial investments: fair value gains/(losses)	1,485	–	–	–	(24)	–
– exchange differences	44	(2)	(6)	6	881	–
Purchases	554	852	16,714	–	–	–
New issuances	–	–	–	–	6,468	–
Sales	–	(335)	–	–	–	–
Settlements	(1,070)	–	(2,484)	(1,244)	(3,896)	(1,620)
Transfers out	–	(266)	(189)	(1,216)	(2,735)	(1,070)
Transfers in	–	388	3	22	1,332	405
At 31 Dec 2020	6,635	1,237	49,534	1,028	20,484	3,538
Unrealised gains/(losses) recognised in profit or loss relating to assets and liabilities held at 31 Dec 2020	–	5	2,741	587	(13)	(1,838)
– net income/(losses) from financial instruments held for trading or managed on a fair value basis	–	5	–	587	–	(1,838)
– changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss	–	–	2,741	–	(13)	–

Transfers between levels of the fair value hierarchy are deemed to occur at the end of each Group's quarterly reporting period. Transfers into and out of levels of the fair value hierarchy are primarily attributable to observability of valuation inputs and price transparency.

Notes on the Consolidated Financial Statements

Effect of changes in significant unobservable assumptions to reasonably possible alternatives

Sensitivity of fair values to reasonably possible alternative assumptions

	2021				2020			
	Reflected in profit or loss		Reflected in OCI		Reflected in profit or loss		Reflected in OCI	
	Favourable changes HK\$m	Un-favourable changes HK\$m	Favourable changes HK\$m	Un-favourable changes HK\$m	Favourable changes HK\$m	Un-favourable changes HK\$m	Favourable changes HK\$m	Un-favourable changes HK\$m
Derivatives, trading assets and trading liabilities ¹	158	(162)	–	–	211	(211)	–	–
Financial assets and liabilities designated and otherwise mandatorily measured at fair value through profit or loss	3,741	(3,742)	–	–	2,478	(2,478)	–	–
Financial investments	–	–	157	(157)	–	–	309	(309)
At 31 Dec	3,899	(3,904)	157	(157)	2,689	(2,689)	309	(309)

¹ 'Derivatives, trading assets and trading liabilities' are presented as one category to reflect the manner in which these instruments are risk-managed.

The sensitivity analysis aims to measure a range of fair values consistent with the application of a 95% confidence interval. Methodologies take account of the nature of the valuation technique employed, as well as the availability and reliability of observable proxy and historical data.

When the fair value of a financial instrument is affected by more than one unobservable assumption, the above table reflects the most favourable or the most unfavourable change from varying the assumptions individually.

Key unobservable inputs to Level 3 financial instruments

The following table lists key unobservable inputs to Level 3 financial instruments and provides the range of those inputs at 31 December 2021.

Quantitative information about significant unobservable inputs in Level 3 valuations

	Fair value			Key unobservable inputs	2021		2020	
	Assets HK\$m	Liabilities HK\$m	Valuation techniques		Full range of inputs		Full range of inputs	
					Lower	Higher	Lower	Higher
Private equity and related investments	77,420	–	See below	See below				
Structured notes	–	20,449						
– equity-linked notes	–	15,517	Model – Option model	Equity volatility	6%	90%	6%	72%
– FX-linked notes	–	4,733	Model – Option model	Equity correlation	22%	97%	39%	88%
– other	–	199	Model – Option model	FX volatility	2%	36%	3%	36%
Others ¹	7,446	2,130						
At 31 Dec 2021	84,866	22,579						

¹ 'Others' includes a range of smaller asset holdings.

Private equity and related investments

Given the bespoke nature of the analysis in respect of each holding, it is not practical to quote a range of key unobservable inputs.

Volatility

Volatility is a measure of the anticipated future variability of a market price. It varies by underlying reference market price, and by strike and maturity of the option. Certain volatilities, typically those of a longer-dated nature, are unobservable and are estimated from observable data. The range of unobservable volatilities reflects the wide variation in volatility inputs by reference market price.

Correlation

Correlation is a measure of the inter-relationship between two market prices and is expressed as a number between minus one and one. It is used to value more complex instruments where the payout is dependent upon more than one market price. There is a wide range of instruments for which correlation is an input, and consequently a wide range of both same-asset correlations and cross-asset correlations is used. In general, the range of same-asset correlations will be narrower than the range of cross-asset correlations.

Unobservable correlations may be estimated based upon a range of evidence, including consensus pricing services, group's trade prices, proxy correlations and examination of historical price relationships. The range of unobservable correlations quoted in the table reflects the wide variation in correlation inputs by market price pair.

Inter-relationships between key unobservable inputs

Key unobservable inputs to Level 3 financial instruments may not be independent of each other. As described above, market variables may be correlated. This correlation typically reflects the manner in which different markets tend to react to macroeconomic or other events. Furthermore, the effect of changing market variables on the group's portfolio will depend on the group's net risk position in respect of each variable.

34 Fair values of financial instruments not carried at fair value

Fair values of financial instruments not carried at fair value and bases of valuation

	Fair Value Hierarchy				Total HK\$m
	Carrying amount HK\$m	Quoted market price Level 1 HK\$m	Observable inputs Level 2 HK\$m	Significant unobservable inputs Level 3 HK\$m	
At 31 Dec 2021					
Assets¹					
Reverse repurchase agreements – non-trading	803,775	–	802,881	947	803,828
Loans and advances to banks	432,247	–	424,175	8,356	432,531
Loans and advances to customers	3,840,939	–	65,268	3,765,148	3,830,416
Financial investments – at amortised cost	502,564	89,050	449,284	2,142	540,476
Liabilities¹					
Repurchase agreements – non-trading	255,374	–	255,366	–	255,366
Deposits by banks	280,310	–	280,408	–	280,408
Customer accounts	6,177,182	–	6,177,676	–	6,177,676
Debt securities in issue	67,364	–	67,842	–	67,842
Subordinated liabilities	4,054	–	3,864	–	3,864
At 31 Dec 2020					
Assets¹					
Reverse repurchase agreements – non-trading	520,344	–	518,295	2,106	520,401
Loans and advances to banks	403,884	–	393,953	10,374	404,327
Loans and advances to customers	3,668,681	–	61,885	3,588,431	3,650,316
Financial investments – at amortised cost	475,025	81,912	450,962	2,012	534,886
Liabilities¹					
Repurchase agreements – non-trading	136,157	–	136,157	–	136,157
Deposits by banks	248,628	–	248,629	–	248,629
Customer accounts	5,911,396	–	5,911,813	–	5,911,813
Debt securities in issue	79,419	–	80,066	–	80,066
Subordinated liabilities	4,065	–	3,749	–	3,749

¹ Amounts with HSBC Group entities are not reflected here. Further details are set out in Note 32.

The fair values above are stated at a specific date and may be significantly different from the amounts which will actually be paid on the maturity or settlement dates of the instruments. In many cases, it would not be possible to realise immediately the estimated fair values given the size of the portfolios measured. Accordingly, these fair values do not represent the value of these financial instruments to the group as a going concern.

Other financial instruments not carried at fair value are typically short term in nature or re-priced to current market rates frequently. Accordingly, their carrying amount is a reasonable approximation of fair value. They include cash and balances at central banks, items in the course of collection from and transmission to other banks, Hong Kong Government certificates of indebtedness, Hong Kong currency notes in circulation, other financial assets and other financial liabilities, all of which are measured at amortised cost.

Valuation

Fair value is an estimate of the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. It does not reflect the economic benefits and costs that the group expects to flow from an instrument's cash flow over its expected future life. Our valuation methodologies and assumptions in determining fair values for which no observable market prices are available may differ from those of other companies.

Repurchase and reverse repurchase agreements – non-trading

Fair values approximate carrying amounts as these balances are generally short dated.

Loans and advances to banks and customers

To determine the fair value of loans and advances to banks and customers, loans are segregated, as far as possible, into portfolios of similar characteristics. Fair values are based on observable market transactions, when available. When they are unavailable, fair values are estimated using valuation models incorporating a range of input assumptions. These assumptions may include: value estimates from third-party brokers reflecting over-the-counter trading activity; forward-looking discounted cash flow models, taking account of expected customer prepayment rates, using assumptions that the group believes are consistent with those that would be used by market participants in valuing such loans; new business rates estimates for similar loans; and trading inputs from other market participants including observed primary and secondary trades. From time to time, we may engage a third-party valuation specialist to measure the fair value of a pool of loans.

The fair value of loans reflects expected credit losses at the balance sheet date and estimates of market participants' expectations of credit losses over the life of the loans, and the fair value effect of repricing between origination and the balance sheet date. For credit impaired loans, fair value is estimated by discounting the future cash flows over the time period they are expected to be recovered.

Notes on the Consolidated Financial Statements

Financial investments

The fair values of listed financial investments are determined using bid market prices. The fair values of unlisted financial investments are determined using valuation techniques that incorporate the prices and future earnings streams of equivalent quoted securities.

Deposits by banks and customer accounts

The fair values of on-demand deposits are approximated by their carrying value. For deposits with longer-term maturities, fair values are estimated using discounted cash flows, applying current rates offered for deposits of similar remaining maturities.

Debt securities in issue and subordinated liabilities

Fair values are determined using quoted market prices at the balance sheet date where available, or by reference to quoted market prices for similar instruments.

35 Structured entities

The group is involved with both consolidated and unconsolidated structured entities through the securitisation of financial assets, conduits and investment funds, established either by the group or a third party.

Consolidated structured entities

The group uses consolidated structured entities to securitise customer loans and advances it originates to diversify its sources of funding for asset origination and capital efficiency purposes. The loans and advances are transferred by the group to the structured entities for cash or synthetically through credit default swaps, and the structured entities issue debt securities to investors. The group's transactions with these entities are not significant.

Unconsolidated structured entities

The term 'unconsolidated structured entities' refers to all structured entities not controlled by the group. The group enters into transactions with unconsolidated structured entities in the normal course of business to facilitate customer transactions and for specific investment opportunities.

Nature and risks associated with the group's interests in unconsolidated structured entities

	Securitisations	HSBC managed funds	Non-HSBC managed funds	Other	Total
Total asset values of the entities (HK\$bn)					
0-4	65	65	114	21	265
4-15	11	37	130	—	178
15-39	—	15	91	—	106
39-196	—	1	50	—	51
196+	—	1	3	—	4
Number of entities at 31 Dec 2021	76	119	388	21	604
	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
Total assets in relation to the group's interests in the unconsolidated structured entities	35,225	32,223	86,044	10,140	163,632
– trading assets	—	1,041	—	432	1,473
– financial assets designated and otherwise mandatorily measured at fair value through profit or loss	—	31,182	86,044	—	117,226
– derivatives	—	—	—	—	—
– loans and advances to customers	35,225	—	—	9,625	44,850
– financial investments	—	—	—	—	—
– other assets	—	—	—	83	83
Total liabilities in relation to the group's interests in the unconsolidated structured entities	—	—	—	60	60
– derivatives	—	—	—	60	60
Other off balance sheet commitments	402	6,999	26,246	5,939	39,586
The group's maximum exposure at 31 Dec 2021	35,627	39,222	112,290	16,019	203,158

Nature and risks associated with the group's interests in unconsolidated structured entities (continued)

	Securitisations	HSBC managed funds	Non-HSBC managed funds	Other	Total
Total asset values of the entities (HK\$bn)					
0-4	52	62	104	25	243
4-15	9	34	107	1	151
15-39	—	18	56	—	74
39-196	—	3	46	—	49
196+	—	1	5	—	6
Number of entities at 31 Dec 2020	61	118	318	26	523
	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
Total assets in relation to the group's interests in the unconsolidated structured entities					
	26,808	26,476	71,481	8,521	133,286
- trading assets	204	1,653	—	—	1,857
- financial assets designated and otherwise mandatorily measured at fair value through profit or loss	—	24,823	71,481	—	96,304
- derivatives	—	—	—	—	—
- loans and advances to customers	26,604	—	—	8,218	34,822
- financial investments	—	—	—	—	—
- other assets	—	—	—	303	303
Total liabilities in relation to the group's interests in the unconsolidated structured entities					
	—	—	—	56	56
- derivatives	—	—	—	56	56
Other off balance sheet commitments	539	3,822	23,024	7,137	34,522
The group's maximum exposure at 31 Dec 2020	27,347	30,298	94,505	15,602	167,752

The maximum exposure to loss from the group's interests in unconsolidated structured entities represents the maximum loss it could incur as a result of its involvement with these entities regardless of the probability of the loss being incurred.

- For commitments, guarantees and written credit default swaps, the maximum exposure to loss is the notional amount of potential future losses.
- For retained and purchased investments in and loans to unconsolidated structured entities, the maximum exposure to loss is the carrying value of these interests at the balance sheet reporting date.

The maximum exposure to loss is stated gross of the effects of hedging and collateral arrangements entered into to mitigate the group's exposure to loss.

Securitisations

The group has interests in unconsolidated securitisation vehicles through holding notes issued by these entities.

HSBC managed funds

The group establishes and manages money market funds and non-money market investment funds to provide customers with investment opportunities. The group, as fund manager, may be entitled to receive management and performance fees based on the assets under management. The group may also retain units in these funds.

Non-HSBC managed funds

The group purchases and holds units of third-party managed funds in order to facilitate business and meet customer needs.

Other

The group has established structured entities in the normal course of business, such as structured credit transactions for customers, to provide finance to public and private sector infrastructure projects, and for asset and structured finance transactions. In addition to the interest disclosed above, the group enters into derivative contracts, reverse repos and stock borrowing transactions with structured entities. These interests arise in the normal course of business for the facilitation of third-party transactions and risk management solutions.

Structured entities sponsored by the group

The amount of assets transferred to and income received from such sponsored entities during 2021 and 2020 were not significant.

Notes on the Consolidated Financial Statements

36 Bank balance sheet and statement of changes in equity

Bank balance sheet at 31 December 2021

	2021 HK\$m	2020 HK\$m
Assets		
Cash and balances at central banks	203,988	291,071
Items in the course of collection from other banks	17,825	16,836
Hong Kong Government certificates of indebtedness	332,044	313,404
Trading assets	647,625	486,764
Derivatives	346,937	396,126
Financial assets designated and otherwise mandatorily measured at fair value through profit or loss	3,246	5,945
Reverse repurchase agreements – non-trading	488,312	299,876
Loans and advances to banks	230,592	243,107
Loans and advances to customers	1,984,297	1,928,622
Financial investments	893,848	950,866
Amounts due from Group companies	544,587	400,073
Investments in subsidiaries	101,535	95,241
Interests in associates and joint ventures	39,830	39,830
Goodwill and intangible assets	19,226	14,009
Property, plant and equipment	72,312	71,523
Deferred tax assets	1,275	1,266
Prepayments, accrued income and other assets	145,729	165,667
Total assets	6,073,208	5,720,226
Liabilities		
Hong Kong currency notes in circulation	332,044	313,404
Items in the course of transmission to other banks	19,101	18,404
Repurchase agreements – non-trading	175,476	73,606
Deposits by banks	224,650	194,778
Customer accounts	3,816,715	3,610,409
Trading liabilities	46,585	29,039
Derivatives	337,010	396,212
Financial liabilities designated at fair value	36,397	41,507
Debt securities in issue	25,393	29,452
Retirement benefit liabilities	1,098	1,574
Amounts due to Group companies	482,995	413,865
Accruals and deferred income, other liabilities and provisions	120,846	121,091
Current tax liabilities	481	616
Deferred tax liabilities	9,339	9,192
Subordinated liabilities	3,119	3,101
Total liabilities	5,631,249	5,256,250
Equity		
Share capital	172,335	172,335
Other equity instruments	44,615	44,615
Other reserves	19,218	25,726
Retained earnings	205,791	221,300
Total equity	441,959	463,976
Total equity and liabilities	6,073,208	5,720,226

Bank statement of changes in equity for the year ended 31 December 2021

	Other reserves								
	Share capital ¹	Other equity instruments	Retained earnings	Property revaluation reserve	Financial assets at FVOCI reserve	Cash flow hedge reserve	Foreign exchange reserve	Other ²	Total equity
	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
At 1 Jan 2021	172,335	44,615	221,300	35,196	6,364	605	(12,679)	(3,760)	463,976
Profit for the year	–	–	40,815	–	–	–	–	–	40,815
Other comprehensive income/(expense) (net of tax)	–	–	912	3,453	(4,834)	(542)	(2,690)	–	(3,701)
– debt instruments at fair value through other comprehensive income	–	–	–	–	(3,289)	–	–	–	(3,289)
– equity instruments designated at fair value through other comprehensive income	–	–	–	–	(1,545)	–	–	–	(1,545)
– cash flow hedges	–	–	–	–	–	(542)	–	–	(542)
– changes in fair value of financial liabilities designated at fair value upon initial recognition arising from changes in own credit risk	–	–	524	–	–	–	–	–	524
– property revaluation	–	–	–	3,453	–	–	–	–	3,453
– remeasurement of defined benefit asset/liability	–	–	388	–	–	–	–	–	388
– exchange differences	–	–	–	–	–	–	(2,690)	–	(2,690)
Total comprehensive income/(expense) for the year	–	–	41,727	3,453	(4,834)	(542)	(2,690)	–	37,114
Dividends paid ³	–	–	(59,105)	–	–	–	–	–	(59,105)
Movement in respect of share-based payment arrangements	–	–	115	–	–	–	–	(140)	(25)
Transfers and other movements ⁴	–	–	1,754	(1,749)	(6)	–	–	–	(1)
At 31 Dec 2021	172,335	44,615	205,791	36,900	1,524	63	(15,369)	(3,900)	441,959
At 1 Jan 2020	172,335	44,615	223,538	40,976	3,504	(119)	(13,327)	(3,933)	467,589
Profit for the year	–	–	50,414	–	–	–	–	–	50,414
Other comprehensive income/(expense) (net of tax)	–	–	2	(4,255)	2,860	724	648	–	(21)
– debt instruments at fair value through other comprehensive income	–	–	–	–	2,149	–	–	–	2,149
– equity instruments designated at fair value through other comprehensive income	–	–	–	–	711	–	–	–	711
– cash flow hedges	–	–	–	–	–	724	–	–	724
– changes in fair value of financial liabilities designated at fair value upon initial recognition arising from changes in own credit risk	–	–	306	–	–	–	–	–	306
– property revaluation	–	–	–	(4,255)	–	–	–	–	(4,255)
– remeasurement of defined benefit asset/liability	–	–	(304)	–	–	–	–	–	(304)
– exchange differences	–	–	–	–	–	–	648	–	648
Total comprehensive income/(expense) for the year	–	–	50,416	(4,255)	2,860	724	648	–	50,393
Dividends paid ³	–	–	(54,268)	–	–	–	–	–	(54,268)
Movement in respect of share-based payment arrangements	–	–	103	–	–	–	–	173	276
Transfers and other movements ⁴	–	–	1,511	(1,525)	–	–	–	–	(14)
At 31 Dec 2020	172,335	44,615	221,300	35,196	6,364	605	(12,679)	(3,760)	463,976

1 Ordinary share capital includes preference shares which have been redeemed or bought back via payments out of distributable profits in previous years.

2 The other reserves mainly comprise purchase premium arising from transfer of business from fellow subsidiaries, property revaluation reserve relating to transfer of properties to a fellow subsidiary and the share-based payment reserve. The share-based payment reserve is used to record the amount relating to share awards and options granted to employees of the group directly by HSBC Holdings plc.

3 Including distributions paid on perpetual subordinated loans classified as equity under HKFRS.

4 The movements include transfers from the property revaluation reserve to retained earnings in relation to depreciation of revalued properties.

37 Legal proceedings and regulatory matters

The group is party to legal proceedings and regulatory matters in a number of jurisdictions arising out of its normal business operations. Apart from the matters described below, the group considers that none of these matters are material. The recognition of provisions is determined in accordance with the accounting policies set out in Note 1.2(n). While the outcomes of legal proceedings and regulatory matters are inherently uncertain, management believes that, based on the information available to it, appropriate provisions have been made in respect of these matters as at 31 December 2021. Any provision recognised does not constitute an admission of wrongdoing or legal liability. It is not practicable to provide an aggregate estimate of potential liability for our legal proceedings and regulatory matters as a class of contingent liabilities.

Anti-money laundering and sanctions-related matters

In December 2012, HSBC Holdings plc ('HSBC Holdings') entered into a number of agreements, including an undertaking with the UK Financial Services Authority (replaced with a Direction issued by the UK Financial Conduct Authority ('FCA') in 2013 and again in 2020) as well as a cease-and-desist order with the US Federal Reserve Board ('FRB'), both of which contained certain forward-looking anti-money laundering ('AML') and sanctions-related obligations. Over the past several years, HSBC has retained a Skilled Person under section 166 of the Financial Services and Markets Act and an Independent Consultant, under the FRB cease-and-desist order to produce periodic assessments of the Group's AML and sanctions compliance programme. The Skilled Person completed its engagement in the second quarter of 2021, and the FCA has determined that no further Skilled Person work is required. Separately, the Independent Consultant continues to work pursuant to the FRB cease-and-desist order.

Based on the facts currently known, it is not practicable to predict the resolution of these matters, including the timing or any possible impact on HSBC, which could be significant.

Singapore Interbank Offered Rate ('Sibor'), Singapore Swap Offer Rate ('SOR') and Australia Bank Bill Swap Rate ('BBSW')

In July and August 2016, HSBC and other panel banks were named as defendants in two putative class actions filed in the New York District Court on behalf of persons who transacted in products related to the Sibor, SOR and BBSW benchmark rates. The complaints allege, among other things, misconduct related to these benchmark rates in violation of US antitrust, commodities and racketeering laws, and state law.

In the Sibor/SOR litigation, in October 2021, the Bank reached a settlement in principle with the plaintiffs to resolve this action. The settlement remains subject to court approval.

In the BBSW litigation, in November 2018, the court dismissed all foreign defendants, including all HSBC entities, on personal jurisdiction grounds. In April 2019, the plaintiffs filed an amended complaint, which the defendants moved to dismiss. In February 2020, the court again dismissed the plaintiffs' amended complaint against all HSBC entities.

There are many factors that may affect the range of outcomes, and the resulting financial impact of these matters, which could be significant.

Foreign exchange-related investigations

In January 2018, following the conclusion of the US Department of Justice's ('DoJ') investigation into HSBC's historical foreign exchange activities, HSBC Holdings entered into a three-year deferred prosecution agreement with the Criminal Division of the DoJ (the 'FX DPA'), regarding fraudulent conduct in connection with two particular transactions in 2010 and 2011. In January 2021, the FX DPA expired and, in August 2021, the charges deferred by the FX DPA were dismissed.

Other regulatory investigations, reviews and litigation

The Bank and/or certain of its affiliates are subject to a number of other investigations and reviews by various regulators and competition and law enforcement authorities, as well as litigation, in connection with various matters relating to the firm's businesses and operations, including investigations by tax administration, regulatory and law enforcement authorities in India and elsewhere in connection with allegations of tax evasion or tax fraud, money laundering and unlawful cross-border banking solicitation.

There are many factors that may affect the range of outcomes, and the resulting financial impact, of these matters, which could be significant.

38 Ultimate holding company

The ultimate holding company of the Bank is HSBC Holdings plc, which is incorporated in England.

The largest group in which the accounts of the Bank are consolidated is that headed by HSBC Holdings plc. The consolidated accounts of HSBC Holdings plc are available to the public on the HSBC Group's website at www.hsbc.com or may be obtained from 8 Canada Square, London E14 5HQ, United Kingdom.

39 Events after the balance sheet date

The following recently announced acquisitions form part of our strategy to grow our insurance business, helping to deliver on our strategic priority to become a market leader in Asian wealth management.

- On 11 February 2022, following the completion of all regulatory approvals, HSBC Insurance (Asia-Pacific) Holdings Ltd, a wholly-owned subsidiary of the group, acquired 100% of the issued share capital of AXA Insurance Pte Limited for HK\$4.1bn, subject to adjustment for closing items. This will be reflected in our 2022 results by which time determination of the initial acquisition accounting will have been completed.
- On 30 December 2021, HSBC Insurance (Asia) Limited, a wholly-owned subsidiary of the group, received approval from the China Banking and Insurance Regulatory Commission to acquire the remaining 50% equity interest in HSBC Life Insurance Company Limited (HSBC Life China). Completion is expected to occur during the first half of 2022. Headquartered in Shanghai, HSBC Life China offers a comprehensive range of insurance solutions covering annuity, whole life, critical illness and unit-linked insurance products and in 2021 reported gross written premiums of approximately HK\$3.0bn (2020: HK\$2.2bn).
- On 28 January 2022, HSBC Insurance (Asia-Pacific) Holdings Limited notified the shareholders of Canara HSBC Oriental Bank of Commerce Life Insurance Company Limited ('CHOICE') of its intention to increase its shareholding in CHOICE up to 49%. The group currently has a 26% shareholding which is accounted for as an associate. Any increase in shareholding is subject to agreement with other shareholders in CHOICE, as well as internal and regulatory approvals. Established in 2008, CHOICE is a life insurance company based in India with reported gross written premiums of approximately HK\$5.4bn for the year to 31 March 2021 (31 March 2020: HK\$4.1bn).

40 Approval of financial statements

The Consolidated Financial Statements were approved and authorised for issue by the Board of Directors on 22 February 2022.

Financial Review

Results for 2021

(Unaudited)

Profit before tax for 2021 reported by The Hongkong and Shanghai Banking Corporation Limited ('the Bank') and its subsidiaries (together 'the group') decreased by HK\$3,633m, or 4%, to HK\$86,563m.

Consolidated income statement and balance sheet data by reportable segments

(Audited)

	Wealth and Personal Banking ¹	Commercial Banking ¹	Global Banking ^{1,2}	Markets and Securities Services ²	Corporate Centre ³	Other (GBM-other) ²	Total
	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
Year ended 31 Dec 2021							
Net interest income	50,632	29,106	15,070	3,497	(2,640)	2,448	98,113
Net fee income/(expense)	23,827	9,828	5,746	5,730	243	(78)	45,296
Net income from financial instruments measured at fair value through profit or loss	22,195	3,551	39	19,363	214	513	45,875
Gains less losses from financial investments	956	368	–	–	–	343	1,667
Net insurance premium income/(expense)	58,645	3,499	–	–	(422)	–	61,722
Other operating income	202	39	237	1,113	599	(157)	2,033
Total operating income	156,457	46,391	21,092	29,703	(2,006)	3,069	254,706
Net insurance claims and benefits paid and movement in liabilities to policyholders	(72,658)	(3,743)	–	–	353	–	(76,048)
Net operating income before change in expected credit losses and other credit impairment charges	83,799	42,648	21,092	29,703	(1,653)	3,069	178,658
– of which: external	80,570	43,398	20,539	29,644	(2,284)	6,791	178,658
inter-segment	3,229	(750)	553	59	631	(3,722)	–
Change in expected credit losses and other credit impairment charges	(1,224)	(3,295)	(2,013)	(10)	(6)	9	(6,539)
Net operating income	82,575	39,353	19,079	29,693	(1,659)	3,078	172,119
Operating expenses	(49,429)	(20,839)	(10,152)	(14,629)	(7,332)	(2,495)	(104,876)
Operating profit	33,146	18,514	8,927	15,064	(8,991)	583	67,243
Share of profit in associates and joint ventures	137	–	–	–	19,183	–	19,320
Profit before tax	33,283	18,514	8,927	15,064	10,192	583	86,563
Balance sheet data at 31 Dec 2021							
Loans and advances to customers (net)	1,544,449	1,315,961	927,542	49,887	1,540	1,560	3,840,939
Customer accounts	3,407,789	1,659,464	891,994	211,621	28	6,286	6,177,182
Year ended 31 Dec 2020							
Net interest income	59,783	34,192	16,993	3,389	(5,357)	2,513	111,513
Net fee income/(expense)	22,174	9,002	5,382	4,973	162	(23)	41,670
Net income from financial instruments measured at fair value through profit or loss	18,927	2,985	(140)	20,544	2,067	884	45,267
Gains less losses from financial investments	772	450	–	–	(15)	417	1,624
Net insurance premium income/(expense)	58,261	3,627	–	–	(325)	–	61,563
Other operating income	5,056	66	303	1,250	(372)	(691)	5,612
Total operating income	164,973	50,322	22,538	30,156	(3,840)	3,100	267,249
Net insurance claims and benefits paid and movement in liabilities to policyholders	(74,394)	(3,700)	–	–	183	–	(77,911)
Net operating income before change in expected credit losses and other credit impairment charges	90,579	46,622	22,538	30,156	(3,657)	3,100	189,338
– of which: external	77,669	49,975	25,868	33,633	(4,711)	6,904	189,338
inter-segment	12,910	(3,353)	(3,330)	(3,477)	1,054	(3,804)	–
Change in expected credit losses and other credit impairment charges	(4,441)	(12,145)	(1,089)	(16)	(5)	(23)	(17,719)
Net operating income	86,138	34,477	21,449	30,140	(3,662)	3,077	171,619
Operating expenses	(47,292)	(19,391)	(9,261)	(12,317)	(5,132)	(2,435)	(95,828)
Operating profit	38,846	15,086	12,188	17,823	(8,794)	642	75,791
Share of profit in associates and joint ventures	6	–	–	–	14,399	–	14,405
Profit before tax	38,852	15,086	12,188	17,823	5,605	642	90,196
Balance sheet data at 31 Dec 2020							
Loans and advances to customers (net)	1,463,558	1,206,857	966,765	24,998	3,402	3,101	3,668,681
Customer accounts	3,333,360	1,472,646	899,564	204,431	449	946	5,911,396

1 In 2021, the cards acquiring business has been transferred from Commercial Banking ('CMB') and Global Banking ('GB') to Wealth and Personal Banking ('WPB') to align with the business model. Comparatives have been re-presented to conform to the current year's presentation.

2 In the second half of 2021, the reportable segments have been changed to reflect the change in the management of the Global Banking and Markets ('GBM') business, with the splitting out of GB and Markets and Securities Services ('MSS') as separate reportable segments, whilst GBM-Other (previously reported within GBM) is now reported under 'Other (GBM-other)'. Comparatives have been re-presented to conform to the current year's presentation. Further details on the change in reportable segments are set out in Note 31 'Segmental analysis' in the Annual Report and Accounts 2021.

3 Includes inter-segment elimination.

EXHIBIT B

RISK MANAGEMENT SYSTEM

The information in this Exhibit B describes the risk management system of the Issuer and references herein to the “**HSBC Group**” or the “**group**” are to the Issuer and its subsidiaries.

The information in this Exhibit B has been extracted from the Annual Report and Accounts 2021 of the Issuer. Reference to page numbers (i.e. the pages numbers which appear on the bottom of the pages) in this Exhibit B are to pages of the Annual Report and Accounts 2021. The extracts set out in this Exhibit B are not complete and reference should be made to the Annual Report and Accounts 2021 which is available on the website of the HKEX at www.hkexnews.hk and our website which is presently at <https://www.warrants.hsbc.com.hk/en/warrant/latest-document-and-notice>.

Risk

Our approach to risk

(Unaudited)

Our risk appetite

We recognise the importance of a strong culture, which refers to our shared attitudes, values and standards that shape behaviours related to risk awareness, risk taking and risk management. All our people are responsible for the management of risk, with the ultimate accountability residing with the Board.

We seek to build our business for the long term by balancing social, environmental and economic considerations in the decisions we make. Our strategic priorities are underpinned by our endeavour to operate in a sustainable way. This helps us to carry out our social responsibility and manage the risk profile of the business. We are committed to managing and mitigating climate-related risks, both physical and transition, and continue to incorporate consideration of these into how we manage and oversee risks internally and with our customers.

The following principles guide the group's overarching appetite for risk and determine how our businesses and risks are managed.

Financial position

- We aim to maintain a strong capital position, defined by regulatory and internal capital ratios.
- We carry out liquidity and funding management for each operating entity, on a stand-alone basis.

Operating model

- We seek to generate returns in line with our risk appetite and strong risk management capability.
- We aim to deliver sustainable and diversified earnings and consistent returns for shareholders.

Business practice

- We have zero tolerance for any of our people knowingly engaging in any business, activity or association where foreseeable reputational risk or damage has not been considered and/or mitigated.
- We have no appetite for deliberately or knowingly causing detriment to consumers, or incurring a breach of the letter or spirit of regulatory requirements.
- We have no appetite for inappropriate market conduct by any member of staff or by any group business.
- We are committed to managing the climate risks that have an impact on our financial position, and delivering on our net zero ambition.

Enterprise-wide application

Our risk appetite encapsulates the consideration of financial and non-financial risks. We define financial risk as the risk of a financial loss as a result of business activities. We actively take these types of risks to maximise shareholder value and profits. Non-financial risk is the risk to achieving our strategy or objectives as the result of failed internal processes, people and systems or from external events.

Our risk appetite is expressed in both quantitative and qualitative terms and applied at the global business level and to material operating entities. It continues to evolve and expand its scope as part of our regular review process.

The Board reviews and approves the group's risk appetite twice a year to make sure it remains fit for purpose. The group's risk appetite is considered, developed and enhanced through:

- an alignment with our strategy, purpose, values and customer needs;
- trends highlighted in other group risk reports;

- communication with risk stewards on the developing risk landscape;
- strength of our capital, liquidity and balance sheet;
- compliance with applicable laws and regulations;
- effectiveness of the applicable control environment to mitigate risk, informed by risk ratings from risk control assessments;
- functionality, capacity and resilience of available systems to manage risk; and
- the level of available staff with the required competencies to manage risks.

We formally articulate our risk appetite through our risk appetite statement ('RAS'), which is approved by the Board on the recommendation of the group Risk Committee ('RC'). Setting out our risk appetite ensures that we agree a suitable level of risk for our strategy. In this way, risk appetite informs our financial planning process and helps senior management to allocate capital to business activities, services and products.

The RAS consists of qualitative statements and quantitative metrics, covering financial and non-financial risks. It is applied to the development of business line strategies, strategic and business planning, and remuneration. At a group level, performance against the RAS is reported to the group Risk Management Meeting ('RMM') alongside key risk indicators to support targeted insight and discussion on breaches of risk appetite and associated mitigating actions. This reporting allows risks to be promptly identified and mitigated, and informs risk-adjusted remuneration to drive a strong risk culture.

Most global businesses and strategically important entities are required to have their own RAS, which is monitored to help ensure it remains aligned with the group's RAS. Each RAS and business activity is guided and underpinned by qualitative principles and/or quantitative metrics.

Risk management

We recognise that the primary role of risk management is to protect our customers, business, colleagues, shareholders and the communities that we serve, while ensuring we are able to support our strategy and provide sustainable growth. This is supported through our three lines of defence model described on page 16.

The implementation of our business strategy, which include a major transformation programme, remains a key focus. As we implement change initiatives, we actively manage the execution risks. We also perform periodic risk assessments, including against strategies to help ensure retention of key personnel for our continued safe operation.

We aim to use a comprehensive risk management approach across the organisation and across all risk types, underpinned by the group's culture and values. This is outlined in our risk management framework, including the key principles, policies and practices that we employ in managing material risks, both financial and non-financial.

The framework fosters continual monitoring, promotes risk awareness and encourages a sound operational and strategic decision making and escalation process. It also supports a consistent approach to identifying, assessing, managing and reporting the risks we accept and incur in our activities, with clear accountabilities. We continue to actively review and develop our risk management framework and enhance our approach to managing risk, through our activities with regard to: people and capabilities; governance; reporting and management information; credit risk management models; and data.

Our risk management framework

The following diagram and descriptions summarise key aspects of the risk management framework, including governance, structure, risk management tools and our culture, which together help align employee behaviour with risk appetite.

Key components of our risk management framework

HSBC Values and risk culture		
Risk governance	Non-executive risk governance	The Board approves the group's risk appetite, plans and performance targets. It sets the 'tone from the top' and is advised by the group's Risk Committee.
	Executive risk governance	Our executive risk governance structure is responsible for the enterprise-wide management of all risks, including key policies and frameworks for the management of risk within the group.
Roles and responsibilities	Three lines of defence model	Our 'three lines of defence' model defines roles and responsibilities for risk management. An independent Risk function helps ensure the necessary balance in risk/return decisions.
Processes and tools	Risk appetite	The group has processes in place to identify/assess, monitor, manage and report risks to help ensure we remain within our risk appetite.
	Enterprise-wide risk management tools	
	Active risk management: identification/assessment, monitoring, management and reporting	
Internal controls	Policies and procedures	Policies and procedures define the minimum requirements for the controls required to manage our risks.
	Control activities	Operational and resilience risk management defines minimum standards and processes for managing operational risks and internal controls.
	Systems and infrastructure	The group has systems and/or processes that support the identification, capture and exchange of information to support risk management activities.

Risk governance

The Board has ultimate responsibility for the effective management of risk and approves our risk appetite. It is advised on risk-related matters by the RC.

The group's Chief Risk Officer, supported by the RMM, holds executive accountability for the ongoing monitoring, assessment and management of the risk environment and the effectiveness of the risk management framework.

The management of regulatory compliance risk and financial crime risk resides with the group's Chief Compliance Officer. Oversight is maintained by the group's Chief Risk Officer, in line with his enterprise risk oversight responsibilities, through the RMM.

Day-to-day responsibility for risk management is delegated to senior managers with individual accountability for decision making. All our people have a role to play in risk management. These roles are defined using the three lines of defence model, which takes into account the group's business and functional structures as described in the following commentary, 'Our responsibilities'.

We use a defined executive risk governance structure to help ensure there is appropriate oversight and accountability of risk, which facilitates reporting and escalation to the RMM. This structure is summarised in the following table.

Governance structure for the management of risk

Authority	Membership	Responsibilities include:
Risk Management Meeting of the group	group Chief Risk Officer group General Counsel group Co-Chief Executives group Chief Financial Officer group heads of global business and global functions	<ul style="list-style-type: none"> Supporting the group Chief Risk Officer in exercising Board-delegated risk management authority. Overseeing the implementation of risk appetite and the risk management framework. Forward-looking assessment of the risk environment, analysing possible risk impacts and taking appropriate action. Monitoring all categories of risk and determining appropriate mitigating action. Promoting a supportive group culture in relation to risk management and conduct.
Global business/Site risk management meetings	Global business/Site Chief Risk Officer Global business/Site Chief Executive Global business/Site Chief Financial Officer Global business/Site heads of global functions	<ul style="list-style-type: none"> Supporting the Chief Risk Officer in exercising Board-delegated risk management authority. Forward-looking assessment of the risk environment, analysing the possible risk impact and taking appropriate action. Implementation of risk appetite and the risk management framework. Monitoring all categories of risk and determining appropriate mitigating actions. Embedding a supportive culture in relation to risk management and controls.

The Board committees with responsibility for oversight of risk-related matters are set out on page 6.

Risk

Our responsibilities

All our people are responsible for identifying and managing risk within the scope of their roles. Roles are defined using the three lines of defence model, which takes into account our business and functional structures as described below.

Three lines of defence

To create a robust control environment to manage risks, we use an activity-based three lines of defence model. This model delineates management accountabilities and responsibilities for risk management and the control environment.

The model underpins our approach to risk management by clarifying responsibility and encouraging collaboration, as well as enabling efficient coordination of risk and control activities.

The three lines of defence are summarised below:

- The first line of defence owns the risks and is responsible for identifying, recording, reporting and managing them in line with risk appetite, and ensuring that the right controls and assessments are in place to mitigate them.
- The second line of defence challenges the first line of defence on effective risk management, and provides advice and guidance in relation to the risk.
- The third line of defence is our Global Internal Audit function, which provides independent assurance that our risk management approach and processes are designed and operating effectively.

Risk function

The group's Risk function, headed by the group's Chief Risk Officer, is responsible for the group's risk management framework. This responsibility includes establishing and monitoring of risk profiles, and identifying and managing forward-looking risk. The group's Risk function is made up of sub-functions covering all risks to our business. Forming part of the second line of defence, the group's Risk function is independent from the global businesses, including sales and trading functions, to provide challenge, appropriate oversight and balance in risk/return decisions.

Responsibility for minimising both financial and non-financial risk lies with our people. They are required to manage the risks of the business and operational activities for which they are responsible. We maintain adequate oversight of our risks through our various specialist risk stewards as well as the collective accountability held by our Chief Risk Officers at sites and global businesses.

We have continued to strengthen the control environment and our approach to the management of non-financial risk, as broadly set out in our risk management framework. The management of non-financial risk focuses on governance and risk appetite, and provides a single view of the non-financial risks that matter the most and the associated controls. It incorporates a risk management system designed to enable the active management of non-financial risk. Our ongoing focus is on simplifying our approach to non-financial risk management, while driving more effective oversight and better end-to-end identification and management of non-financial risks. This is overseen by the Operational and Resilience Risk function, headed by the group Head of Operational and Resilience Risk.

Stress testing and recovery planning

The group operates a wide-ranging stress testing programme that is a key part of our risk management and capital and liquidity planning. Stress testing provides management with key insights into the impact of severely adverse events on the group, and provides confidence to regulators on the group's financial stability.

Our stress testing programme assesses our capital and liquidity strength through a rigorous examination of our resilience to external shocks. As well as undertaking regulatory-driven stress tests, we conduct our own internal stress tests, in order to understand the nature and level of all material risks, quantify the impact of such risks and develop plausible business-as-usual mitigating actions.

Many of our regulators – including the Hong Kong Monetary Authority ('HKMA') – use stress testing as a prudential regulatory tool, and the group has focused significant governance and resources to meet their requirements.

Internal stress tests

Our internal capital assessment uses a range of stress scenarios that explore risks identified by management. They include potential adverse macroeconomic, geopolitical and operational risk events, as well as other potential events that are specific to the group.

The selection of stress scenarios is based upon the output of our identified top and emerging risks and our risk appetite. Stress testing analysis helps management understand the nature and extent of vulnerabilities to which the group is exposed. Using this information, management decides whether risks can or should be mitigated through management actions or, if they were to crystallise, be absorbed through capital and liquidity. This in turn informs decisions about preferred capital and liquidity levels and allocations.

In addition to the group-wide stress testing scenarios, each major subsidiary and branch conducts regular macroeconomic and event-driven scenario analyses specific to its region. They also participate, as required, in the regulatory stress testing programmes of the jurisdictions in which they operate, and the stress tests of the HKMA. Global functions and businesses also perform bespoke stress testing to inform their assessment of risks to potential scenarios.

We also conduct reverse stress tests each year at a group level and, where required, at subsidiary entity level to understand potential extreme conditions that would make our business model non-viable. Reverse stress testing identifies potential stresses and vulnerabilities we might face, and helps inform early warning triggers, management actions and contingency plans designed to mitigate risks.

The group stress testing programme is overseen by the RC and results are reported, where appropriate, to the RMM and RC.

Recovery and resolution plans

Recovery and resolution plans form part of the integral framework safeguarding the group's financial stability. The group's recovery plan, together with stress testing, helps us understand the likely outcomes of adverse business or economic conditions and in the identification of mitigating actions.

Key developments in 2021

In 2021, it was announced that Mark McKeown was retiring from his role of the group's Chief Risk Officer in late October 2021. Martin Haythorne, who was the Global Head of Wholesale Credit and Lending, has been appointed as the group's Chief Risk Officer with effect from 2 August 2021.

We continued to actively manage the risks resulting from the Covid-19 pandemic and its impacts on our customers and operations during 2021, as well as other key risks described in this section.

In addition, we enhanced our risk management in the following areas:

- We streamlined the articulation of our risk appetite framework, providing further clarity on how risk appetite interacts with strategic planning and recovery planning processes.
- We continued to simplify our approach to non-financial risk management, with the implementation of more effective oversight tools and techniques to improve end-to-end identification and management of these risks.
- We accelerated the transformation of our approach to managing financial risks across the businesses and risk functions, including initiatives to enhance portfolio monitoring and analytics, credit risk management, traded risk management, treasury risk management and models used to manage financial risks.
- We are progressing with a comprehensive regulatory reporting programme to strengthen our global processes, improve consistency, and enhance controls.
- We launched an enhanced approach to Conduct for all colleagues, businesses and geographies, establishing the outcomes to be achieved for customers and markets in all risk disciplines, operations and technologies and integrating it into our approach to culture and our risk management arrangements.
- We continued to enhance our approach to portfolio risk management, through clearly defined roles and responsibilities, and improving our data and management information reporting capabilities.
- We established a dedicated Climate Risk Oversight Forum to oversee our approach to climate risk. Globally, the Group has appointed a Group Head of Climate Risk in support of our climate change strategy and to oversee the development of our climate risk management capabilities. We leveraged on the Group climate risk programme, which continues to drive the delivery of our enhanced climate risk management approach.
- We continued to improve the effectiveness of our financial crime controls with a targeted update of our fraud controls. We refreshed our financial crime policies, ensuring they remained up-to-date and addressed changing and emerging risks, and we continued to meet our regulatory obligations.

Top and emerging risks

(Unaudited)

We use a top and emerging risks process to provide a forward-looking view of issues with the potential to threaten the execution of our strategy or operations over the medium to long term.

We proactively assess the internal and external risk environment, as well as review the themes identified across our region and global businesses, for any risks that may require global escalation, updating our top and emerging risks as necessary.

Our current top and emerging risks are as follows:

Externally driven

Geopolitical and macroeconomic risks

(Unaudited)

Our operations and portfolios are exposed to risks associated with political instability, civil unrest and military conflict, which could lead to disruption of our operations, physical risk to our staff and/or physical damage to our assets.

Global tensions over trade, technology and ideology are manifesting themselves in divergent regulatory standards and compliance regimes, presenting long-term strategic challenges for multinational businesses.

The Covid-19 pandemic brought supply chain issues into focus, with shortages appearing across several regions and products throughout 2020 and 2021, and it is not expected that these issues will ease significantly before mid-2022.

The pandemic has also heightened geopolitical tensions, which could have implications for the group and its customers.

The group will increasingly need to consider potential regulatory, reputational and market risks arising from the evolving geopolitical landscape. In 2021, there was an escalation of tensions between China and the US, and increasingly extending to the UK, the EU, India and other countries.

The US-China relationship in particular remains complex, with divisions over a number of critical issues. The US, the UK, the EU, Canada and other countries have imposed various sanctions and trade restrictions on Chinese persons and companies, and the US continues to develop its approach to perceived strategic competition with China.

Certain US measures are particularly relevant. The US Hong Kong Autonomy Act authorises secondary sanctions against non-US financial institutions found to be knowingly conduct significant transactions with individuals and entities that are determined by the US to have undermined Hong Kong's autonomy. In addition, the US has imposed restrictions on US persons' ability to buy or sell certain publicly traded securities of certain Chinese companies linked to China's defence and related material or surveillance sectors.

There are also increasing discussions between the US and other governments on multilateral efforts to address certain issues with China, which are likely to create a more complex operating environment for the group and its customers. Notably, with its traditional allies including the EU, UK, and Canada, the US has increasingly instituted sanctions in response to allegations of human rights abuses in Xinjiang.

China in turn has announced a number of its own sanctions and trade restrictions that target foreign individuals and companies. These have been imposed mainly against certain public officials associated with the implementation of foreign sanctions against China. China has promulgated new laws that provide a legal framework for imposing further sanctions and export restrictions, including a law prohibiting the implementation of, or compliance with, foreign sanctions against China and which also creates a private right of action in the Chinese courts for damages caused by third parties implementing foreign sanctions or other discriminatory measures. These and any future measures and countermeasures that may be taken by the US, China and other countries may affect the group, its customers, and the markets in which we operate.

As the geopolitical landscape evolves, compliance by multinational corporations with their legal or regulatory obligations in one jurisdiction may be seen as supporting the law or policy objectives of that jurisdiction over another, creating additional compliance, reputational and political risks for the group. We maintain an open dialogue with our regulators on the impact of legal and regulatory obligations on our business and customers.

Risk

Expanding data privacy and cybersecurity laws in a number of markets could pose potential challenges to intra-group data sharing. These developments could increase financial institutions' compliance burdens in respect of cross-border transfers of personal information.

Monetary and fiscal policies in developed markets will likely remain broadly accommodative for some time owing to uncertainty over the economic outlook. However, rising global inflation – partly on the back of higher energy prices – is putting pressure on central banks to tighten monetary policy. The US Federal Reserve Board began tapering its asset purchases from November 2021 and financial markets currently expect it to raise the Federal Funds rate over the next year. The European Central Bank is on course to end its extraordinary asset purchase programme in March 2022.

Persistent supply issues or further increases in energy prices – for instance as a result of escalation in the Russia-Ukraine crisis – could keep inflation high and force central banks to tighten monetary policies faster than currently envisaged. Conversely, monetary policy tightening may be constrained by the emergence and spread of new Covid-19 variants that dampen economic recovery. We continue to monitor our risk profile closely in the context of uncertainty over monetary policies.

Market concerns remain about repercussions for the Chinese domestic economy from the recent instability in the commercial real estate sector. Such repercussions may occur directly through financial exposures to the Chinese commercial real estate sector, or indirectly through the effect of a slowdown in economic activity in China and in the supply chain to the real estate sector. While at 31 December 2021 we had no direct credit exposure to developers classified as falling within the 'red' category of the 'three red lines' framework used by the Chinese government in its governance of the real estate sector, deteriorating operating performance and challenging liquidity conditions were more broadly seen across the sector. We continue to monitor the situation closely, including potential indirect impacts, and seek to take mitigating actions as required.

The global economic recovery in 2021 eased financial difficulties for some of our customers, which contributed to a reduction in ECL charges.

For further details on customer relief programmes, see pages 46 to 47.

Mitigating actions

- We closely monitor geopolitical and economic developments in key markets and sectors and undertake scenario analysis where appropriate. This helps us to take portfolio actions where necessary, including enhanced monitoring, amending our risk appetite and/or reducing limits and exposures.
- We stress test portfolios of particular concern to identify sensitivity to loss under a range of scenarios, with management actions to rebalance exposures and manage risk appetite where necessary.
- We regularly review key portfolios to help ensure that individual customer or portfolio risks are understood and our ability to manage the level of facilities offered through any downturn is appropriate.
- We have taken steps to enhance physical security in those geographical areas deemed to be at high risk from terrorism and military conflicts.

Environmental, social and governance risk

(Unaudited)

We are subject to financial and non-financial risks associated with environmental, social and governance ('ESG') risk. Our main ESG risks are climate risk, nature-related risks and human rights risks. These can impact us both directly and indirectly through our customers.

Climate-related risk increased over 2021, owing to the pace and volume of policy and regulatory changes globally particularly on climate risk management, stress testing and scenario analysis and disclosures. If we fail to meet evolving regulatory expectations or requirements on climate risk management, this could have regulatory compliance and reputational impacts for the group.

We face increased reputational, legal and regulatory risks as we make progress towards our net zero ambition, with stakeholders likely to place a greater focus on our actions such as the development of climate-related policies, our disclosures and investment decisions relating to our ambition. To track and report on progress towards achieving our ambition, we rely on internal and external data, guided by certain industry standards. While emissions reporting has improved over time, data remain of limited quality and consistency. Methodologies we have used may develop over time in line with market practice and regulation as well as owing to developments in climate science. Any developments in data and methodologies could result in revisions, meaning that reported figures may not be reconcilable or comparable year-on-year. We may also have to re-evaluate our progress towards our climate-related targets in future and this could result in reputational, legal and regulatory risks.

Climate risk will also have an impact on model risk, as models play an important role in risk management and the financial reporting of climate-related risks. The uncertain impacts of climate change and data limitations, present challenges to creating reliable and accurate model outputs.

We could also face increased resilience, retail credit and wholesale credit risks owing to the increase in frequency and severity of weather events and chronic shifts in weather patterns. These risks could impact our own critical operations resulting in customer detriment and operational losses for HSBC. Our customers' operations and assets could also be affected, reducing their ability to afford mortgage or loan repayments, leading to credit risk impacts for the group.

There is increasing evidence that a number of nature-related risks beyond climate change - which include risks that can be represented more broadly by the economic dependency on nature – can and will have significant economic impact. These risks arise when the provision of natural services – such as water availability, air quality, and soil quality – is compromised by overpopulation, urban development, natural habitat and ecosystem loss, and other environmental stresses beyond climate change. They can show themselves in various ways, including through macroeconomic, market, credit, reputational, legal and regulatory risks, for both HSBC and its customers. In 2021, we added nature-related risks as a new emerging risk driver, under the umbrella theme of ESG Risks and continue to engage with investors, regulators and customers on nature-related risks to evolve our approach and understand best practice risk mitigation.

Regulation and disclosure requirements in relation to human rights, and to Modern Slavery in particular, are increasing. Businesses are expected to explain more about their efforts to identify and respond to the risk of negative human rights impacts arising from the actions of their employees, suppliers, customers and those in whom they invest.

Mitigating actions

- We continue to deepen our understanding of the drivers of climate risk as well as manage our exposure. We have established a dedicated Climate Risk Oversight Forum for overseeing our approach and providing support in managing climate risk.
- Our climate risk programme continues to accelerate the development of our climate risk management capabilities across four key pillars – governance and risk appetite, risk management, stress testing and scenario analysis, and disclosures. We are also enhancing our approach to greenwashing risk.
- In December 2021, the Group published our Thermal Coal Phase-Out Policy committing to phase out the financing of coal-fired power and thermal coal mining in EU/OECD markets by end 2030, and globally by end 2040. The policy helps us chart the path to net zero and is a component of our approach towards managing the climate risk of our lending portfolio.
- We have started to incorporate the outcomes and insights from the Bank of England's Climate Biennial Exploratory Scenario and HKMA Climate Risk Stress Test into climate risk management.
- We are undertaking training and adding additional roles with specialist skills to manage climate-related risks.
- We have delivered climate risk training to our legal entity boards and wider target audiences.
- With the help of external stakeholders, we continued to review and improve our approach to human rights issues, following the UN Guiding Principles on Business and Human Rights.
- In 2021, the Group joined several industry working groups dedicated to helping us assess and manage nature-related risks, such as the Taskforce on Nature-Related Financial Disclosure ('TNFD'). The Group's asset management business also published its biodiversity policy to publicly explain how our analysts address nature-related issues.
- We continue to engage with our customers, investors and regulators proactively on the management of ESG risks. The Group also engages with initiatives, including the Climate Financial Risk Forum, Equator Principles, Taskforce on Climate-related Financial Disclosures and CDP (formerly the Carbon Disclosure Project) to drive best practice for climate risk management.

Ibor transition

(Unaudited)

Interbank offered rates ('Ibors') have historically been used extensively to set interest rates on different types of financial transactions and for valuation purposes, risk measurement and performance benchmarking.

Following the UK's Financial Conduct Authority ('FCA') announcement in July 2017 that it would no longer continue to persuade or require panel banks to submit rates for the London interbank offered rate ('Libor') after 2021, we have been actively working to transition legacy contracts from Ibors and meet client needs for products linked to new near risk-free replacement rates ('RFRs') or alternative reference rates. In March 2021, in accordance with the 2017 FCA announcement, ICE Benchmark Administration Limited ('IBA') announced that it would cease publication of 26 of the 35 main Libor currency interest rate benchmark settings from the end of 2021, but that the most widely used US dollar Libor settings would cease from 30 June 2023. As a result, our focus during 2021 was on the transition of legacy contracts referencing the Euro Overnight Index average ('Eonia') and the Libor settings that demised from the end of 2021.

During 2021, we continued the development of IT and RFR product capabilities, implemented supporting operational processes, and engaged with our clients to discuss options for the transition of their legacy contracts. The successful implementation of new processes and controls, as well as the transition of contracts away from Ibors, reduced the heightened financial and

non-financial risks to which we were exposed. However, while all but exceptional new Libor contract issuance ceased during 2021, and from the end of 2021 for US dollar, we remain exposed to risks, including from a small population of so-called 'tough legacy' contracts, which reference Ibors that demised from the end of 2021, and have not been able to be transitioned to a new rate or do not have clear fallback language in place, and from legacy contracts that reference US dollar Libor and other regional rates demising at later dates ('demising regional rates'), which are expected to demise from June 2023.

Financial risks have been largely mitigated as a result of the implementation of model and pricing changes. However, differences in US dollar Libor and its replacement RFR, Secured Overnight Funding Rate ('SOFR'), create a basis risk in the trading book and banking book due to the asymmetric adoption of SOFR across assets, liabilities and products that we need to actively manage through appropriate financial hedging. Such basis risk is also created for other demising regional rates. Additionally, the comparatively limited use of SOFR in financial markets to date could result in insufficient liquidity to transition legacy US dollar contracts during 2022. This could potentially delay transition of some US dollar contracts into 2023, compressing the amount of time for transition, which could lead to heightened operational and conduct related risks as a result.

Additional non-financial risks, including financial reporting risks relating to potential mis-statements due to the complexity in applying accounting reliefs relating to amendments of legacy contracts and legal risk continue to exist.

These risks are present in different degrees across our product offering.

Transition legacy contracts

During 2021, we either successfully transitioned or confirmed appropriate fallback for over 99% of legacy Ibor contracts in sterling, Swiss franc, euro and Japanese yen Libor interest rates, as well as Eonia, with only a very small proportion of 'tough legacy' contracts remaining. Our approach to transition 'tough legacy' and US dollar Libor and other demising regional rates legacy contracts will differ by product and business area, but will be based on the lessons learned from the successful transition of contracts during 2021. We will continue to communicate with our clients and investors in a structured manner and be client led in the timing and nature of the transition.

For derivatives, all of our sterling, Swiss franc, euro and Japanese yen Libor interest rate exposure at year-end has rates determined by fallback mechanisms, or had no further such rate fixings post year end. We anticipate our US dollar Libor and demising regional rates exposures will continue to reduce through 2022 as a result of contract maturities, active transition and the cessation of new US dollar Libor issuance and that of demising regional rates. We will continue to look to actively reduce our US dollar and demising regional rates exposures by transitioning trades ahead of the demise date of 30 June 2023, by working with our clients to determine their needs and alternative approaches. Additionally, we are working with market participants, including clearing houses, to ensure we are able to transition contracts as the US dollar Libor and demising regional rates cessation dates approach.

For our loan book, over 90% of our reported exposure at the end of 2021 relates to sterling, Swiss franc, euro and Japanese yen Libor interest rate contracts that required no further client negotiation. The remaining exposure relates to a small number of 'tough legacy' contracts where discussions with our clients and other market participants, for syndicated transactions, have continued in early 2022, and this has led to further transitions being completed. Contracts that are unable to transition prior to their first interest payment date in 2022 are expected to use an alternative rate determined by the contractual language and governing law. For the remaining demising Ibors, notably US dollar Libor and demising regional rates, we have implemented new products and processes and updated our systems in readiness for transition. Global Banking, Commercial Banking and Global Private Banking have begun to engage with clients who

Risk

have upcoming contract maturities with a view to refinancing using an appropriate replacement rate. Further communications and outreach to customers with US dollar Libor and demising regional rates contracts with later maturities will occur in due course.

For the group's non-derivative financial liabilities at 31 December 2021, there were three Japanese Yen Total Loss Absorbing Capacity ('TLAC') instruments at fixed to floating rate where the JPY Libor benchmark will be used to reset the coupon rate if the bank chooses not to redeem these instruments on the respective call date, or dates, for each series. The interest rate for these instruments is currently at fixed rate and the earliest call date before the coupon rate reset among these instruments is in September 2023.

We remain mindful of the various factors that impact on Ibor remediation strategy for our regulatory capital and TLAC instruments, including – but not limited to – timescales for cessation of relevant Ibor rates, constraints relating to the governing law of outstanding instruments, and the potential relevance of legislative solutions. We remain committed in seeking to remediate or mitigate relevant risks relating to Ibor-demise, as appropriate, on our outstanding regulatory capital and TLAC instruments before the relevant calculation, which may occur post-cessation of the relevant Ibor rate or rates.

Where we hold bonds issued by other institutions, we have remained dependent on the issuer's agents to engage in the transition process, although analysis will be undertaken of the issuers in US dollar Libor and other demising regional rate bonds to reduce our exposure, as occurred through 2021.

The completion of an orderly transition from the remaining Ibors, notably US dollar Libor and other demising regional rates, continues to be our programme's key objective through 2022 and 2023, with the aim of putting systems and processes in place to help achieve this.

(Audited)

At 31 Dec 2021

	USD Libor HK\$m	Japanese Yen Libor HK\$m	Sibor HK\$m	GBP Libor HK\$m	Others ¹ HK\$m
Non-derivative financial assets²	206,508	2,846	56,291	22,197	4,779
Non-derivative financial liabilities	147,198	10,930	–	–	–
Derivative notional contract amount	8,547,665	798,921	–	88,218	715,439

At 31 Dec 2020

Non-derivative financial assets ²	253,239	2,688	63,100	33,797	15,724
Non-derivative financial liabilities	119,269	12,192	–	–	4,125
Derivative notional contract amount	6,252,168	3,281,539	299	82,902	1,383,582

¹ Comprises financial instruments referencing other significant benchmark rates yet to transition to alternative benchmarks (Euro Libor, Swiss Franc Libor, Eonia, SGD Swap Offer Rate ('SOR') and Thai Baht Interest Rate Fixing ('THBFIX')).

² Gross carrying amount excluding allowances for expected credit losses.

The amounts in the above table relate to the group's main operating entities¹ and provide an indication of the extent of the group's exposure to the Ibor benchmarks which are due to be replaced. Amounts are in respect of financial instruments that:

- contractually reference an interest rate benchmark that is planned to transition to an alternative benchmark;
- have a contractual maturity date beyond the date by which the reference interest rate benchmark is expected to cease; and
- are recognised on the group's consolidated balance sheet.

¹ Entities where we have material exposures impacted by Ibor reform in countries/territories comprising of Hong Kong, Singapore, Thailand, Australia and Japan.

In March 2021, the administrator of Libor, IBA, announced that the publication date of most US dollar Libor tenors is extended from 31 December 2021 to 30 June 2023. Publication of one-week and two-month tenors will cease after 31 December 2021. This change, together with the extended publication dates of Sibor, SOR and THBFIX, reduce the amounts presented at 31 December 2021 in the above table as some financial instruments included at 31 December 2020 will reach their contractual maturity date prior

Mitigating actions

- Our global Ibor transition programme, which is overseen by the Group Chief Risk and Compliance Officer, will continue to deliver IT and operational processes to meet its objectives.
- We carry out extensive training, communication and client engagement to facilitate appropriate selection of new rates and products and we have dedicated teams in place to support the transition.
- We actively transition legacy contracts and ceased new issuance of Libor and demising regional rate based contracts, in line with regulatory expectations and with associated monitoring and controls.
- We assess, monitor and dynamically manage risks arising from Ibor transition, and implement specific mitigating controls when required.
- We continue to actively engage with regulatory and industry bodies to mitigate risks relating to 'tough legacy' contracts.

Financial instruments impacted by Ibor reform

(Audited)

Amendments to HKFRSs issued in October 2020 (Interest Rate Benchmark Reform Phase 2) represents the second phase of the project on the effects of interest rate benchmark reform, addressing issues affecting financial statements when changes are made to contractual cash flows and hedging relationships as a result of reform.

Under these amendments, changes made to a financial instrument measured at other than fair value through profit or loss that are economically equivalent and required by interest rate benchmark reform, do not result in the derecognition or a change in the carrying amount of the financial instrument. Instead, they require the effective interest rate to be updated to reflect the change in the interest rate benchmark. In addition, hedge accounting will not be discontinued solely because of the replacement of the interest rate benchmark if the hedge meets other hedge accounting criteria.

Financial instruments yet to transition to alternative benchmarks, by main benchmark					
	USD Libor HK\$m	Japanese Yen Libor HK\$m	Sibor HK\$m	GBP Libor HK\$m	Others ¹ HK\$m
Non-derivative financial assets²	206,508	2,846	56,291	22,197	4,779
Non-derivative financial liabilities	147,198	10,930	–	–	–
Derivative notional contract amount	8,547,665	798,921	–	88,218	715,439

¹ Comprises financial instruments referencing other significant benchmark rates yet to transition to alternative benchmarks (Euro Libor, Swiss Franc Libor, Eonia, SGD Swap Offer Rate ('SOR') and Thai Baht Interest Rate Fixing ('THBFIX')).

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The amounts in the above table relate to the group's main operating entities¹ and provide an indication of the extent of the group's exposure to the Ibor benchmarks which are due to be replaced. Amounts are in respect of financial instruments that:

- contractually reference an interest rate benchmark that is planned to transition to an alternative benchmark;
- have a contractual maturity date beyond the date by which the reference interest rate benchmark is expected to cease; and
- are recognised on the group's consolidated balance sheet.

¹ Entities where we have material exposures impacted by Ibor reform in countries/territories comprising of Hong Kong, Singapore, Thailand, Australia and Japan.

to the extended publication dates. Comparative data have not been re-presented.

For further details on our approach to Ibor transition, see 'Top and emerging risks – Ibor transition' (unaudited) above.

Financial crime risk environment

(Unaudited)

Financial institutions remain under considerable regulatory scrutiny regarding their ability to prevent and detect financial crime. The financial crime threats we face have continued to evolve, often in tandem with broader geopolitical, socioeconomic and technological shifts in our markets, leading to challenges such as managing conflicting laws and approaches to legal and regulatory regimes.

Financial crime risk evolved during the Covid-19 pandemic, notably with the manifestation of fraud risks linked to the economic slowdown and the resulting deployment of government relief measures. The accelerated digitisation of financial services has fostered significant changes to the payments ecosystem, including a multiplicity of providers and new payment mechanisms, not all of which are subject to the same level of regulatory scrutiny or regulations as financial institutions. This is presenting increasing challenges to the industry in terms of maintaining required levels of transparency, notably where institutions serve as intermediaries. Developments around digital assets and currencies, notably the role of stablecoins and central bank digital currencies, have continued at pace, with an increasing regulatory and enforcement focus on financial crimes linked to these types of assets.

Expectations with respect to intersection of ESG issues and financial crime as our organisation, customers and suppliers transition to net zero, are increasing, not least with respect to potential 'greenwashing'. Companies also face as a heightened regulatory focus on both human rights issues and environmental crimes, from a financial crime perspective. We also continue to face increasing challenges presented by national data privacy requirements, which may affect our ability to manage financial crime risks holistically and effectively.

Mitigating actions

- We are strengthening our fraud and surveillance controls, and investing in next generation capabilities to fight financial crime through the application of advanced analytics and artificial intelligence.
- We are looking at the impact of a rapidly changing payments ecosystem to ensure our financial crime controls remain appropriate for changes in customer behaviour and gaps in regulatory coverage, including the development of procedures and controls to manage the risks associated with direct and indirect exposure to digital assets and currencies.
- We are assessing our existing policies and control framework to ensure that developments in the ESG space are considered and the risks mitigated.
- We work with jurisdictions and relevant international bodies to address data privacy challenges through international standards, guidance, and legislation to help enable effective management of financial crime risk.
- We work closely with our regulators and engage in public-private partnerships, playing an active role in shaping the industry's financial crime controls for the future, notably with respect to the enhanced, and transparent, use of technology.

Regulatory compliance risk environment including conduct

(Unaudited)

We keep abreast of the emerging regulatory compliance and conduct agenda, which currently include, but are not limited to: ESG matters; operational resilience; how digital and technology changes, including payments, are impacting financial institutions; how we are ensuring good customer outcomes, including addressing customer vulnerabilities; regulatory reporting; and employee compliance. We monitor regulatory developments closely and engage with regulators, as appropriate, to help ensure new regulatory requirements are implemented effectively and in a timely way.

Mitigating actions

- We monitor for regulatory developments to understand the evolving regulatory landscape and respond with changes in a timely way.
- We engage, wherever possible, with governments and regulators to make a positive contribution to regulations and ensure that new requirements are considered properly and can be implemented effectively.
- We hold regular meetings with relevant authorities to discuss strategic contingency plans, including those arising from geopolitical issues.
- We launched our simplified conduct approach to align to our new purpose and values, in particular the value 'we take responsibility'.

Cyber threat and unauthorised access to systems

(Unaudited)

Together with other organisations, we continue to operate in an increasingly hostile cyber threat environment, which requires ongoing investment in business and technical controls to defend against these threats.

Key threats include unauthorised access to online customer accounts, advanced malware attacks, attacks on our third-party suppliers, and security vulnerabilities being exploited.

Mitigating actions

- We continually evaluate threat levels for the most prevalent attack types and their potential outcomes. To further protect the group and our customers and help ensure the safe expansion of our global business lines, we strengthen our controls to reduce the likelihood and impact of advanced malware, data leakage, exposure through third parties and security vulnerabilities.
- We continue to enhance our cybersecurity capabilities, including Cloud security, identity and access management, metrics and data analytics, and third-party security reviews. An important part of our defence strategy is ensuring our colleagues remain aware of cybersecurity issues and know how to report incidents.
- We report and review cyber risk and control effectiveness at executive and non-executive Board level. We also report across our global businesses, functions and regions to help ensure appropriate visibility and governance of the risk and mitigating actions.
- The Group participates globally in several industry bodies and working groups to share information about tactics employed by cyber-crime groups and to collaborate in fighting, detecting and preventing cyber-attacks on financial organisations.

Digitalisation and technological advances

(Unaudited)

Developments in technology and changes in regulation are enabling new entrants to the industry. This challenges the group to continue to innovate and optimise in order to take advantage of new digital capabilities to best serve our customers.

Mitigating actions

- We continue to monitor this emerging risk, as well as the advances in technology to understand how changes may impact our customers and business.
- We closely monitor and assess impacts to financial crime and the impact on payment transparency and architecture.

Risk

Internally driven

Data management

(Unaudited)

We use a large number of systems and growing quantities of data to support our customers. Risk arises if data is incorrect, unavailable, or misused, or if the privacy of our customers and colleagues are unprotected. Along with other banks and financial institutions, we need to meet external regulatory obligations and laws that cover data, such as the Basel Committee on Banking Supervision's guidelines 239 'Principles for effective risk data aggregation and risk reporting' and the General Data Protection Regulation ('GDPR').

Mitigating actions

- Through our global data management framework, we monitor proactively the quality, availability and security of data that supports our customers and internal processes. We resolve any identified data issues in a timely manner.
- We have made improvements to our data policies and are implementing an updated control framework to enhance the end-to-end management of data risk by our global businesses, global functions and markets.
- We protect customer data via our data privacy framework, which establishes practices, design principles and guidelines that enable us to demonstrate compliance with data privacy laws and regulations.
- We continue to modernise our data and analytics infrastructure through investments in Cloud technology, data visualisation, machine learning and artificial intelligence.
- We delivered global mandatory training on the importance of protecting data and managing data appropriately.

IT systems infrastructure and resilience

(Unaudited)

We operate an extensive technology landscape, which must remain resilient in order to support customers, the organisation and markets globally. Technology risks arise where technology is not understood, maintained and development of technology is not controlled.

Mitigating actions

- We continue to invest in transforming how software solutions are developed, delivered and maintained. We concentrate on improving system resilience and service continuity testing. We continue to ensure security is built into our software development life cycle and improved our testing processes and tools.
- We continue to upgrade many of our IT systems, simplify our service provision and replace older IT infrastructure and applications. These enhancements supported global improvements in service availability during 2021 for both our customers and colleagues.

Risks arising from the receipt of services from third parties

(Unaudited)

We use third parties to provide a range of services, in common with other financial service providers. Risks arising from the use of third party service providers and their supply chain are less transparent. It is critical that we ensure we have appropriate risk management policies, processes and practices over the selection, governance and oversight of third parties and their supply chain, particularly for key activities that could affect our operational resilience. Any deficiency in the management of risks associated with our third parties could affect our ability to meet customer, strategic or regulatory expectations.

Mitigating actions

- We have enhanced our control framework for external supplier arrangements to ensure the risks associated with third-party

arrangements are understood and managed effectively by our global businesses, global functions and markets.

- We have applied the same control standards to intra-group arrangements as we have for external third party arrangements to ensure we are managing them effectively.
- We are implementing the changes required by the new global third-party risk policy to comply with new regulations as defined by our regulators.

Risks associated with workforce capability, capacity and environmental factors with potential impact on growth

(Unaudited)

Our success in delivering our strategic priorities and managing the regulatory environment proactively depends on the development and retention of our leadership and high-performing employees. A very competitive employment market will continue to test our ability to attract and retain talent. Changed working arrangements, local Covid-19 restrictions and health concerns during the pandemic have also impacted employee mental health and well-being.

Mitigating actions

- We have put in place measures to help support our people so they are able to work safely during the Covid-19 pandemic. While our approach to workplace recovery around the world is consistent, the measures we take in different locations are specific to their environment.
- We promote a diverse and inclusive workforce and provide active support across a wide range of health and well-being activities. We continue to build our speak-up culture through active campaigns.
- We monitor people risks that could arise due to organisational restructuring, helping to ensure we manage redundancies sensitively and support impacted employees. We encourage our people leaders to focus on talent retention at all levels, with an empathetic mindset and approach, while ensuring the whole proposition of working at HSBC is well understood.
- Our Future Skills curriculum helps provide critical skills that will enable employees and HSBC to be successful in the future.
- We continue to develop succession plans for key management roles, with actions agreed and reviewed on a regular basis by the group Executive Committee.

Change execution risk

(Unaudited)

We have continued our increased investment in strategic change to support the delivery of our strategic priorities and regulatory commitments. This requires change to be executed safely and efficiently.

Mitigating actions

- A Global Transformation Programme is progressing with the delivery of strategic change commitments made in February 2020 to restructure our business, reallocate capital into higher growth and higher return businesses and markets, and to simplify our organisation to improve operational resilience and reduce costs.
- The remit of the Transformation Oversight Executive Committee established in 2020 to oversee the Global Transformation Programme was expanded in 2021 to oversee the prioritisation, strategic alignment and management of execution risk for all change portfolios and initiatives.
- We continue to work to strengthen our change management practices to deliver sustainable change, increased adoption of Agile ways of working and a more consistent standard of delivery. The Transformation Oversight Executive Committee oversees the continued embedding of our improved Group-wide change framework released in May 2021, which sets out the mandatory principles and standards relating to leading and delivering change.

Areas of special interest

(Unaudited)

During 2021, a number of areas were identified and considered as part of our top and emerging risks because of the effect they may have on the group. While considered under the themes captured under top and emerging risks, in this section we have placed a particular focus on the Covid-19 pandemic and climate-related risks.

Risks related to Covid-19

Despite the successful roll-out of vaccines around the world, the Covid-19 pandemic and its effect on the global economy have continued to impact our customers and organisation. The global vaccination roll-out in 2021 helped reduce the social and economic impact of the Covid-19 pandemic, although there has been significant divergence in the speed at which vaccines have been deployed around the world. Most developed countries have now vaccinated a large proportion of their populations, but many less developed countries have struggled to secure supplies and are at an earlier stage of their roll-out. By the end of 2021, high vaccination rates had ensured that many Covid-19-related restrictions on activity in developed markets had been lifted and travel constraints were easing. However, the emergence of the Omicron variant in late 2021 demonstrated the continued risk new variants pose.

The pandemic necessitated governments to respond at unprecedented levels to protect public health, and to support local economies and livelihoods. The resulting government support measures and restrictions created additional challenges, given the rapid pace of change and significant operational demands. Renewed outbreaks, particularly those resulting from the emergence of variants of the virus, emphasise the ongoing threat of Covid-19 and could result in further tightening of government restrictions. There remains a divergence in approach taken by countries to the level of restrictions on activity and travel. Such diverging approaches to future pandemic waves could prolong or worsen supply chain and international travel disruptions.

We continue to support our personal and business customers through market-specific measures initiated during the Covid-19 pandemic, and by supporting national government schemes that focus on the parts of the economy most impacted by the pandemic. For further details of our customer relief programmes, see pages 46 to 47.

The rapid introduction and varying nature of the government support schemes introduced throughout the Covid-19 pandemic has led to increased operational risks, including complex conduct considerations, increased reputational risk and increased risk of fraud. These risks are likely to be heightened further as and when those remaining government support schemes are unwound. These events have also led to increased litigation risk.

The impact of the pandemic on the long-term prospects of businesses in the most vulnerable sectors of the economy – such as retail, hospitality, travel and commercial real estate – remains uncertain and may lead to significant credit losses on specific exposures, which may not be fully captured in ECL estimates. In addition, in times of stress, fraudulent activity is often more prevalent, leading to potentially significant credit or operational losses.

As economic conditions improve, and government support measures come to an end, there is a risk that the outputs of HKFRS 9 models may have a tendency to underestimate loan losses. To help mitigate this risk, model outputs and management adjustments are closely monitored and independently reviewed at the group and country level for reliability and appropriateness.

Despite the ongoing economic recovery, significant uncertainties remain in assessing the duration and impact of the Covid-19 pandemic, including whether any subsequent outbreaks result in a reimposition of government restrictions. There is a risk that economic activity remains below pre-pandemic levels for a prolonged period increasing inequality across markets, and it will likely be some time before societies return to pre-pandemic levels

of social interactions. As a result, there may still be a requirement for additional mitigating actions including further use of adjustments, overlays and model redevelopment.

Governments and central banks in major economies have deployed extensive measures to support their local populations. This is expected to reverse partially in 2022. Central banks in certain markets are expected to raise interest rates, but such increases are expected to be gradual and monetary policy is expected to remain accommodative overall. Policy tightening in emerging markets has already begun in order to counteract rising inflation and the risk of capital outflows. Some governments are also expected to reduce the level of fiscal support they offer households and business as the appetite for broad lockdowns and public health restrictions decreases. Government debt has risen in many economies, and is expected to remain high into the medium term. High government debt burdens have raised fiscal vulnerabilities, increasing the sensitivity of debt service costs to interest rate increases and potentially reducing the fiscal space available to address future economic downturns.

Our Central scenario used to calculate impairment assumes that economic activity will continue to recover through 2022, surpassing peak pre-pandemic levels of GDP in all our key markets. It is assumed that the private sector growth accelerates, ensuring strong recovery is sustained even as pandemic-related fiscal support is withdrawn. However, there is a high degree of uncertainty associated with economic forecasts in the current environment and there are significant risks to our Central scenario. The degree of uncertainty varies by market, driven by territory-specific trends in the evolution of the pandemic and associated policy responses. As a result, our Central scenario for impairment has not been assigned an equal likelihood of occurrence across our key markets. For further details of our Central and other scenarios, see 'Measurement uncertainty and sensitivity analysis of ECL estimates' on pages 35 to 39.

We continue to monitor the situation closely, and given the novel and prolonged nature of the pandemic, additional mitigating actions may be required.

Climate-related risks

Climate change can have an impact across HSBC's risk taxonomy through both transition and physical channels. Transition risk can arise from the move to a low-carbon economy, such as through policy, regulatory and technological changes. Physical risk can arise through increasing severity and/or frequency of severe weather or other climatic events, such as rising sea levels and flooding. These have the potential to cause both idiosyncratic and systemic risks, resulting in potential financial and non-financial impacts for HSBC. Financial impacts could materialise if transition and physical risks impact the ability of our customers to repay their loans. Non-financial impacts could materialise if our own assets or operations are impacted by extreme weather or chronic changes in weather patterns, or as a result of business decisions to achieve our climate ambition.

How climate change is impacting our customers

Climate change could impact our customers in two main ways. Firstly, customer business models may fail to align to a low-carbon economy, which could mean that new climate-related regulation would have a material impact on their business. Secondly, extreme weather events or chronic changes in weather patterns may damage our customers' assets leaving them unable to operate their business or live in their home.

One of the most valuable ways we can help our customers navigate the transition challenges and to become more resilient to the physical impacts of climate change is through financing and investment. To do this effectively, we must understand the risks they are facing.

The table below summarises the key categories of transition, physical risk, with examples of how our customers might be affected financially by climate change and the shift to a low-carbon economy.

Risk

Climate risk	Main causes of financial impact on customers	
Transition	Policy and legal	Mandates on, and regulation of, existing products and services Litigation from parties who have suffered from the effects of climate change.
	Technology	Replacement of existing products with lower emission options.
	End-demand (market)	Changing consumer behaviour.
	Reputational	Increased scrutiny following a change in stakeholder perceptions of climate-related action or inaction.
Physical	Acute	Increased frequency and severity of weather events.
	Chronic	Changes in precipitation patterns Rising temperatures.

Integrating climate risk into enterprise-wide risk management

Our approach to climate risk management is aligned to our Group-wide risk management framework and three lines of defence model, which sets out how we identify, assess and manage our risks. This approach ensures the Board and senior management have visibility and oversight of our key climate risks.

Climate risk appetite

Our climate risk appetite metrics aim to support the oversight and management of the financial and non-financial risks from climate change, meet regulatory expectations and support the business to deliver our climate ambition in a safe and sustainable way. Our measures are focused on the oversight and management of our key climate risks – wholesale credit risk, retail credit risk, reputational risk, resilience risk and regulatory compliance risk. Our future ambition for our climate risk appetite is to:

- adapt the risk appetite metrics to incorporate forward looking transition plans and net zero commitments;
- expand metrics to consider other financial and non-financial risks; and
- use enhanced scenario analysis capabilities.

Climate risk policies, processes and controls

We have also integrated climate risk into the supporting policies, processes and controls for our key climate risks. We have updated our policy on product management, and developed the first version of a climate risk scoring tool for our corporate portfolios. In addition, we published and started to implement our new Thermal Coal Phase-out Policy.

Climate risk governance and reporting

Our key climate risks are reported and governed through our climate risk governance structure. Our Climate Risk Oversight Forum is responsible for the oversight, management and escalation of climate risks across the group. Our Climate Risk management information dashboard includes metrics relating to our key climate risks, and is reported to the Climate Risk Oversight Forum. In addition, our key wholesale credit exposures are included as part of our broader ESG management information dashboard, which is presented to the group Executive Committee each quarter. The group RMM and the RC receive scheduled updates on climate risk, and receive regular updates on our climate risk appetite and top and emerging climate risks.

To ensure climate risk is appropriately managed and governed, climate related measures covering risk responsibilities relating to the four pillars of governance, risk management, stress testing and scenario analysis and disclosures were included in the group Chief Risk Officer's scorecard in 2021.

Climate risk programme

Our dedicated programme continues to accelerate the development of our climate risk management capabilities. The key achievements in 2021 include:

- We delivered tailored training sessions to our legal entity boards.
- We delivered training to colleagues across the three lines of defence so they can understand climate risk as part of their role. and we also included an introduction to our climate ambition in our global mandatory training.
- We developed our climate risk scoring tool for corporate customers for use in priority regions, which builds on our corporate transition questionnaire.
- We have continued to develop our stress test and scenario analysis capabilities, including model development and delivered regulatory climate stress tests. These are being used to further improve our understanding of our risk exposures for use in risk management and business decision making.

We will continue to enhance our climate risk management capabilities throughout 2022. This will include the further roll-out of training, refinement of our risk appetite, enhancement of our climate risk scoring tool and increasing the availability and quality of data so that new metrics can be developed.

How climate risk can impact HSBC

Below, we provide detail on how climate risk impacts to our customers might manifest across our key climate risks, and the potential time frames involved using the Task Force on Climate-related Financial Disclosures four main drivers of transition climate risk – policy and legal, technology, end-demand (market) and reputational – and two physical risk drivers – acute and chronic.

Risk management framework					
Risk type	Financial risks			Non-financial risks	
	Wholesale credit	Retail credit	Strategic risk (reputational)	Resilience risk	Regulatory compliance risk
	All term periods	Medium-long term	All term periods	All term periods	Short-medium term
Transition risk drivers					
– Policy and legal	●	●			●
– Technology	●				
– End-demand (market)	●				
– Reputational	●	●	●		
Physical risk drivers					
– Acute – increased frequency and severity of weather events	●	●		●	
– Chronic – changes in weather patterns	●			●	

¹ Short term: less than one year; medium term: period to 2030; long term: period to 2050.

Wholesale credit risk

Identification and assessment

We have identified six key sectors where our wholesale credit customers have the highest climate risk, based on their carbon emissions. These are oil and gas, building and construction, chemicals, automotive, power and utilities, and metals and mining.

We continue to roll out our transition and physical risk questionnaire to our largest customers in high-risk sectors, with the addition of four more sectors: agriculture, manufacturing, real estate and transportation. The questionnaires will help us to assess and improve our understanding of the impact of climate change on our customers' business models and any related transition strategies. It also helps us to identify potential business opportunities to support the transition. In 2022, we intend to increase the scope of the questionnaire by adding more countries and territories to the scope.

Management

In 2021 we developed a scoring tool, which provides a climate risk score for each customer based on questionnaire responses. The climate risk score will then be used in portfolio level management information to assess and compare clients. The scoring tool will be enhanced and refined over time as more data becomes available. The results of the tool have been provided to business and risk management teams. During 2021, we also performed a climate-related stress test. In 2022 we aim to further embed climate risk considerations in our credit risk management processes.

Aggregation and reporting

We currently report our transition risk exposure and RWAs consumed by the six high risk sectors in the wholesale portfolio. We also report the proportion of questionnaire responses that reported either having a board policy or management plan for transition risk.

We will continue to report these metrics in 2022 and will aim to cascade these measures to global businesses and to provide insight on the climate risk profile of our portfolio and customers.

Retail credit risk

Identification and assessment

We manage retail credit risk under a framework of controls that enable the identification and assessment of credit risk, across the retail portfolio.

In 2021, we completed a Group-wide climate scenario analysis stress testing exercise. This enabled us to enhance our understanding and assess the impact of physical risk to our mortgage portfolio under three potential future climate scenarios, with a focus on Hong Kong.

Understanding the impact of future climate risk relies heavily upon the availability of quality data, as well as on the evolution of climate risk modelling expertise. As this matures, we plan to expand our approach to additional markets.

Management

We are focusing on embedding climate risk into retail risk management, prioritising exposure in the largest residential mortgage portfolios.

We continue to update our risk management framework and policy to reflect lessons learnt.

Aggregation and reporting

We manage and monitor the integration of climate risk across Wealth and Personal Banking ('WPB') through the RMM.

We have also developed and are implementing metrics to support active risk management, which will be tracked and monitored through relevant Credit Risk meetings.

Reputational risk

Identification and assessment

We implement sustainability risk policies, including the Equator Principles as part of our broader reputational risk framework. We focus on sensitive sectors that may have a high adverse impact on people or the environment, and in which we have a significant number of customers. A key area of focus is high-carbon sectors, which include power generation, mining, agricultural commodities and forestry. During 2021, the Group published its thermal coal phase-out policy.

Management

As the primary point of contact for our customers, our relationship managers are responsible for checking that our customers meet policies aimed at reducing carbon impacts. The Group's global network of more than 75 sustainability risk managers provides local policy support and expertise to relationship managers. A central Sustainability Risk team provides a higher level of guidance and is responsible for the oversight of policy compliance and implementation over wholesale banking activity. During 2021, we introduced a refreshed assurance framework, which took a risk-based approach focusing on higher risks.

Aggregation and reporting

The Group's Sustainability Risk Oversight Forum provides a Group-wide forum for senior members of our Global Risk and Compliance team and global businesses affected by sustainability risk. It also oversees the development and implementation of sustainability risk policies. Cases involving complex sustainability risk issues related to customers, transactions or third parties are managed through the reputational risk and client selection governance process. The Group reports annually on its implementation of the Equator Principles and the corporate loans, project-related bridge loans and advisory mandates completed under the principles. With the introduction of Equator Principles IV, a training programme was delivered to raise the awareness of the changes and obligations therein.

Regulatory compliance risk

Identification and assessment

Compliance continues to prioritise the identification and assessment of compliance risks that may arise from increased focus more generally on climate risk. Although not an exhaustive list, key Regulatory Compliance risks under consideration include those related to product management, mis-selling, marketing, conflicts of interest and regulatory change.

An area of particular focus is the risk of greenwashing. We regard greenwashing as the act of knowingly or unknowingly misleading stakeholders regarding our climate strategy, the climate impact/benefits of a product or service or regarding the climate commitments of our customers. For the Compliance function, product-based greenwashing is a key area of focus. When considering product-based greenwashing, we seek to:

- effectively and consistently consider climate risk factors in the development and ongoing governance of new, changed or withdrawn products and services through the enhancement of existing risk management frameworks utilised within the Group's operating entities and lines of business, enabling climate risks to be identified and assessed in a timely manner;
- ensure that climate-related products and services offered to customers are appropriately designed and that related sales practices and marketing materials are clear, fair and not misleading; and
- develop climate-related products and services consistent with the evolving expectations of the Group's regulators and other relevant authorities.

Management

We continue to develop our compliance policies and underlying measurement capability to enhance the management of climate risks in line with our climate ambitions and risk appetite.

Risk

As such, we have integrated and are continuing to enhance climate risk considerations within our product and customer life-cycle policies. This includes specific climate risk requirements relating to new product approvals and ongoing product management. Our policies set the minimum standards that are required to manage the risk of breaches of our regulatory duty to customers, including those related to climate risk, ensuring fair customer outcomes are achieved.

In addition, we have placed significant focus this year on supporting and improving the capability of our Compliance colleagues through specific climate risk training, communications and guidance materials to ensure the robust identification, assessment and management of climate risks.

Aggregation and reporting

We continue to operate an ESG and Climate Risk Working Group at Group level. This working group tracks and monitors the integration and embedding of climate risk within the management of Regulatory Compliance risks and controls more generally, and monitors ongoing regulatory and legislative changes across the sustainability and climate risk agenda.

We have also developed and implemented climate risk metrics and indicators aligned to wider Regulatory Compliance risks.

The Compliance function is also represented at the group's Climate Risk Oversight Forum.

Resilience risk

Identification and assessment

Our assessment of climate risk identified building unavailability, workplace safety, information technology and cybersecurity risk, transaction processing risk, and third-party risk, as the key risks facing our operational resilience.

We are currently working with industry partners to repeat and extend the 2020 stress testing, given developments in industry understanding of climate risk. We will continue to work with our partners to identify and assess emerging climate risks.

Management

In 2021, we reviewed existing policies, processes and controls, which were then revised as required. This work will continue in subsequent years.

Identification of new tooling, both internally and through collaboration with business partners, for the management of climate risk is ongoing with new tooling being introduced as appropriate.

Our stress test results will continue to inform our approach to climate risk management.

Aggregation and reporting

Our exposure to climate risk will continue to be aggregated and reported to the Non-Financial Risk Management Board and other relevant formal governance forums.

Our material banking risks

(Unaudited)

The material risk types associated with our banking and insurance manufacturing operations are described in the following tables:

Description of risks – banking operations

Risks	Arising from	Measurement, monitoring and management of risk
<p>Credit risk</p> <p>Credit risk is the risk of financial loss if a customer or counterparty fails to meet an obligation under a contract.</p>	<p>Credit risk arises principally from direct lending, trade finance and leasing business, but also from certain other products such as guarantees and derivatives.</p>	<p>Credit risk is:</p> <ul style="list-style-type: none"> • measured as the amount that could be lost if a customer or counterparty fails to make repayments; • monitored using various internal risk management measures and within limits approved by individuals within a framework of delegated authorities; and • managed through a robust risk control framework, which outlines clear and consistent policies, principles and guidance for risk managers.
<p>Treasury risk</p> <p>Treasury risk is the risk of having insufficient capital, liquidity or funding resources to meet financial obligations and satisfy regulatory requirements, including the risk of adverse impact on earnings or capital due to structural foreign exchange exposures and changes in market interest rates, together with pension and insurance risk.</p>	<p>Treasury risk arises from changes to the respective resources and risk profiles driven by customer behaviour, management decisions, or pension plan fiduciary decisions. It also arises from the external environment, including changes to market parameters such as interest rates or foreign exchange rates, together with updates to the regulatory requirements.</p>	<p>Treasury risk is:</p> <ul style="list-style-type: none"> • measured through risk appetite and more granular limits, set to provide an early warning of increasing risk, minimum ratios of relevant regulatory metrics, and metrics to monitor the key risk drivers impacting treasury resources; • monitored and projected against appetites and by using operating plans based on strategic objectives together with stress and scenario testing; and • managed through control of resources in conjunction with risk profiles, strategic objectives and cash flows.
<p>Market risk</p> <p>Market risk is the risk of adverse financial impact on trading activities arising from changes in market parameters such as interest rates, foreign exchange rates, asset prices, volatilities, correlations and credit spreads.</p>	<p>Exposure to market risk is separated into two portfolios: trading and non-trading. Market risk exposures arising from our insurance operations are discussed on the following page.</p>	<p>Market risk is:</p> <ul style="list-style-type: none"> • measured using sensitivities, value at risk ('VaR') and stress testing, giving a detailed picture of potential gains and losses for a range of market movements and scenarios, as well as tail risks over specified time horizons; • monitored using value at risk, stress testing and other measures; and • managed using risk limits approved by the Board for the group and the various global businesses.
<p>Resilience risk</p> <p>Resilience risk is the risk that we are unable to provide critical services to our customers, affiliates and counterparties as a result of sustained and significant operational disruption.</p>	<p>Resilience risk arises from failures or inadequacies in processes, people, systems or external events.</p>	<p>Resilience risk is:</p> <ul style="list-style-type: none"> • measured through a range of metrics with defined maximum acceptable impact tolerances, and against our agreed risk appetite; • monitored through oversight of enterprise processes, risks, controls and strategic change programmes; and • managed by continual monitoring and thematic reviews.
<p>Regulatory compliance risk</p> <p>Regulatory compliance risk is the risk associated with breaching our duty to clients and other counterparties, inappropriate market conduct and breaching related financial services regulatory standards.</p>	<p>Regulatory compliance risk arises from the risks associated with breaching our duty to our customers, inappropriate market conduct and breaching other regulatory requirements.</p>	<p>Regulatory compliance risk is:</p> <ul style="list-style-type: none"> • measured by reference to risk appetite, identified metrics, incident assessments, regulatory feedback and the judgement and assessment of our regulatory compliance teams; • monitored against the first line of defence risk and control assessments, the results of the monitoring and control assurance activities of the second line of defence functions, and the results of internal and external audits and regulatory inspections; and • managed by establishing and communicating appropriate policies and procedures, training employees in them, and monitoring activity to help ensure their observance. Proactive risk control and/or remediation work is undertaken where required.

Risk

Description of risks – banking operations (continued)

Risks	Arising from	Measurement, monitoring and management of risk
<p>Financial crime risk</p> <p>Financial crime risk is the risk of knowingly or unknowingly helping parties to commit or to further illegal activity through HSBC, including money laundering, fraud, bribery and corruption, tax evasion, sanctions breaches, and terrorist and proliferation financing.</p>	<p>Financial crime risk arises from day-to-day banking operations involving customers, third parties and employees. Exceptional circumstances which impact day to day operations may additionally increase financial crime risk.</p>	<p>Financial crime risk is:</p> <ul style="list-style-type: none"> measured by reference to risk appetite, identified metrics, incident assessments, regulatory feedback and the judgement and assessment of our financial crime risk teams; monitored against the first line of defence risk and control assessments, the results of the monitoring and control assurance activities of the second line of defence functions, and the results of internal and external audits and regulatory inspections; and managed by establishing and communicating appropriate policies and procedures, training employees in them, and monitoring activity to help ensure their observance. Proactive risk control and/or remediation work is undertaken where required.
<p>Model risk</p> <p>Model risk is the potential for adverse consequences from business decisions arising from the use of models that have been inadequately designed, implemented or used or that model does not perform in line with expectations and predictions.</p>	<p>Model risk arises in both financial and non-financial contexts whenever business decision making includes reliance on models.</p>	<p>Model risk is:</p> <ul style="list-style-type: none"> measured by reference to model performance tracking and the output of detailed technical reviews, with key metrics including model review statuses and findings; monitored against model risk appetite statements, insight from the independent review function, feedback from internal and external audits, and regulatory reviews; and managed by creating and communicating appropriate policies, procedures and guidance, training colleagues in their application, and supervising their adoption to ensure operational effectiveness.

Our insurance manufacturing subsidiaries are regulated separately from our banking operations. Risks in the insurance entities are managed using methodologies and processes that are subject to oversight at group level. Our insurance operations are also subject

to some of the same risks as our banking operations, and these are covered by the group's risk management processes. There are specific risks inherent to the insurance operations as noted below.

Description of risks – insurance manufacturing operations

Risks	Arising from	Measurement, monitoring and management of risk
<p>Financial risk</p> <p>For insurance entities, financial risk includes the risk of not being able to match liabilities arising under insurance contracts with appropriate investments and that the expected sharing of financial performance with policyholders under certain contracts is not possible.</p>	<p>Exposure to financial risks arises from:</p> <ul style="list-style-type: none"> market risk affecting the fair values of financial assets or their future cash flows; credit risk; and liquidity risk of entities being unable to make payments to policyholders as they fall due. 	<p>Financial risk is:</p> <ul style="list-style-type: none"> measured (i) for credit risk, in terms of economic capital and the amount that could be lost if a counterparty fails to make repayments; (ii) for market risk, in terms of economic capital, internal metrics and fluctuations in key financial variables; and (iii) for liquidity risk, in terms of internal metrics including stressed operational cash flow projections; monitored through a framework of approved limits and delegated authorities; and managed through a robust risk control framework, which outlines clear and consistent policies, principles and guidance. This includes using product design, asset liability matching and bonus rates.
<p>Insurance risk</p> <p>Insurance risk is the risk that, over time, the cost of insurance policies written, including claims and benefits, may exceed the total amount of premiums and investment income received.</p>	<ul style="list-style-type: none"> The cost of claims and benefits can be influenced by many factors, including mortality and morbidity experience, as well as lapse and surrender rates. 	<p>Insurance risk is:</p> <ul style="list-style-type: none"> measured in terms of life insurance liabilities and economic capital allocated to insurance underwriting risk; monitored through a framework of approved limits and delegated authorities; and managed through a robust risk control framework which outlines clear and consistent policies, principles and guidance. This includes using product design, underwriting, reinsurance and claims-handling procedures.

Credit risk

Overview

(Audited)

Credit risk is the risk of financial loss if a customer or counterparty fails to meet an obligation under a contract. Credit risk arises principally from direct lending, trade finance and leasing business, but also from other products, such as guarantees and credit derivatives.

Credit risk management

Key developments in 2021

(Unaudited)

There were no material changes to the policies and practices for the management of credit risk in 2021. We continued to apply the requirements of HKFRS 9 'Financial Instruments' within the Credit Risk sub-function.

Due to the Covid-19 pandemic and its continued effects on the global economy, we provided short-term support to customers through market-specific measures under the current credit policy framework. We have also implemented the guidance provided by regulators on managing the credit portfolio as required throughout the course of the customer relief life cycle.

The extent of our support depends on the degree of country-specific government support measures, restrictions, associated policy responses, and the effects of new Covid-19 variants.

The majority of the customer relief programmes that we provided during the Covid-19 pandemic ended by 31 December 2021 and will not be reassessed under the revised definition of default. For further details of market-specific measures to support our personal and business customers, see pages 46 to 47.

In 2022, we will adopt the EBA 'Guidelines on the application of definition of default'. There is expected to be no material impact on our retail and wholesale portfolios.

Governance and structure

(Unaudited)

We have established credit risk management and related HKFRS 9 processes throughout the group. We continue to assess the impact of economic developments in key markets on specific customers, customer segments or portfolios. As credit conditions change, we take mitigating action, including the revision of risk appetites or limits and tenors, as appropriate. In addition, we continue to evaluate the terms under which we provide credit facilities within the context of individual customer requirements, the quality of the relationship, local regulatory requirements, market practices and our local market position.

Credit risk sub-function

(Audited)

Credit approval authorities are delegated by the Board to the group Co-Chief Executives together with the authority to sub-delegate them. The Credit Risk sub-function in Global Risk is responsible for the key policies and processes for managing credit risk, which include formulating group credit policies and risk rating frameworks, guiding the group's appetite for credit risk exposures, undertaking independent reviews and objective assessment of credit risk, and monitoring performance and management of portfolios.

The principal objectives of our credit risk management are:

- to maintain across HSBC a strong culture of responsible lending, and robust risk policies and control frameworks;
- to both partner and challenge our businesses in defining, implementing and continually re-evaluating our risk appetite under actual and scenario conditions; and
- to ensure there is independent, expert scrutiny of credit risks, their causes and their mitigation.

Key risk management processes

HKFRS 9 'Financial Instruments' process

(Unaudited)

The HKFRS 9 process comprises three main areas: modelling and data; implementation; and governance.

Modelling and data

(Unaudited)

We have established HKFRS 9 modelling and data processes in various geographies, which are subject to internal model risk governance including independent review of significant model developments.

Implementation

(Unaudited)

A centralised impairment engine performs the expected credit losses calculation using data, which is subject to a number of validation checks and enhancements, from a variety of client, finance and risk systems. Where possible, these checks and processes are performed in a globally consistent and centralised manner.

Governance

(Unaudited)

Management review forums are established in key sites and at group level in order to review and approve the impairment results. Management review forums have representatives from Credit Risk and Finance, and the group's ECL is approved by the group's Chief Risk Officer and Chief Financial Officer in the forum. Other key members of the management review forums are the group heads of Wholesale Credit and Wealth and Personal Banking Risk, as well as the group head of Loan Management Unit and the group financial controller. The key site and group level approvals are subsequently reported up to the global business impairment committee for final approval of the Group's ECL for the period. Required members of the committee are the global heads of Wholesale Credit, Market Risk, and Wealth and Personal Banking Risk, as well as the relevant Global business Chief Financial Officer and the Global Financial controller.

Concentration of exposure

(Audited)

Concentrations of credit risk arise when a number of counterparties or exposures that have comparable economic characteristics, or such counterparties are engaged in similar activities or operate in the same geographical areas or industry sectors so that their collective ability to meet contractual obligations is uniformly affected by changes in economic, political or other conditions. We use a number of controls and measures to minimise undue concentration of exposure in our portfolios across industries, countries and global businesses. These include portfolio and counterparty limits, approval and review controls, and stress testing.

Credit quality of financial instruments

(Audited)

Our risk rating system facilitates the internal ratings-based approach under the Basel framework adopted by the group to support the calculation of our minimum credit regulatory capital requirement. The five credit quality classifications encompass a range of granular internal credit rating grades assigned to wholesale and retail customers, and the external ratings attributed by external agencies to debt securities.

For debt securities and certain other financial instruments, external ratings have been aligned to the five quality classifications based upon the mapping of related customer risk rating ('CRR') to external credit rating.

Risk

Wholesale lending

(Unaudited)

The CRR 10-grade scale summarises a more granular underlying 23-grade scale of obligor probability of default ('PD'). All corporate customers are rated using the 10 or 23-grade scale, depending on the degree of sophistication of the Basel approach adopted for the exposure.

Each CRR band is associated with an external rating grade by reference to long-run default rates for that grade, represented by

the average of issuer-weighted historical default rates. This mapping between internal and external ratings is indicative and may vary over time.

Retail lending

(Unaudited)

Retail lending credit quality is based on a 12-month point-in-time probability-weighted PD.

Credit quality classification

(Unaudited)

	Sovereign debt securities and bills	Other debt securities and bills	Wholesale lending and derivatives		Retail lending	
	External credit rating	External credit rating	Internal credit rating	12-month Basel probability of default %	Internal credit rating	12 month probability-weighted PD %
Quality classification^{1, 2}						
Strong	BBB and above	A- and above	CRR 1 to CRR 2	0 – 0.169	Band 1 and 2	0.000 – 0.500
Good	BBB- to BB	BBB+ to BBB-	CRR 3	0.170 – 0.740	Band 3	0.501 – 1.500
Satisfactory	BB- to B and unrated	BB+ to B and unrated	CRR 4 to CRR 5	0.741 – 4.914	Band 4 and 5	1.501 – 20.000
Sub-standard	B- to C	B- to C	CRR 6 to CRR 8	4.915 – 99.999	Band 6	20.001 – 99.999
Credit impaired	Default	Default	CRR 9 to CRR 10	100	Band 7	100

1 Customer risk rating ('CRR').

2 12-month PIT PD.

Quality classification definitions

'Strong' exposures demonstrate a strong capacity to meet financial commitments, with negligible or low probability of default and/or low levels of expected loss.

'Good' exposures require closer monitoring and demonstrate a good capacity to meet financial commitments, with low default risk.

'Satisfactory' exposures require closer monitoring and demonstrate an average-to-fair capacity to meet financial commitments, with moderate default risk.

'Sub-standard' exposures require varying degrees of special attention and default risk is of greater concern.

'Credit-impaired' exposures have been assessed as described in Note 1.2(i) on the Consolidated Financial Statements.

Renegotiated loans and forbearance

(Audited)

'Forbearance' describes concessions made on the contractual terms of a loan in response to an obligor's financial difficulties.

A loan is classed as 'renegotiated' when we modify the contractual payment terms on concessionary terms because we have significant concerns about the borrowers' ability to meet contractual payments when due. Non-payment-related concessions (e.g. covenant waivers), while potential indicators of impairment, do not trigger identification as renegotiated loans under our existing disclosures.

Loans that have been identified as renegotiated retain this designation until maturity or derecognition under our existing disclosures.

For details of our policy on derecognised renegotiated loans, see Note 1.2(i) on the financial statements.

Credit quality of renegotiated loans

(Unaudited)

On execution of a renegotiation, a loan will also be classified as credit impaired if it is not already so classified. In wholesale lending, all facilities with a customer, including loans that have not been modified, are considered credit impaired following the identification of a renegotiated loan under our existing disclosures.

Wholesale renegotiated loans are classified as credit-impaired until there is sufficient evidence to demonstrate a significant reduction in the risk of non-payment of future cash flows, observed over a minimum one-year period, and there are no other indicators of impairment. Personal renegotiated loans generally remain credit impaired until repayment, write-off or derecognition.

Renegotiated loans and recognition of expected credit losses

(Audited)

For retail lending, unsecured renegotiated loans are generally segmented from other parts of the loan portfolio. Renegotiated expected credit loss assessments reflect the higher rates of losses typically encountered with renegotiated loans. For wholesale lending, renegotiated loans are typically assessed individually. Credit risk ratings are intrinsic to the impairment assessments. The individual impairment assessment takes into account the higher risk of the future non-payment inherent in renegotiated loans.

Customer Relief Programmes and renegotiated loans

(Unaudited)

In response to the Covid-19 pandemic, governments and regulators around the world encouraged a range of customer relief programmes including payment deferrals. In determining whether a customer is experiencing financial difficulty for the purposes of identifying renegotiated loans a payment deferral requested under such schemes, or an extension thereof, is not automatically determined to be evidence of financial difficulty and would therefore not automatically trigger identification as renegotiated loans. Rather, information provided by payment deferrals is considered in the context of other reasonable and supportable information. The HKFRS 9 treatment of customer relief programmes is explained on pages 46 to 47.

Impairment assessment

(Audited)

For details of our impairment policies on loans and advances and financial investments, see Note 1.2(i) on the financial statements.

Write-off of loans and advances

(Audited)

For details of our policy on the write-off of loans and advances, see Note 1.2(i) on the financial statements.

Unsecured personal facilities, including credit cards, are generally written off at between 150 and 210 days past due. The standard period runs until the end of the month in which the account becomes 180 days contractually delinquent. However, in exceptional circumstances to achieve a fair customer outcome and in line with regulatory expectations, they may be extended further.

For secured facilities, write-off should occur upon repossession of collateral, receipt of proceeds via settlement, or determination that recovery of the collateral will not be pursued.

Any secured assets maintained on the balance sheet beyond 60 months of consecutive delinquency-driven default require additional monitoring and review to assess the prospect of recovery.

There are exceptions in a few countries and territories where local regulation or legislation constrains earlier write-off, or where the realisation of collateral for secured real estate lending takes more time. Write-off, either partially or in full, may be earlier when there is no reasonable expectation of further recovery, for example, in the event of a bankruptcy or equivalent legal proceedings. Collection procedures may continue after write-off.

Summary of credit risk

The following disclosure presents the gross carrying/nominal amount of financial instruments to which the impairment requirements in HKFRS 9 are applied and the associated allowance for expected credit losses ('ECL').

Summary of financial instruments to which the impairment requirements in HKFRS 9 are applied

(Audited)

	2021		2020	
	Gross carrying/nominal amount	Allowance for ECL ¹	Gross carrying/nominal amount	Allowance for ECL ¹
	HK\$m	HK\$m	HK\$m	HK\$m
At 31 Dec				
Loans and advances to customers at amortised cost	3,872,956	(32,017)	3,697,568	(28,887)
Loans and advances to banks	432,286	(39)	403,908	(24)
Other financial assets measured at amortised cost	2,114,301	(639)	1,869,268	(713)
– cash and balances at central banks	276,857	–	347,999	–
– items in the course of collection from other banks	21,632	–	21,943	–
– Hong Kong Government certificates of indebtedness	332,044	–	313,404	–
– reverse repurchase agreements – non-trading	803,775	–	520,344	–
– financial investments	502,997	(433)	475,553	(527)
– prepayments, accrued income and other assets ²	176,996	(206)	190,025	(186)
Amounts due from Group companies	99,604	–	82,849	–
Total gross carrying amount on-balance sheet	6,519,147	(32,695)	6,053,593	(29,624)
Loans and other credit related commitments	1,826,335	(580)	1,725,963	(825)
Financial guarantee	34,302	(44)	32,358	(124)
Total nominal amount off-balance sheet³	1,860,637	(624)	1,758,321	(949)
	8,379,784	(33,319)	7,811,914	(30,573)
	Fair value	Allowance for ECL	Fair value	Allowance for ECL
	HK\$m	HK\$m	HK\$m	HK\$m
At 31 Dec				
Debt instruments measured at Fair Value through Other Comprehensive Income ('FVOCI') ⁴	1,541,909	(121)	1,689,820	(167)

¹ The total ECL is recognised in the loss allowance for the financial asset unless the total ECL exceeds the gross carrying amount of the financial asset, in which case the ECL is recognised as a provision.

² Includes only those financial instruments that are subject to the impairment requirements of HKFRS 9. 'Prepayments, accrued income and other assets', as presented within the consolidated balance sheet on page 75, which includes both financial and non-financial assets.

³ Represents the maximum amount at risk should the contracts be fully drawn upon and client defaults.

⁴ Debt instruments measured at FVOCI continue to be measured at fair value with the allowance for ECL as a memorandum item. Change in ECL is recognised in 'Change in expected credit losses and other credit impairment charges' in the consolidated income statement.

The following table provides an overview of the group's credit risk by stage and industry, and the associated ECL coverage. The financial assets recorded in each stage have the following characteristics:

- Stage 1: These financial assets are unimpaired and without significant increase in credit risk on which a 12-month allowance for ECL is recognised.
- Stage 2: A significant increase in credit risk has been experienced on these financial assets since initial recognition for which a lifetime ECL is recognised.
- Stage 3: There is objective evidence of impairment and the financial assets are therefore considered to be in default or otherwise credit impaired on which a lifetime ECL is recognised.
- POCI: Financial assets that are purchased or originated at a deep discount are seen to reflect the incurred credit losses on which a lifetime ECL is recognised.

Risk

Summary of credit risk (excluding debt instruments measured at FVOCI) by stage distribution and ECL coverage by industry sector

(Audited)

	Gross carrying/nominal amount ¹					Allowance for ECL					ECL coverage %				
	Stage 1 HK\$m	Stage 2 HK\$m	Stage 3 HK\$m	POCI HK\$m	Total HK\$m	Stage 1 HK\$m	Stage 2 HK\$m	Stage 3 HK\$m	POCI HK\$m	Total HK\$m	Stage 1 %	Stage 2 %	Stage 3 %	POCI %	Total %
Loans and advances to customers	3,349,434	480,632	41,332	1,558	3,872,956	(2,603)	(9,426)	(19,654)	(334)	(32,017)	0.1	2.0	47.6	21.4	0.8
– personal	1,461,358	60,795	10,158	–	1,532,311	(1,236)	(2,965)	(1,765)	–	(5,966)	0.1	4.9	17.4	–	0.4
– corporate ²	1,626,514	398,273	31,068	1,556	2,057,411	(1,131)	(6,384)	(17,859)	(332)	(25,706)	0.1	1.6	57.5	21.3	1.2
– financial institutions ³	261,562	21,564	106	2	283,234	(236)	(77)	(30)	(2)	(345)	0.1	0.4	28.3	100.0	0.1
Loans and advances to banks	431,079	1,207	–	–	432,286	(36)	(3)	–	–	(39)	0.0	0.2	–	–	0.0
Other financial assets	2,092,847	21,164	289	1	2,114,301	(482)	(140)	(17)	–	(639)	0.0	0.7	5.9	–	0.0
Loan and other credit-related commitments	1,782,353	43,711	271	–	1,826,335	(260)	(295)	(25)	–	(580)	0.0	0.7	9.2	–	0.0
– personal	1,245,694	6,976	154	–	1,252,824	–	–	–	–	–	–	–	–	–	–
– corporate ²	417,349	30,978	117	–	448,444	(247)	(288)	(25)	–	(560)	0.1	0.9	21.4	–	0.1
– financial institutions ³	119,310	5,757	–	–	125,067	(13)	(7)	–	–	(20)	0.0	0.1	–	–	0.0
Financial guarantee	30,214	4,048	40	–	34,302	(14)	(14)	(16)	–	(44)	0.0	0.3	40.0	–	0.1
– personal	4,000	–	1	–	4,001	(1)	–	(1)	–	(2)	0.0	–	100.0	–	0.0
– corporate ²	22,995	4,011	39	–	27,045	(13)	(14)	(15)	–	(42)	0.1	0.3	38.5	–	0.2
– financial institutions ³	3,219	37	–	–	3,256	–	–	–	–	–	–	–	–	–	–
At 31 Dec 2021	7,685,927	550,762	41,932	1,559	8,280,180	(3,395)	(9,878)	(19,712)	(334)	(33,319)	0.0	1.8	47.0	21.4	0.4

The above table does not include balances due from Group companies.

1 Represents the maximum amount at risk should the contracts be fully drawn upon and clients default.

2 Includes corporate and commercial.

3 Includes non-bank financial institutions.

Unless identified at an earlier stage, all financial assets are deemed to have suffered a significant increase in credit risk when they are 30 days past due ('DPD') and are transferred from stage 1 to stage 2. The following disclosure presents the ageing of stage 2 financial assets by those less than 30 and greater than 30 days past due and therefore presents those amounts classified as stage 2 due to ageing (30 DPD) and those identified at an earlier stage (less than 30 DPD).

Stage 2 days past due analysis for loans and advances to customers

(Audited)

	Gross carrying amount				Allowance for ECL				ECL coverage %			
	Stage 2 HK\$m	of which: Up-to-date HK\$m	of which: 1 to 29 DPD ^{1,2} HK\$m	of which: 30 and > DPD ^{1,2} HK\$m	Stage 2 HK\$m	of which: Up-to-date HK\$m	of which: 1 to 29 DPD ^{1,2} HK\$m	of which: 30 and > DPD ^{1,2} HK\$m	Stage 2 %	of which: Up-to-date %	of which: 1 to 29 DPD %	of which: 30 and > DPD %
At 31 Dec 2021												
Loans and advances to customers at amortised cost	480,632	471,298	6,788	2,546	(9,426)	(8,862)	(226)	(338)	2.0	1.9	3.3	13.3
– personal	60,795	53,316	5,048	2,431	(2,965)	(2,460)	(173)	(332)	4.9	4.6	3.4	13.7
– corporate and commercial	398,273	396,420	1,738	115	(6,384)	(6,325)	(53)	(6)	1.6	1.6	3.0	5.2
– non-bank financial institutions	21,564	21,562	2	–	(77)	(77)	–	–	0.4	0.4	–	–

1 Days past due ('DPD').

2 The days past due amounts presented above are on a contractual basis and include the benefit of any customer relief payment holidays granted.

Summary of credit risk (excluding debt instruments measured at FVOCI) by stage distribution and ECL coverage by industry sector (continued)

(Audited)

	Gross carrying/nominal amount ¹					Allowance for ECL					ECL coverage %				
	Stage 1	Stage 2	Stage 3	POCI	Total	Stage 1	Stage 2	Stage 3	POCI	Total	Stage 1	Stage 2	Stage 3	POCI	Total
	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	%	%	%	%	%
Loans and advances to customers	3,150,921	510,040	35,752	855	3,697,568	(4,393)	(6,438)	(17,694)	(362)	(28,887)	0.1	1.3	49.5	42.3	0.8
– personal	1,381,495	61,790	9,062	–	1,452,347	(1,809)	(3,463)	(1,872)	–	(7,144)	0.1	5.6	20.7	–	0.5
– corporate ²	1,580,976	391,635	26,514	853	1,999,978	(2,428)	(2,897)	(15,763)	(360)	(21,448)	0.2	0.7	59.5	42.2	1.1
– financial institutions ³	188,450	56,615	176	2	245,243	(156)	(78)	(59)	(2)	(295)	0.1	0.1	33.5	100.0	0.1
Loans and advances to banks	401,256	2,652	–	–	403,908	(19)	(5)	–	–	(24)	0.0	0.2	–	–	0.0
Other financial assets	1,854,154	14,834	279	1	1,869,268	(452)	(221)	(40)	–	(713)	0.0	1.5	14.3	–	0.0
Loan and other credit-related commitments	1,677,242	48,538	183	–	1,725,963	(514)	(281)	(30)	–	(825)	0.0	0.6	16.4	–	0.0
– personal	1,205,969	6,129	79	–	1,212,177	(1)	–	–	–	(1)	0.0	–	–	–	0.0
– corporate ²	388,833	34,095	104	–	423,032	(492)	(266)	(30)	–	(788)	0.1	0.8	28.8	–	0.2
– financial institutions ³	82,440	8,314	–	–	90,754	(21)	(15)	–	–	(36)	0.0	0.2	–	–	0.0
Financial guarantee	25,786	6,522	50	–	32,358	(51)	(56)	(17)	–	(124)	0.2	0.9	34.0	–	0.4
– personal	4,043	2	6	–	4,051	–	–	(1)	–	(1)	–	–	16.7	–	0.0
– corporate ²	20,737	6,241	44	–	27,022	(51)	(56)	(16)	–	(123)	0.2	0.9	36.4	–	0.5
– financial institutions ³	1,006	279	–	–	1,285	–	–	–	–	–	–	–	–	–	–
At 31 Dec 2020	7,109,359	582,586	36,264	856	7,729,065	(5,429)	(7,001)	(17,781)	(362)	(30,573)	0.1	1.2	49.0	42.3	0.4

The above table does not include balances due from Group companies.

1 Represents the maximum amount at risk should the contracts be fully drawn upon and clients default.

2 Includes corporate and commercial.

3 Includes non-bank financial institutions.

Unless identified at an earlier stage, all financial assets are deemed to have suffered a significant increase in credit risk when they are 30 days past due ('DPD') and are transferred from stage 1 to stage 2. The following disclosure presents the ageing of stage 2 financial assets by those less than 30 and greater than 30 days past due and therefore presents those amounts classified as stage 2 due to ageing (30 DPD) and those identified at an earlier stage (less than 30 DPD).

Stage 2 days past due analysis for loans and advances to customers (continued)

(Audited)

	Gross carrying amount				Allowance for ECL				ECL coverage %			
	Stage 2	Up-to-date	1 to 29 DPD ^{1,2}	30 and > DPD ^{1,2}	Stage 2	Up-to-date	1 to 29 DPD ^{1,2}	30 and > DPD ^{1,2}	Stage 2	Up-to-date	1 to 29 DPD	30 and > DPD
	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	%	%	%	%
At 31 Dec 2020												
Loans and advances to customers at amortised cost	510,040	499,567	6,590	3,883	(6,438)	(5,505)	(268)	(665)	1.3	1.1	4.1	17.1
– personal	61,790	53,063	5,311	3,416	(3,463)	(2,642)	(204)	(617)	5.6	5.0	3.8	18.1
– corporate and commercial	391,635	389,941	1,227	467	(2,897)	(2,785)	(64)	(48)	0.7	0.7	5.2	10.3
– non-bank financial institutions	56,615	56,563	52	–	(78)	(78)	–	–	0.1	0.1	–	–

1 Days past due ('DPD').

2 The days past due amounts presented above are on a contractual basis and include the benefit of any customer relief payment holidays granted.

Risk

Credit exposure

Maximum exposure to credit risk

(Audited)

This section provides information on the maximum exposure to credit risk associated with balance sheet items as well as loan and other credit-related commitments.

'Maximum exposure to credit risk' table

The following table presents our maximum exposure to credit risk before taking account of any collateral held or other credit enhancements (unless such enhancements meet accounting offsetting requirements). The table excludes financial instruments whose carrying amount best represents the net exposure to credit risk, and it excludes equity securities as they are not subject to credit risk. For the financial assets recognised on the balance sheet, the maximum exposure to credit risk equals their carrying amount; for financial guarantees and other guarantees granted, it is the maximum amount that we would have to pay if the guarantees were called upon. For loan commitments and other credit-related commitments, it is generally the full amount of the committed facilities.

Other credit risk mitigants

There are arrangements in place that reduce our maximum exposure to credit risk. These include a charge over collateral on borrowers' specific assets, such as properties, collateral held in the form of financial instruments that are not held on the balance sheet and short positions in securities. In addition, for financial assets held as part of linked insurance/investment contracts the risk is predominantly borne by the policyholder.

Collateral available to mitigate credit risk is disclosed in the Collateral section on pages 47-50.

Maximum exposure to credit risk before collateral held or other credit enhancements

(Audited)

	2021 HK\$m	2020 HK\$m
Cash and balances at central banks	276,857	347,999
Items in the course of collection from other banks	21,632	21,943
Hong Kong Government certificates of indebtedness	332,044	313,404
Trading assets	478,030	434,029
Derivatives	365,167	422,945
Financial assets designated at fair value	33,274	35,145
Reverse repurchase agreements – non-trading	803,775	520,344
Loans and advances to banks	432,247	403,884
Loans and advances to customers	3,840,939	3,668,681
Financial investments	2,044,473	2,164,846
Amounts due from Group companies	112,719	83,203
Other assets	180,757	197,362
Total on-balance sheet exposure to credit risk	8,921,914	8,613,785
Total off-balance sheet	3,506,253	3,326,935
Financial guarantees and other similar contracts	377,487	325,631
Loan and other credit-related exposure	3,128,766	3,001,304
At 31 Dec	12,428,167	11,940,720

Total exposure to credit risk remained broadly unchanged in 2021 with loans and advances continuing to be the largest element.

Credit deterioration of financial instruments

(Audited)

A summary of our current policies and practices regarding the identification, treatment and measurement of stage 1, stage 2, stage 3 (credit impaired) and POCI financial instruments can be found in Note 1.2(i) on the Consolidated Financial Statements.

Measurement uncertainty and sensitivity analysis of ECL estimates

(Audited)

Despite a broad recovery in economic conditions during 2021, ECL estimates continue to be subject to a high degree of uncertainty, and management judgements and estimates continued to reflect a degree of caution, both in the selection of economic scenarios and their weightings, and through management judgemental adjustments.

The recognition and measurement of ECL involves the use of significant judgement and estimation. We form multiple economic scenarios based on economic forecasts, apply these assumptions to credit risk models to estimate future credit losses, and probability-weight the results to determine an unbiased ECL estimate. Management judgemental adjustments are used to address late-breaking events, data and model limitations, model deficiencies and expert credit judgements.

Methodology

Four economic scenarios are used to capture the current economic environment and to articulate management's view of the range of potential outcomes. Scenarios produced to calculate ECL are aligned to the group's top and emerging risks.

In the second quarter of 2020, to ensure that the severe risks associated with the pandemic were appropriately captured, management added a fourth, more severe, scenario to use in the measurement of ECL. Starting in the fourth quarter of 2021, HSBC's methodology has been adjusted so that the use of four scenarios, of which two are downside scenarios, is the standard approach to ECL calculation.

Three of these scenarios are drawn from consensus forecasts and distributional estimates. The Central scenario is deemed the 'most likely' outcome, and usually attracts the largest probability weighting, while the outer scenarios represent the tails of the distribution which are less likely to occur. The Central scenario is created using the average of a panel of external forecasters. Consensus Upside and Downside scenarios are created with reference to distributions for select markets that capture forecasters' views of the entire range of outcomes. In the later years of the scenarios, projections revert to long-term consensus trend expectations. In the consensus outer scenarios, reversion to trend expectations is done mechanically with reference to historically observed quarterly changes in the values of macroeconomic variables.

The fourth scenario, Downside 2, is designed to represent management's view of severe downside risks. It is a globally consistent, narrative driven, scenario that explores more extreme economic outcomes than those captured by the consensus scenarios. In this scenario, variables do not, by design, revert to long-term trend expectations. They may instead explore alternative states of equilibrium, where economic activity moves permanently away from past trends.

The two consensus, 'Upside' and 'Downside' scenarios are constructed to be consistent with a 10% probability and the Downside 2 to a 5% probability. The Central Scenario is assigned the remaining 75%. This weighting scheme is deemed appropriate for the unbiased estimation of ECL in most circumstances. Management may, however, depart from this probability based scenario weighting approach when the economic outlook is determined to be more uncertain and risks are elevated.

Description of Consensus Economic Scenarios

The economic assumptions presented in this section have been formed internally with reference to external forecasts specifically for the purpose of calculating ECL.

The global economy experienced a recovery in 2021, following an unprecedented contraction in 2020. Restrictions to mobility and travel eased across certain markets, aided by the successful roll-out of vaccination programmes. The emergence of new variants that potentially reduce the efficacy of vaccines remains a risk.

Economic forecasts remain subject to a high degree of uncertainty. Risks to the economic outlook are dominated by the progression of the pandemic, vaccine roll-out and the public policy response. Geopolitical risks also remain significant and include continued differences between the US and other countries with China over a range of economic and strategic defence issues.

The key markets covered in the scenarios include Hong Kong and mainland China, and the scenarios used to calculate ECL in the *Annual Report and Accounts 2021* are described below.

The consensus Central scenario

HSBC's Central scenario features a continued recovery in economic growth in 2022 as activity and employment gradually return to the levels reached prior to the outbreak of Covid-19.

Our Central scenario assumes that the stringent restrictions on activity, imposed across several countries and territories in 2020 and 2021 are not repeated. The new viral strain that emerged late in 2021, Omicron, has only a limited impact on the recovery, according to this scenario. Consumer spending and business investment, supported by elevated levels of private sector savings, are expected to drive the economic recovery as fiscal and monetary policy support recedes.

Regional differences in the speed of economic recovery in the Central scenario reflect differences in the progression of the pandemic, roll-out of vaccination programmes, national level restrictions imposed and scale of support measures. Global GDP is expected to grow by 4.2% in 2022 in the Central scenario and the average rate of global GDP growth is 3.1% over the five-year forecast period. This exceeds the average growth rate over the five-year period prior to the onset of the pandemic.

The key features of our Central scenario are:

- Economic activity continues its recovery, growing at a moderate rate in 2022. GDP growth in our key markets has recovered to pre-pandemic levels.
- Unemployment in mainland China has recovered to pre-pandemic levels. In Hong Kong, unemployment declines to levels only slightly higher than existed pre-pandemic.
- Covid related fiscal spending recedes in 2022 as fewer restrictions on activity allow fiscal support to be withdrawn. Deficits remain high in several countries as they embark on multi-year investment programmes to support recovery, productivity growth and climate transition.
- Inflation across many of our key markets remains elevated through 2022. Supply-driven price pressures persist through the first half of 2022 before gradually easing. In subsequent years, inflation quickly converges back towards central bank target rates.
- Policy interest rates in key markets rise gradually over our projection period, in line with economic recovery.
- The West Texas Intermediate oil price is forecast to average US\$62 per barrel over the projection period.

In the longer term, growth reverts back towards similar levels that existed prior to the pandemic, suggesting that the damage to long-term economic prospects is expected to be minimal. The Central scenario was first created with forecasts available in November, and subsequently updated in December. Probability weights assigned to the Central scenario vary from 70% to 80% and reflect relative differences in uncertainty across markets.

Risk

The following table describes key macroeconomic variables and the probabilities assigned in the consensus Central scenario.

Central scenario 2022-2026

	Hong Kong	Mainland China
	%	%
GDP growth rate (annual average rate)		
2022	3.1	5.3
2023	2.9	5.4
2024	2.6	5.1
5 Year average	2.7	5.1
Unemployment rate (annual average rate)		
2022	4.1	3.8
2023	3.6	3.7
2024	3.5	3.8
5 Year average	3.6	3.8
House price growth (annual average rate)		
2022	3.4	0.3
2023	2.4	4.7
2024	2.0	4.9
5 Year average	2.6	3.5
Short term interest rate (annual average rate)		
2022	0.5	3.1
2023	1.1	3.2
2024	1.6	3.4
5 Year average	1.4	3.4
Probability	70.0	80.0

The consensus Upside scenario

Compared with the Central scenario, the consensus Upside scenario features a faster recovery in economic activity during the first two years, before converging to long-run trend expectations.

The scenario is consistent with a number of key upside risk themes. These include the orderly and rapid global abatement of Covid-19 via successful containment and ongoing vaccine efficacy; de-escalation of tensions between the US and China and continued fiscal and monetary support.

The following table describes key macroeconomic variables and the probabilities assigned in the consensus Upside scenario.

Consensus Upside scenario best outcome

	Hong Kong	Mainland China
	%	%
GDP growth rate	10.3 (4Q22)	11.8 (4Q22)
Unemployment rate	2.7 (4Q23)	3.5 (1Q23)
House price growth	11.9 (4Q22)	8.2 (4Q22)
Short-term interest rate	0.6 (1Q22)	3.2 (1Q22)
Probability	5.0	5.0

Note: Extreme point in the consensus Upside is 'best outcome' in the scenario, for example the highest GDP growth and the lowest unemployment rate etc, in first two years of the scenario.

Downside scenarios

The progress of the pandemic and the ongoing public policy response continues to be a key source of risk. Downside scenarios assume that new strains of the virus result in an acceleration in infection rates and increased pressure on public health services, necessitating restrictions on activity. The reimposition of such restrictions could be assumed to have damaging effect on consumer and business confidence.

Government fiscal programmes in advanced economies in 2020 and 2021 were supported by accommodative actions taken by central banks. These measures have provided households and firms with significant support. An inability or unwillingness to continue with such support or the untimely withdrawal of support present a downside risk to growth.

While Covid-19 and related risks dominate the economic outlook, geopolitical risks also present a threat. These risks include:

- continued differences between the US and other countries with China, which could affect sentiment and restrict global economic activity; and
- the re-emergence of social unrest in Hong Kong.

The consensus Downside Scenario

In the consensus Downside scenario, the economic recovery is considerably weaker compared with the Central scenario. GDP growth is expected to be lower, unemployment rates rise moderately and asset and commodity prices fall, before gradually recovering towards their long-run trend expectations. The scenario is consistent with the key downside risks articulated above. Further outbreaks of Covid-19, coupled with delays in vaccination programmes, lead to longer-lasting restrictions on economic activity in this scenario. Other global risks also increase and drive increased risk-aversion in asset markets.

The following table describes key macroeconomic variables and the probabilities assigned in the consensus Downside scenario.

Consensus Downside scenario worst outcome

	Hong Kong	Mainland China
	%	%
GDP growth rate	(1.0) (4Q22)	2.3 (4Q22)
Unemployment rate	5.6 (2Q22)	4.0 (2Q22)
House price growth	(7.9) (4Q22)	(3.7) (2Q22)
Short-term interest rate	0.4 (1Q22)	2.9 (1Q22)
Probability	20.0	10.0

Note: Extreme point in the consensus Downside is 'worst outcome' in the scenario, i.e. lowest GDP growth, highest unemployment rate etc, in first two years of the scenario.

Downside 2 scenario

The Downside 2 scenario features a deep global recession. In this scenario, new Covid-19 variants emerge that cause infections to rise sharply in 2022, resulting in setbacks to vaccination programmes and the rapid imposition of restrictions on mobility and travel across some countries. The scenario also assumes governments and central banks are unable to significantly increase fiscal and monetary support, which results in abrupt corrections in labour and asset markets.

The following table describes key macroeconomic variables and the probabilities assigned in the Downside 2 scenario.

Downside 2 scenario worst outcome

	Hong Kong	Mainland China
	%	%
GDP growth rate	(8.2) (4Q22)	(4.8) (4Q22)
Unemployment rate	6.1 (4Q22)	5.4 (4Q23)
House price growth	(17.7) (4Q22)	(24.8) (4Q22)
Short-term interest rate	1.3 (2Q22)	4.0 (2Q22)
Probability	5.0	5.0

Note: Extreme point in the Downside 2 is 'worst outcome' in the scenario, for example lowest GDP growth and the highest unemployment rate, in first two years of the scenario.

Scenario weighting

In reviewing the economic conjuncture, the level of uncertainty and risks, management has considered both global and country-specific factors. This has led management to assign scenario probabilities that are tailored to its view of uncertainty in individual markets.

To inform its view, management have considered the progression of the virus in individual markets, the efficacy of vaccine roll-outs, the degree of current and expected future government support and connectivity with other countries. Management has also been guided by the policy response and economic performance through the pandemic, as well as the evidence that economies have adapted as the virus has progressed.

A key consideration in the fourth quarter was the emergence of the new variant, Omicron. The virulence and severity of the new strain, in addition to the continued efficacy of vaccines against it, was unknown when the variant first emerged. Management therefore determined that uncertainty attached to forecasts has increased and sought to reflect this in scenario weightings.

China's significant capacity to extend policy support to the economy and manage through Covid related disruptions, led management to conclude that the outlook for mainland China was the least uncertain of our key markets. The Central scenario was given an 80% probability while a total of 15% has been assigned to the two Downside scenarios. In Hong Kong, the combination of recurrent outbreaks and the other risks outlined above, led management to assign a 25% weight to the two Downside scenarios.

Critical accounting estimates and judgements

The calculation of ECL under HKFRS 9 involves significant judgements, assumptions and estimates. Despite a general recovery in economic conditions during 2021, the level of estimation uncertainty and judgement has remained high during 2021 as a result of the ongoing economic effects of the Covid-19 pandemic and other sources of economic instability, including significant judgements relating to:

- the selection and weighting of economic scenarios, given rapidly changing economic conditions in an unprecedented manner, uncertainty as to the effect of government and central bank support measures designed to alleviate adverse economic impacts, and a wider distribution of economic forecasts than before the pandemic. The key judgements are the length of time over which the economic effects of the pandemic will occur and the speed and shape of recovery. The main factors include the effectiveness of pandemic containment measures, the pace of roll-out and effectiveness of vaccines, and the emergence of new variants of the virus, plus a range of geopolitical uncertainties, which together represent a high degree of estimation uncertainty, particularly in assessing Downside scenarios;
- estimating the economic effects of those scenarios on ECL, where there is no observable historical trend that can be reflected in the models that will accurately represent the effects of the economic changes of the severity and speed brought about by the Covid-19 pandemic and recovery from those conditions. Modelled assumptions and linkages between economic factors and credit losses may underestimate or overestimate ECL in these conditions, and there is significant uncertainty in the estimation of parameters such as collateral values and loss severity; and
- the identification of customers experiencing significant increases in credit risk and credit impairment, particularly where those customers have accepted payment deferrals and other reliefs designed to address short-term liquidity issues given muted default experience to date. The use of segmentation techniques for indicators of significant increases in credit risk involves significant estimation uncertainty.

How economic scenarios are reflected in of ECL calculations

Models are used to reflect economic scenarios on ECL estimates. As described above, modelled assumptions and linkages based on historical information could not alone produce relevant information under the conditions experienced in 2021, and judgemental adjustments were still required to support modelled outcomes.

We have developed a globally consistent methodologies for the application of forward economic guidance into the calculation of ECL for wholesale and retail credit risk. These standard approaches are described below, followed by the management judgemental adjustments made, including those to reflect the circumstances experienced in 2021.

For our wholesale portfolios, a global methodology is used for the estimation of the term structure of probability of default ('PD') and loss given default ('LGD'). For PDs, we consider the correlation of forward economic guidance to default rates for a particular industry in a country. For LGD calculations we consider the correlation of forward economic guidance to collateral values and realisation rates for a particular country and industry. PDs and LGDs are estimated for the entire term structure of each instrument.

For impaired loans, LGD estimates take into account independent recovery valuations provided by external consultants where available, or internal forecasts corresponding to anticipated economic conditions and individual company conditions. In estimating the ECL on impaired loans that are individually considered not to be significant, we incorporate forward economic guidance proportionate to the probability-weighted outcome and the Central scenario outcome for non-stage 3 populations.

For our retail portfolios, the impact of economic scenarios on PD is modelled at a portfolio level. Historical relationships between observed default rates and macroeconomic variables are integrated into HKFRS 9 ECL estimates by using economic response models. The impact of these scenarios on PD is modelled over a period equal to the remaining maturity of the underlying asset or assets. The impact on LGD is modelled for mortgage portfolios by forecasting future loan-to-value ('LTV') profiles for the remaining maturity of the asset by using national level forecasts of the house price index and applying the corresponding LGD expectation.

These models are based largely on historical observations and correlations with default rates. Management judgemental adjustments are described below.

Management judgemental adjustments

In the context of HKFRS 9, management judgemental adjustments are short-term increases or decreases to the ECL at either a customer, segment or portfolio level to account for late-breaking events, model and data limitations and deficiencies, and expert credit judgement applied following management review and challenge.

At 31 December 2021, management judgements were applied to reflect credit risk dynamics not captured by our models. The drivers of the management judgemental adjustments reflect the changing economic outlook and evolving risks across our geographies.

Where the macroeconomic and portfolio risk outlook continues to improve, supported by low levels of observed defaults, adjustments initially taken to reflect increased risk expectations have been retired or reduced.

However, other adjustments have increased where modelled outcomes are overly sensitive and not aligned to observed changes in the risk of the underlying portfolios during the pandemic, or where sector-specific risks are not adequately captured.

The effect of management judgmental adjustments are considered for balances and ECL when determining whether or not a significant increase in credit risk has occurred and are attributed or allocated to a stage as appropriate. This is in accordance with the internal adjustments framework.

Management judgmental adjustments are reviewed under the governance process for HKFRS 9 (as detailed in the unaudited section 'Credit risk management' on page 29). Review and challenge focuses on the rationale and quantum of the adjustments with further review by the second line of defence where significant. For some management judgemental adjustments, internal frameworks establish the conditions under which these adjustments should no longer be required and as such are considered as part of the governance process. This internal governance process allows management judgemental adjustments to be reviewed regularly and, where possible, to reduce the reliance on these through model recalibration or redevelopment, as appropriate.

Risk

Management judgemental adjustments made in estimating the scenario-weighted reported ECL at 31 December 2021 are set out in the following table. The table includes adjustments in relation to data and model limitations, including those driven by late-breaking events and sector specific risks and as a result of the regular process of model development and implementation.

Management judgemental adjustments to ECL as at 31 December 2021¹

	Retail HK\$bn	Wholesale HK\$bn	Total HK\$bn
Low-risk counterparties (banks, sovereigns and government entities) ²	0.1	(0.2)	(0.1)
Corporate lending adjustments		4.1	4.1
Retail model default suppression adjustments	—		—
Macroeconomic-related adjustments	(0.4)		(0.4)
Pandemic-related economic recovery adjustments	0.6		0.6
Other retail lending adjustments	0.7		0.7
Total	1.0	3.9	4.9

Management judgemental adjustments to ECL as at 31 December 2020¹

	Retail HK\$bn	Wholesale HK\$bn	Total HK\$bn
Low-risk counterparties (banks, sovereigns and government entities) ²	0.2	—	0.2
Corporate lending adjustments		3.0	3.0
Retail model default suppression adjustments	1.3		1.3
Macroeconomic-related adjustments ³	0.9		0.9
Pandemic-related economic recovery adjustments	—		—
Other retail lending adjustments ³	0.3		0.3
Total	2.7	3.0	5.7

1 Management judgemental adjustments presented in the table reflect increases in ECL.

2 Low-risk counterparties for Retail is comprised of adjustments relating to WPB Insurance only.

3 Retail lending probability of default adjustments are reported under 'Macroeconomic-related adjustments' and 'Other retail lending adjustments'. Comparatives are re-presented to conform to the current year's presentation.

Management judgemental adjustments at 31 December 2021 were an increase to ECL of HK\$3.9bn for the wholesale portfolio and an increase to ECL of HK\$1bn for the retail portfolio.

During 2021, management judgemental adjustments reflected an evolving macroeconomic outlook and the relationship of the modelled ECL to this outlook and to late-breaking and sector specific risks.

At 31 December 2021, wholesale management judgemental adjustments were an ECL increase of HK\$0.9bn mainly from increase in Corporate lending adjustment by HK\$1.2bn. These principally reflected the outcome of management judgements for high-risk and vulnerable sectors in some of our key markets, supported by credit experts' input, portfolio risk metrics, quantitative analyses and benchmarks. Considerations include risk of individual exposures under different macroeconomic scenarios and comparison of key risk metrics to pre-pandemic levels, resulting in either releases or increases to ECL in each geography.

The increase in adjustment impact relative to 31 December 2020 was mostly driven by management judgements as a result of the effect of further improvement of macroeconomic scenarios on modelled outcomes and increased dislocation of modelled outcomes to management expectations for high-risk sectors, mainly for real estate sector. The adjustment for real estate was recommended focusing on the uncertainty for the higher risk China commercial real estate offshore exposures booked in Hong Kong on account of tightening liquidity and increased refinancing risks, resulting in the downgrade of some previously highly-rated borrowers. The increase management adjustment for real estate sector was partly offset by adjustment releases in other sectors

resulted from improvement in industry outlook and portfolio quality.

At 31 December 2021, retail management judgemental adjustments were an ECL increase of HK\$1.0bn (31 December 2020: HK\$2.7bn increase):

- Pandemic-related economic recovery adjustments increased ECL by HK\$0.6bn (31 December 2020: HK\$0) to adjust for the effects of the volatile pace of recovery from the pandemic. This is where in management's judgement, supported by quantitative analyses of portfolio and economic metrics, modelled outcomes are overly sensitive given the limited observed deterioration in the underlying portfolio during the pandemic.
- Other retail lending adjustments increased ECL by HK\$0.7bn (31 December 2020: HK\$0.3bn) and macroeconomic-related adjustments decreased ECL by HK\$0.4bn (31 December 2020: HK\$0.9bn increase). These were primarily to address areas such as model recalibration and redevelopment, customer relief and data limitations.
- All retail model default suppression adjustments were removed in 2021.

Economic scenarios sensitivity analysis of ECL estimates

Management considered the sensitivity of the ECL outcome against the economic forecasts as part of the ECL governance process by recalculating the ECL under each scenario described above for selected portfolios, applying a 100% weighting to each scenario in turn. The weighting is reflected in both the determination of a significant increase in credit risk and the measurement of the resulting ECL.

The ECL calculated for the Upside and Downside scenarios should not be taken to represent the lower and upper limits of possible ECL outcomes. The impact of defaults that might occur in the future under different economic scenarios is captured by recalculating ECL for loans at the balance sheet date.

There is a particularly high degree of estimation uncertainty in numbers representing more severe risk scenarios when assigned a 100% weighting.

For wholesale credit risk exposures, the sensitivity analysis excludes ECL and financial instruments related to defaulted obligors because the measurement of ECL is relatively more sensitive to credit factors specific to the obligor than future economic scenarios. Therefore, it is impracticable to separate the effect of macroeconomic factors in individual assessments. When compared with the performing portfolio, the defaulted obligors represent a significantly smaller portion of the wholesale exposures, even if accounting for the larger portion of the allowance for ECL.

For retail credit risk exposures, the sensitivity analysis includes ECL for loans and advances to customers related to defaulted obligors. This is because the retail ECL for secured mortgage portfolios including loans in all stages is sensitive to macroeconomic variables.

Wholesale and retail sensitivity

The wholesale and retail sensitivity analysis is stated inclusive of management judgemental adjustments, as appropriate to each scenario. The results tables exclude portfolios held by the insurance business and small portfolios, and as such cannot be directly compared to personal and wholesale lending presented in other credit risk tables. Additionally in both the wholesale and retail analysis, the comparative period results for additional and alternative Downside scenarios are not directly comparable to the current period, because they reflect different risk profiles relative with the Consensus scenarios for the period end.

Wholesale analysis

HKFRS 9 ECL sensitivity to future economic conditions¹

	Hong Kong	Mainland China
	HK\$m	HK\$m
ECL coverage of financial instruments subject to significant measurement uncertainty at 31 December 2021²		
Reported ECL	5,981	1,162
Consensus scenarios ECL		
Central scenario	5,085	881
Upside scenario	3,712	281
Downside scenario	7,674	1,684
Alternative (Downside 2) scenario ECL	14,575	6,286

HKFRS 9 ECL sensitivity to future economic conditions¹

	Hong Kong	Mainland China
	HK\$m	HK\$m
ECL coverage of financial instruments subject to significant measurement uncertainty at 31 December 2020 ²		
Reported ECL	3,675	897
Consensus scenarios		
Central scenario	3,009	718
Upside scenario	1,638	217
Downside scenario	5,208	1,954
Alternative scenarios	10,568	8,979

- ¹ Excludes ECL and financial instruments relating to defaulted obligors because the measurement of ECL is relatively more sensitive to credit factors specific to the obligor than future economic scenarios.
- ² Includes off-balance sheet financial instruments that are subject to significant measurement uncertainty.

At 31 December 2021, the most significant level of ECL sensitivity related to the judgements over the China offshore real estate portfolio booked in Hong Kong.

Retail analysis

HKFRS 9 ECL sensitivity to future economic conditions¹

	Reported ECL	Central Scenario	Upside Scenario	Downside Scenario	Alternative Scenarios
	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
ECL coverage of loans and advances to customers					
At 31 December 2021²					
Hong Kong	2,554	2,395	1,884	2,802	4,198

HKFRS 9 ECL sensitivity to future economic conditions¹

	Reported ECL	Central Scenario	Upside Scenario	Downside Scenario	Alternative Scenarios
	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
ECL coverage of loans and advances to customers					
At 31 December 2020 ²					
Hong Kong	2,959	2,822	2,711	3,043	4,153

- ¹ ECL sensitivities exclude portfolios using less complex modelling approaches.
- ² ECL sensitivity includes only on-balance sheet financial instruments to which HKFRS 9 impairment requirements are applied.

Risk

Reconciliation of changes in gross carrying/nominal amount and allowances for loans and advances to banks and customers, including loan commitments and financial guarantees

(Unaudited)

The following disclosure provides a reconciliation by stage of the group's gross carrying/nominal amount and allowances for loans and advances to banks and customers, including loan commitments and financial guarantees. Movements are calculated on a quarterly basis and therefore fully capture stage movements between quarters. If movements were calculated on a year-to-date basis they would only reflect the opening and closing position of the financial instrument.

The transfers of financial instruments represents the impact of stage transfers upon the gross carrying/nominal amount and associated allowance for ECL.

The net remeasurement of ECL arising from stage transfers represents the increase or decrease due to these transfers, for example, moving from a 12-month (stage 1) to a lifetime (stage 2) ECL measurement basis. Net remeasurement excludes the underlying customer risk rating ('CRR')/probability of default ('PD') movements of the financial instruments transferring stage. This is captured, along with other credit quality movements in the 'changes in risk parameters – credit quality' line item.

Changes in 'New financial assets originated or purchased', 'assets derecognised (including final repayments)' and 'changes to risk parameters – further lending/repayments' represent the impact from volume movements within the group's lending portfolio.

Reconciliation of changes in gross carrying/nominal amount and allowances for loans and advances to banks and customers, including loan commitments and financial guarantees

(Audited)

	Stage 1		Stage 2		Stage 3		POCI		Total	
	Gross carrying/nominal amount	Allowance for ECL	Gross carrying/nominal amount	Allowance for ECL	Gross carrying/nominal amount	Allowance for ECL	Gross carrying/nominal amount	Allowance for ECL	Gross carrying/nominal amount	Allowance for ECL
	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
At 1 Jan 2021	5,254,097	(4,978)	567,753	(6,781)	35,984	(17,739)	855	(362)	5,858,689	(29,860)
Transfers of financial instruments:	(82,216)	(1,758)	62,505	3,758	19,711	(2,000)	–	–	–	–
– transfers from stage 1 to stage 2	(790,973)	1,689	790,973	(1,689)	–	–	–	–	–	–
– transfers from stage 2 to stage 1	716,431	(3,412)	(716,431)	3,412	–	–	–	–	–	–
– transfers to stage 3	(9,067)	104	(14,911)	2,238	23,978	(2,342)	–	–	–	–
– transfers from stage 3	1,393	(139)	2,874	(203)	(4,267)	342	–	–	–	–
Net remeasurement of ECL arising from transfer of stage	–	1,686	–	(2,347)	–	(107)	–	–	–	(768)
New financial assets originated and purchased	1,621,239	(1,183)	–	–	–	–	973	–	1,622,212	(1,183)
Assets derecognised (including final repayments)	(1,086,986)	314	(120,885)	674	(5,745)	1,165	(9)	–	(1,213,625)	2,153
Changes to risk parameters – further lending/repayment	(93,466)	1,078	19,540	87	(2,332)	998	(263)	25	(76,521)	2,188
Changes in risk parameters – credit quality	–	2,078	–	(4,768)	–	(6,612)	–	49	–	(9,253)
Changes to model used for ECL calculation	–	(126)	–	(377)	–	7	–	–	–	(496)
Assets written off	–	–	–	–	(4,531)	4,531	–	–	(4,531)	4,531
Credit-related modifications that resulted in derecognition	–	–	–	–	(973)	–	–	–	(973)	–
Foreign exchange	(23,231)	(28)	684	18	(478)	65	2	(1)	(23,023)	54
Others	43	1	–	(1)	3	(1)	–	(45)	46	(46)
At 31 Dec 2021	5,589,480	(2,916)	529,597	(9,737)	41,639	(19,693)	1,558	(334)	6,162,274	(32,680)
ECL income statement charge for the year										(7,359)
Recoveries										1,011
Others										(169)
Total ECL income statement charge for the year										(6,517)

	At 31 Dec 2021		Year ended 31 Dec 2021
	Gross carrying/nominal amount	Allowance for ECL	ECL charge
	HK\$m	HK\$m	HK\$m
As above	6,162,274	(32,680)	(6,517)
Other financial assets measured at amortised cost	2,114,301	(639)	(184)
Non-trading reverse repurchase agreement commitments	3,605	–	–
Performance and other guarantees not considered for HKFRS 9	N/A	N/A	145
Amounts due from Group companies	99,604	–	–
Summary of financial instruments to which the impairment requirements in HKFRS 9 are applied/Summary consolidated income statement	8,379,784	(33,319)	(6,556)
Debt instruments measured at FVOCI	1,541,909	(121)	17
Total allowance for ECL/total income statement ECL charge for the year	N/A	(33,440)	(6,539)

Reconciliation of changes in gross carrying/nominal amount and allowances for loans and advances to banks and customers, including loan commitments and financial guarantees (continued)

(Audited)

	Stage 1		Stage 2		Stage 3		POCI		Total	
	Gross carrying/nominal amount	Allowance for ECL	Gross carrying/nominal amount	Allowance for ECL	Gross carrying/nominal amount	Allowance for ECL	Gross carrying/nominal amount	Allowance for ECL	Gross carrying/nominal amount	Allowance for ECL
	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
At 1 Jan 2020	5,383,650	(3,839)	331,701	(4,874)	16,775	(9,032)	1,152	(300)	5,733,278	(18,045)
Transfers of financial instruments:	(288,695)	(2,585)	259,962	4,322	28,733	(1,737)	—	—	—	—
– transfers from stage 1 to stage 2	(975,023)	2,504	975,023	(2,504)	—	—	—	—	—	—
– transfers from stage 2 to stage 1	702,624	(5,130)	(702,624)	5,130	—	—	—	—	—	—
– transfers to stage 3	(17,478)	95	(14,362)	1,821	31,840	(1,916)	—	—	—	—
– transfers from stage 3	1,182	(54)	1,925	(125)	(3,107)	179	—	—	—	—
Net remeasurement of ECL arising from transfer of stage	—	1,978	—	(2,598)	—	(5,702)	—	—	—	(6,322)
New financial assets originated and purchased	1,422,036	(1,743)	—	—	—	—	2	—	1,422,038	(1,743)
Assets derecognised (including final repayments)	(1,093,254)	320	(182,195)	687	(4,244)	1,357	—	—	(1,279,693)	2,364
Changes to risk parameters – further lending/repayment	(235,616)	(1,037)	140,675	4	41	606	(293)	10	(95,193)	(417)
Changes in risk parameters – credit quality	—	1,501	—	(6,709)	—	(9,339)	—	(71)	—	(14,618)
Changes to model used for ECL calculation	—	489	—	2,626	—	26	—	—	—	3,141
Assets written off	—	—	—	—	(6,064)	6,058	—	—	(6,064)	6,058
Credit-related modifications that resulted in derecognition	—	—	—	—	(4)	2	—	—	(4)	2
Foreign exchange	65,974	(67)	17,610	(237)	744	14	(6)	(1)	84,322	(291)
Others	2	5	—	(2)	3	8	—	—	5	11
At 31 Dec 2020	5,254,097	(4,978)	567,753	(6,781)	35,984	(17,739)	855	(362)	5,858,689	(29,860)
ECL income statement charge for the year										(17,595)
Recoveries										733
Others										(154)
Total ECL income statement charge for the year										(17,016)

	At 31 Dec 2020		Year ended 31 Dec 2020
	Gross carrying/nominal amount	Allowance for ECL	
	HK\$m	HK\$m	
As above	5,858,689	(29,860)	(17,016)
Other financial assets measured at amortised cost	1,869,268	(713)	(452)
Non-trading reverse repurchase agreement commitments	1,108	—	—
Performance and other guarantees not considered for HKFRS 9	N/A	N/A	(147)
Amounts due from Group companies	82,849	—	—
Summary of financial instruments to which the impairment requirements in HKFRS 9 are applied/Summary consolidated income statement	7,811,914	(30,573)	(17,615)
Debt instruments measured at FVOCI	1,689,820	(167)	(104)
Total allowance for ECL/total income statement ECL charge for the year	N/A	(30,740)	(17,719)

Risk

Credit quality

Credit quality of financial instruments

(Audited)

We assess the credit quality of all financial instruments that are subject to credit risk. The credit quality of financial instruments is a point-in-time assessment of the probability of default of financial instruments, whereas stages 1 and 2 are determined based on relative deterioration of credit quality since initial recognition. Accordingly, for non-credit-impaired financial instruments, there is

no direct relationship between the credit quality assessment and stages 1 and 2, though typically the lower credit quality bands exhibit a higher proportion in stage 2.

The five credit quality classifications each encompass a range of granular internal credit rating grades assigned to wholesale and retail lending businesses and the external ratings attributed by external agencies to debt securities, as shown in the table on page 30 (unaudited).

Distribution of financial instruments by credit quality at 31 December 2021

(Audited)

	Gross carrying/notional amount					Total HK\$m	Allowance for ECL HK\$m	Net HK\$m
	Strong HK\$m	Good HK\$m	Satisfactory HK\$m	Sub- standard HK\$m	Credit impaired HK\$m			
In-scope for HKFRS 9 impairment								
Loans and advances to customers held at amortised cost	2,076,114	876,388	838,222	39,342	42,890	3,872,956	(32,017)	3,840,939
– personal	1,290,946	136,390	91,809	3,008	10,158	1,532,311	(5,966)	1,526,345
– corporate and commercial	648,930	653,853	685,887	36,117	32,624	2,057,411	(25,706)	2,031,705
– non-bank financial institutions	136,238	86,145	60,526	217	108	283,234	(345)	282,889
Loans and advances to banks	423,839	5,750	2,611	86	–	432,286	(39)	432,247
Cash and balances at central banks	269,108	7,663	86	–	–	276,857	–	276,857
Items in the course of collection from other banks	21,632	–	–	–	–	21,632	–	21,632
Hong Kong Government certificates of indebtedness	332,044	–	–	–	–	332,044	–	332,044
Reverse repurchase agreements – non-trading	530,900	144,373	128,502	–	–	803,775	–	803,775
Financial investments held at amortised cost	406,588	88,765	7,644	–	–	502,997	(433)	502,564
Prepayments, accrued income and other assets	95,520	45,945	34,642	599	290	176,996	(206)	176,790
Debt instruments measured at fair value through other comprehensive income ¹	1,438,300	72,697	30,085	–	–	1,541,082	(121)	1,540,961
Out-of-scope for HKFRS 9 impairment								
Trading assets	389,531	65,272	21,676	518	1,033	478,030	–	478,030
Other financial assets designated and otherwise mandatorily measured at fair value through profit or loss	25,738	2,386	900	–	–	29,024	–	29,024
Derivatives	161,471	49,735	5,222	45	–	216,473	–	216,473
Total gross carrying amount on-balance sheet	6,170,785	1,358,974	1,069,590	40,590	44,213	8,684,152	(32,816)	8,651,336
Percentage of total credit quality	71%	16%	12%	–%	1%	100%		
Loan and other credit related commitments	1,732,590	699,474	491,037	19,400	983	2,943,484	(580)	2,942,904
Financial guarantee and similar contracts	135,199	151,565	64,012	3,647	456	354,879	(204)	354,675
Total nominal off-balance sheet amount	1,867,789	851,039	555,049	23,047	1,439	3,298,363	(784)	3,297,579

The above table does not include balances due from Group companies.

¹ For the purposes of this disclosure, gross carrying value is defined as the amortised cost of a financial asset, before adjusting for any loss allowance. As such the gross carrying value of debt instruments at FVOCI as presented above will not reconcile to the balance sheet as it excludes fair value gains and losses.

Distribution of financial instruments by credit quality at 31 December 2020 (continued)

(Audited)

	Gross carrying/notional amount						Allowance for ECL	Net
	Strong	Good	Satisfactory	Sub-standard	Credit impaired	Total		
	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
In-scope for HKFRS 9 impairment								
Loans and advances to customers held at amortised cost	1,926,557	861,848	832,072	40,484	36,607	3,697,568	(28,887)	3,668,681
– personal	1,220,972	146,492	70,098	5,723	9,062	1,452,347	(7,144)	1,445,203
– corporate and commercial	604,310	631,415	702,801	34,085	27,367	1,999,978	(21,448)	1,978,530
– non-bank financial institutions	101,275	83,941	59,173	676	178	245,243	(295)	244,948
Loans and advances to banks	393,732	8,441	1,650	85	–	403,908	(24)	403,884
Cash and balances at central banks	338,968	8,332	699	–	–	347,999	–	347,999
Items in the course of collection from other banks	21,943	–	–	–	–	21,943	–	21,943
Hong Kong Government certificates of indebtedness	313,404	–	–	–	–	313,404	–	313,404
Reverse repurchase agreements – non-trading	315,534	135,842	68,968	–	–	520,344	–	520,344
Financial investments held at amortised cost	389,024	75,792	10,737	–	–	475,553	(527)	475,026
Prepayments, accrued income and other assets	100,460	46,003	42,535	747	280	190,025	(186)	189,839
Debt instruments measured at fair value through other comprehensive income ¹	1,579,022	69,909	30,197	–	–	1,679,128	(167)	1,678,961
Out-of-scope for HKFRS 9 impairment								
Trading assets	360,104	47,456	24,962	1,507	–	434,029	–	434,029
Other financial assets designated and otherwise mandatorily measured at fair value through profit or loss	23,285	6,068	2,197	–	–	31,550	–	31,550
Derivatives	258,643	75,131	11,431	318	2	345,525	–	345,525
Total gross carrying amount on-balance sheet	6,020,676	1,334,822	1,025,448	43,141	36,889	8,460,976	(29,791)	8,431,185
Percentage of total credit quality	71%	16%	12%	1%	0%	100%		
Loan and other credit related commitments	1,627,804	704,123	464,521	14,968	1,978	2,813,394	(825)	2,812,569
Financial guarantee and similar contracts	101,381	121,415	78,434	4,046	879	306,155	(432)	305,723
Total nominal off-balance sheet amount	1,729,185	825,538	542,955	19,014	2,857	3,119,549	(1,257)	3,118,292

The above table does not include balances due from Group companies.

¹ For the purposes of this disclosure, gross carrying value is defined as the amortised cost of a financial asset, before adjusting for any loss allowance. As such the gross carrying value of debt instruments at FVOCI as presented above will not reconcile to the balance sheet as it excludes fair value gains and losses.

Risk

Distribution of financial instruments to which the impairment requirements in HKFRS 9 are applied, by credit quality and stage allocation

(Audited)

	Gross carrying/notional amount						Allowance for ECL HK\$m	Net HK\$m
	Strong HK\$m	Good HK\$m	Satisfactory HK\$m	Sub- standard HK\$m	Credit impaired HK\$m	Total HK\$m		
Loans and advances to banks	423,839	5,750	2,611	86	–	432,286	(39)	432,247
– stage 1	423,561	5,241	2,244	33	–	431,079	(36)	431,043
– stage 2	278	509	367	53	–	1,207	(3)	1,204
– stage 3	–	–	–	–	–	–	–	–
– POCI	–	–	–	–	–	–	–	–
Loans and advances to customers at amortised cost	2,076,114	876,388	838,222	39,342	42,890	3,872,956	(32,017)	3,840,939
– stage 1	2,034,725	732,858	577,785	4,066	–	3,349,434	(2,603)	3,346,831
– stage 2	41,389	143,530	260,437	35,276	–	480,632	(9,426)	471,206
– stage 3	–	–	–	–	41,332	41,332	(19,654)	21,678
– POCI	–	–	–	–	1,558	1,558	(334)	1,224
Other financial assets measured at amortised cost	1,655,792	286,746	170,874	599	290	2,114,301	(639)	2,113,662
– stage 1	1,651,199	278,343	163,190	115	–	2,092,847	(482)	2,092,365
– stage 2	4,593	8,403	7,684	484	–	21,164	(140)	21,024
– stage 3	–	–	–	–	289	289	(17)	272
– POCI	–	–	–	–	1	1	–	1
Loan and other credit-related commitments	1,347,783	311,803	162,448	4,030	271	1,826,335	(580)	1,825,755
– stage 1	1,344,540	297,202	138,722	1,889	–	1,782,353	(260)	1,782,093
– stage 2	3,243	14,601	23,726	2,141	–	43,711	(295)	43,416
– stage 3	–	–	–	–	271	271	(25)	246
– POCI	–	–	–	–	–	–	–	–
Financial guarantees	11,350	12,188	9,883	841	40	34,302	(44)	34,258
– stage 1	11,127	10,890	8,038	159	–	30,214	(14)	30,200
– stage 2	223	1,298	1,845	682	–	4,048	(14)	4,034
– stage 3	–	–	–	–	40	40	(16)	24
– POCI	–	–	–	–	–	–	–	–
At 31 Dec 2021	5,514,878	1,492,875	1,184,038	44,898	43,491	8,280,180	(33,319)	8,246,861
Debt instruments at FVOCI ¹								
– stage 1	1,438,161	72,697	30,085	–	–	1,540,943	(121)	1,540,822
– stage 2	139	–	–	–	–	139	–	139
– stage 3	–	–	–	–	–	–	–	–
– POCI	–	–	–	–	–	–	–	–
At 31 Dec 2021	1,438,300	72,697	30,085	–	–	1,541,082	(121)	1,540,961

The above table does not include balances due from Group companies.

¹ For the purposes of this disclosure, gross carrying value is defined as the amortised cost of a financial asset, before adjusting for any loss allowance. As such the gross carrying value of debt instruments at FVOCI as presented above will not reconcile to the balance sheet as it excludes fair value gains and losses.

Distribution of financial instruments to which the impairment requirements in HKFRS 9 are applied, by credit quality and stage allocation (continued)

(Audited)

	Gross carrying/notional amount						Allowance for ECL	Net
	Strong	Good	Satisfactory	Sub-standard	Credit impaired	Total		
	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m	HK\$m
Loans and advances to banks	393,732	8,441	1,650	85	—	403,908	(24)	403,884
– stage 1	392,766	7,082	1,408	—	—	401,256	(19)	401,237
– stage 2	966	1,359	242	85	—	2,652	(5)	2,647
– stage 3	—	—	—	—	—	—	—	—
– POCI	—	—	—	—	—	—	—	—
Loans and advances to customers at amortised cost	1,926,557	861,848	832,072	40,484	36,607	3,697,568	(28,887)	3,668,681
– stage 1	1,907,066	697,619	541,177	5,059	—	3,150,921	(4,393)	3,146,528
– stage 2	19,491	164,229	290,895	35,425	—	510,040	(6,438)	503,602
– stage 3	—	—	—	—	35,752	35,752	(17,694)	18,058
– POCI	—	—	—	—	855	855	(362)	493
Other financial assets measured at amortised cost	1,479,334	265,966	122,941	747	280	1,869,268	(713)	1,868,555
– stage 1	1,475,066	263,384	115,572	132	—	1,854,154	(452)	1,853,702
– stage 2	4,268	2,582	7,369	615	—	14,834	(221)	14,613
– stage 3	—	—	—	—	279	279	(40)	239
– POCI	—	—	—	—	1	1	—	1
Loan and other credit-related commitments	1,270,557	328,523	122,817	3,883	183	1,725,963	(825)	1,725,138
– stage 1	1,269,249	307,836	98,578	1,579	—	1,677,242	(514)	1,676,728
– stage 2	1,308	20,687	24,239	2,304	—	48,538	(281)	48,257
– stage 3	—	—	—	—	183	183	(30)	153
– POCI	—	—	—	—	—	—	—	—
Financial guarantees	7,694	12,634	10,896	1,084	50	32,358	(124)	32,234
– stage 1	7,272	11,095	7,374	45	—	25,786	(51)	25,735
– stage 2	422	1,539	3,522	1,039	—	6,522	(56)	6,466
– stage 3	—	—	—	—	50	50	(17)	33
– POCI	—	—	—	—	—	—	—	—
At 31 Dec 2020	5,077,874	1,477,412	1,090,376	46,283	37,120	7,729,065	(30,573)	7,698,492
Debt instruments at FVOCI ¹								
– stage 1	1,578,971	69,886	30,197	—	—	1,679,054	(167)	1,678,887
– stage 2	50	24	—	—	—	74	—	74
– stage 3	—	—	—	—	—	—	—	—
– POCI	—	—	—	—	—	—	—	—
At 31 Dec 2020	1,579,021	69,910	30,197	—	—	1,679,128	(167)	1,678,961

The above table does not include balances due from Group companies.

1 For the purposes of this disclosure, gross carrying value is defined as the amortised cost of a financial asset, before adjusting for any loss allowance. As such the gross carrying value of debt instruments at FVOCI as presented above will not reconcile to the balance sheet as it excludes fair value gains and losses.

Mainland China commercial real estate

(Unaudited)

The following table presents the group's total exposure to mainland China commercial real estate ('CRE') at 31 December 2021, by country/territory and credit quality. Mainland China reported real estate exposures comprise exposures booked in mainland China and offshore where the ultimate parent and beneficial owner is based in mainland China, and all exposures booked on mainland China balance sheets.

Mainland China CRE exposure

	Hong Kong	Mainland China	Rest of Asia-Pacific	Total
	HK\$m	HK\$m	HK\$m	HK\$m
Loans and advances to customers ¹	77,229	53,116	658	131,003
Guarantees issued and others ²	13,624	18,533	127	32,284
Total mainland China CRE exposure at 31 Dec 2021	90,853	71,649	785	163,287
Distribution of mainland China CRE exposure by credit quality				
– Strong	27,630	30,141	239	58,010
– Good	20,681	18,357	—	39,038
– Satisfactory	26,384	22,263	546	49,193
– Sub-standard	12,245	94	—	12,339
– Impaired	3,913	794	—	4,707
At 31 Dec 2021	90,853	71,649	785	163,287
Allowance for ECL	4,371	379	15	4,765

1 Amounts represent gross carrying amount.

2 Amounts represent nominal amount.

At 31 December 2021, the group had no direct credit exposure to developers in the 'red' category of the Chinese government's 'three red lines' framework. The group's exposures related to companies whose primary activities are focused on residential, commercial and mixed-use real estate activities. Lending is generally focused on tier 1 and 2 cities.

Booked in Hong Kong are higher risk exposures to a combination of state and privately owned enterprises. This portfolio had 89% of exposure booked with a credit quality of 'satisfactory' or above, but had a higher degree of uncertainty due to tightening liquidity and increased refinancing risks. In addition, offshore exposures are typically higher risk than onshore exposures. At 31 December 2021, the group had allowances for ECL of HK\$4,371m held against mainland China commercial real estate exposures booked in Hong Kong. We will continue to monitor the prevailing situation closely.

Risk

Credit-impaired loans

(Audited)

We determine that a financial instrument is credit impaired and in stage 3 by considering relevant objective evidence, primarily whether:

- contractual payments of either principal or interest are past due for more than 90 days;
- there are other indications that the borrower is unlikely to pay, such as when a concession has been granted to the borrower for economic or legal reasons relating to the borrower's financial condition; and
- the loan is otherwise considered to be in default. If such unlikelihood to pay is not identified at an earlier stage, it is deemed to occur when an exposure is 90 days past due, even where regulatory rules permit default to be defined based on 180 days past due. Therefore, the definitions of credit impaired and default are aligned as far as possible so that stage 3 represents all loans that are considered defaulted or otherwise credit impaired.

Customer relief programmes

(Unaudited)

In response to the Covid-19 outbreak, governments and regulators across Asia-Pacific have introduced a number of support measures

for both personal and wholesale customers in market-wide schemes. The following table presents the number of personal accounts/wholesale customers and the associated drawn loan values of customers under these schemes and HSBC-specific measures for major markets at 31 December 2021. When schemes expire, accounts and customers and their associated drawn balances are no longer reported under relief regardless of their repayment status. In relation to personal lending, the majority of relief measures, including payment holidays, relate to existing lending, while in wholesale lending the relief measures comprise payment holidays, refinancing of existing facilities and new lending under government-backed schemes.

At 31 December 2021, the gross carrying value of loans to personal customers under relief was HK\$10.5bn (31 December 2020: HK\$19.9bn). The decrease in personal customer relief during the year was driven by customers exiting relief measures. The gross carrying value of loans to wholesale customers under relief was HK\$67.3bn (31 December 2020: HK\$91.8bn). We continue to monitor the recoverability of loans granted under customer relief programs, including loans to a small number of customers that were subsequently found to be ineligible for such relief. The ongoing performance of such loans remains an area of uncertainty at 31 December 2021.

Personal lending

		31 Dec 2021			31 Dec 2020		
		Hong Kong	Other markets ¹	Total	Hong Kong	Other markets ¹	Total
Market-wide schemes							
Number of accounts in mortgage customer relief	000s	—	8	8	—	6	6
Drawn loan value of accounts in mortgage customer relief	HK\$m	—	5,284	5,284	—	7,518	7,518
Number of accounts in other personal lending customer relief	000s	—	33	33	—	37	37
Drawn loan value of accounts in other personal lending customer relief	HK\$m	—	4,455	4,455	—	2,818	2,818
HSBC-specific measures							
Number of accounts in mortgage customer relief	000s	—	—	—	3	—	3
Drawn loan value of accounts in mortgage customer relief	HK\$m	448	23	471	8,713	128	8,841
Number of accounts in other personal lending customer relief	000s	—	2	2	1	5	6
Drawn loan value of accounts in other personal lending customer relief	HK\$m	267	35	302	582	196	778
Total personal lending under market-wide schemes and HSBC-specific measures							
Number of accounts in mortgage customer relief	000s	—	8	8	3	6	9
Drawn loan value of accounts in mortgage customer relief	HK\$m	448	5,307	5,755	8,713	7,646	16,359
Number of accounts in other personal lending customer relief	000s	—	35	35	1	42	43
Drawn loan value of accounts in other personal lending customer relief	HK\$m	267	4,490	4,757	582	3,014	3,596
Market-wide schemes and HSBC-specific measures – mortgage relief as a proportion of total mortgages	%	0.1	1.3	0.5	1.2	2.0	1.5
Market-wide schemes and HSBC-specific measures – other personal lending relief as a proportion of total other personal lending loans and advance	%	0.1	4.2	1.3	0.2	2.7	1.0

Wholesale lending

		31 Dec 2021			31 Dec 2020		
		Hong Kong	Other markets	Total	Hong Kong	Other markets	Total
Market-wide schemes							
Number of customers under market-wide measures	000s	1	1	2	3	—	3
Drawn loan value of customers under market-wide schemes	HK\$m	22,671	5,152	27,823	82,356	5,178	87,534
HSBC-specific measures							
Number of customers under HSBC-specific measures	000s	5	1	6	—	—	—
Drawn loan value of customers under HSBC-specific measures	HK\$m	35,958	3,497	39,455	1	4,295	4,296
Total wholesale lending under market-wide schemes and HSBC-specific measures							
Number of customers	000s	6	2	8	3	—	3
Drawn loan values	HK\$m	58,629	8,649	67,278	82,357	9,473	91,830
Market-wide schemes and HSBC-specific measures as a proportion of total wholesale lending loans and advances	%	4.1	0.9	2.9	5.9	1.1	4.1

Number of accounts/customers below 500 is rounded to zero in the above table.

¹ Other markets in personal lending mainly represent Malaysia and Singapore.

The initial granting of customer relief does not automatically trigger a migration to stage 2 or 3. However, information provided by payment deferrals is considered in the context of other reasonable and supportable information. This forms part of the overall assessment for significant increase in credit risk and for credit impairment, to identify loans for which lifetime ECL is appropriate. An extension in payment deferral does not automatically result in stage 2 or stage 3. The key accounting and credit risk judgement to ascertain whether a significant increase in credit risk has occurred is whether the economic effects of Covid-19 on the customer are likely to be temporary over the lifetime of the loan, and do not indicate that a concession is being made in respect of financial difficulty that would be consistent with stage 3.

The following narratives provides further details on the major relief programmes offered in Hong Kong and Malaysia.

Wholesale lending

Given the persistence of the Covid-19 pandemic around the world and the severity of the ensuing impact on the global and local economy, HKMA – together with the Banking Sector SME Lending Coordination Mechanism – announced on 21 September 2021 that the Pre-approved Principal Payment Holiday Scheme would be extended for another six months until April 2022. HKMA and the coordination mechanism agreed that all principal payments of loans falling due between November 2021 and April 2022 by eligible corporate customers would be deferred by another six months except for repayments of trade loans, which would be deferred by 90 days.

Personal lending

Hong Kong

Mortgages

Customer relief granted on Hong Kong mortgages consists of deferred principal repayment of up to 12 months. This relief programme was available to existing HSBC mortgage loan customers who had a good repayment record during the six months prior to application. The scheme has now been closed to applications.

Malaysia

The Malaysian government has since April 2020 mandated several targeted relief assistance for customers impacted by Covid-19. The programs mainly comprised 6-month payment moratorium for unemployed or a reduction in monthly payment corresponding to reduction in income. The active relief takers in the portfolio comprises enrolments into the targeted relief assistance rolled out from 7 July 2021 where eligibility criteria was relaxed. The latest mandated relief assistance rolled out since 15 November 2021 is targeted at the lower income segment, requires documentary proof of unemployment or income reduction and a notification to the credit bureau. Repeated enrolments are allowed.

Collateral and other credit enhancements

(Audited)

Although collateral can be an important mitigant of credit risk, it is the group's general practice to lend on the basis of the customer's ability to meet their obligations out of cash flow resources rather than placing primary reliance on collateral and other credit risk enhancements. Depending on the customer's standing and the type of product, facilities may be provided without any collateral or other credit enhancements. For other lending, a charge over collateral is obtained and considered in determining the credit decision and pricing. In the event of default, the bank may utilise the collateral as a source of repayment.

Depending on its form, collateral can have a significant financial effect in mitigating our exposure to credit risk. Where there is sufficient collateral, an expected credit loss is not recognised. This

is the case for reverse repurchase agreements and for certain loans and advances to customers where the loan to value ('LTV') is very low.

Mitigants may include a charge on borrowers' specific assets, such as real estate or financial instruments. Other credit risk mitigants include short positions in securities and financial assets held as part of linked insurance/investment contracts where the risk is predominantly borne by the policyholder. Additionally, risk may be managed by employing other types of collateral and credit risk enhancements, such as second charges, other liens and unsupported guarantees. Guarantees are normally taken from corporates and export credit agencies. Corporates would normally provide guarantees as part of a parent/subsidiary relationship and span a number of credit grades. The export credit agencies will normally be investment grade.

Certain credit mitigants are used strategically in portfolio management activities. While single name concentrations arise in portfolios managed by Global Banking and Corporate Banking, it is only in Global Banking that their size requires the use of portfolio level credit mitigants. Across Global Banking, risk limits and utilisations, maturity profiles and risk quality are monitored and managed proactively. This process is key to the setting of risk appetite for these larger, more complex, geographically distributed customer groups. While the principal form of risk management continues to be at the point of exposure origination, through the lending decision-making process, Global Banking also utilises loan sales and credit default swap ('CDS') hedges to manage concentrations and reduce risk. These transactions are the responsibility of a dedicated Global Banking portfolio management team. Hedging activity is carried out within agreed credit parameters, and is subject to market risk limits and a robust governance structure. Where applicable, CDSs are entered into directly with a central clearing house counterparty. Otherwise, our exposure to CDS protection providers is diversified among mainly banking counterparties with strong credit ratings.

CDS mitigants are held at portfolio level and are not reported in the presentation below.

Collateral on loans and advances

(Audited)

The collateral measured in the following tables consists of fixed first charges on real estate, and charges over cash and marketable financial instruments. The values in the tables represent the expected market value on an open market basis; no adjustment has been made to the collateral for any expected costs of recovery. Marketable securities are measured at their fair value.

Other types of collateral such as unsupported guarantees and floating charges over the assets of a customer's business are not measured in the following tables. While such mitigants have value, often providing rights in insolvency, their assignable value is not sufficiently certain and they are therefore assigned no value for disclosure purposes.

The LTV ratios presented are calculated by directly associating loans and advances with the collateral that individually and uniquely supports each facility. When collateral assets are shared by multiple loans and advances, whether specifically or, more generally, by way of an all monies charge, the collateral value is pro-rated across the loans and advances protected by the collateral.

For credit-impaired loans, the collateral values cannot be directly compared with impairment allowances recognised. The LTV figures use open market values with no adjustments.

Impairment allowances are calculated on a different basis, by considering other cash flows and adjusting collateral values for costs of realising collateral.

Risk

Personal lending

(Unaudited)

The following table provides a quantification of the value of fixed charges we hold over specific assets where we have a history of enforcing, and are able to enforce, collateral in satisfying a debt in the event of the borrower failing to meet its contractual obligations, and where the collateral is cash or can be realised by sale in an established market. The collateral valuation excludes any adjustments for obtaining and selling the collateral and, in particular, loans shown as not collateralised or partially collateralised may also benefit from other forms of credit mitigants.

Residential mortgages including loan commitments by level of collateral

(Audited)

	2021		2020	
	Gross carrying/ nominal amount HK\$m	ECL coverage %	Gross carrying/ nominal amount HK\$m	ECL coverage %
Stage 1				
Fully collateralised	1,201,044	0.0	1,124,513	0.0
LTV ratio:				
– less than 70%	1,004,531	0.0	940,033	0.0
– 71% to 90%	169,824	0.0	148,242	0.0
– 91% to 100%	26,689	0.0	36,238	0.0
Partially collateralised (A):	256	0.0	2,852	0.0
– collateral value on A	242		2,762	
Total	1,201,300	0.0	1,127,365	0.0
Stage 2				
Fully collateralised	23,758	0.4	26,554	0.6
LTV ratio:				
– less than 70%	20,691	0.3	22,045	0.4
– 71% to 90%	2,860	1.0	4,059	1.4
– 91% to 100%	207	2.4	450	2.0
Partially collateralised (B):	28	3.6	116	3.4
– collateral value on B	23		111	
Total	23,786	0.4	26,670	0.6
Stage 3				
Fully collateralised	5,113	5.2	4,556	6.4
LTV ratio:				
– less than 70%	4,153	4.5	3,185	4.7
– 71% to 90%	827	7.7	1,245	8.8
– 91% to 100%	133	14.3	126	25.4
Partially collateralised (C):	104	29.8	119	52.1
– collateral value on C	91		103	
Total	5,217	5.7	4,675	7.5
At 31 Dec	1,230,303	0.0	1,158,710	0.1

Other personal lending

(Unaudited)

Other personal lending consists primarily of personal loans, overdrafts and credit cards, all of which are generally unsecured, except lending to private banking customers which are generally secured.

Commercial real estate loans and advances

(Unaudited)

The value of commercial real estate collateral is determined by using a combination of external and internal valuations and physical inspections. For commercial real estate, where the facility exceeds regulatory threshold requirements, group policy requires an independent review of the valuation at least every three years, or more frequently as the need arises. In Hong Kong, market practice is typically for lending to major property companies to be either secured by guarantees or unsecured.

Commercial real estate loans and advances including loan commitments by level of collateral

(Audited)

	2021		2020	
	Gross carrying nominal amount HK\$m	ECL coverage %	Gross carrying/ nominal amount HK\$m	ECL coverage %
Stage 1				
Not collateralised	268,397	0.0	303,890	0.0
Fully collateralised	315,939	0.1	321,650	0.1
Partially collateralised (A):	14,260	0.1	20,941	0.3
– collateral value on A	7,790		12,163	
Total	598,596	0.0	646,481	0.1
Stage 2				
Not collateralised	68,871	5.8	23,644	0.1
Fully collateralised	69,438	0.7	73,991	0.6
Partially collateralised (B):	7,626	2.2	3,092	1.3
– collateral value on B	3,159		1,315	
Total	145,935	3.2	100,727	0.5
Stage 3				
Not collateralised	1,541	35.8	–	–
Fully collateralised	3,085	11.3	298	6.4
Partially collateralised (C):	21	33.3	–	–
– collateral value on C	14		–	
Total	4,647	19.5	298	6.4
POCI				
Not collateralised	–	–	–	–
Fully collateralised	764	–	–	–
Partially collateralised (D):	–	–	–	–
– collateral value on D	–		–	
Total	764	–	–	–
At 31 Dec	749,942	0.8	747,506	0.1

Risk

Other corporate, commercial and non-bank financial institutions lending

(Unaudited)

Other corporate, commercial and financial (non-bank) loans are analysed separately in the following table. For financing activities in other corporate and commercial lending, collateral value is not strongly correlated to principal repayment performance.

Collateral values are generally refreshed when an obligor's general credit performance deteriorates and we have to assess the likely performance of secondary sources of repayment should it prove necessary to rely on them.

Accordingly, the following table reports values only for customers with CRR 8–10, recognising that these loans and advances generally have valuations that are comparatively recent.

Other corporate, commercial and non-bank financial institutions loans and advances including loan commitments by level of collateral

(Audited)

	2021		2020	
	Gross carrying/nominal amount	ECL coverage	Gross carrying/nominal amount	ECL coverage
	HK\$m	%	HK\$m	%
Stage 1				
Not collateralised	2,044,385	0.0	1,918,586	0.1
Fully collateralised	431,547	0.1	398,232	0.1
Partially collateralised (A):	262,118	0.0	242,375	0.1
– collateral value on A	108,645		103,582	
Total	2,738,050	0.0	2,559,193	0.1
Stage 2				
Not collateralised	314,470	0.4	294,547	0.4
Fully collateralised	113,991	0.7	129,799	0.9
Partially collateralised (B):	37,862	0.4	40,104	1.1
– collateral value on B	15,205		19,214	
Total	466,323	0.4	464,450	0.6
Stage 3				
Not collateralised	17,171	80.2	16,948	75.1
Fully collateralised	2,551	17.3	3,555	18.4
Partially collateralised (C):	7,621	36.8	7,753	31.8
– collateral value on C	4,102		4,171	
Total	27,343	62.2	28,256	56.1
POCI				
Not collateralised	351	47.6	506	36.4
Fully collateralised	442	37.8	348	51.4
Partially collateralised (D):	–	–	–	–
– collateral value on D	–		–	
Total	793	42.1	854	42.5
At 31 Dec	3,232,509	0.6	3,052,753	0.7

Other credit risk exposures

(Unaudited)

In addition to collateralised lending described above, other credit enhancements are employed and methods used to mitigate credit risk arising from financial assets. These are summarised below:

- Some securities issued by governments, banks and other financial institutions may benefit from additional credit enhancements provided by government guarantees that cover the assets.
- Debt securities issued by banks and financial institutions include asset-backed securities ('ABSs') and similar instruments, which are supported by underlying pools of financial assets. Credit risk associated with ABSs is reduced through the purchase of credit default swap ('CDS') protection.
- The group's maximum exposure to credit risk includes financial guarantees and similar contracts granted, as well as loan and other credit-related commitments. Depending on the terms of the arrangement, we may use additional credit mitigation if a guarantee is called upon or a loan commitment is drawn and subsequently defaults.

Derivatives

(Unaudited)

We participate in transactions exposing us to counterparty credit risk. Counterparty credit risk is the risk of financial loss if the counterparty to a transaction defaults before satisfactorily settling it. It arises principally from over-the-counter ('OTC') derivatives and securities financing transactions and is calculated in both the trading and non-trading books. Transactions vary in value by reference to a market factor such as an interest rate, exchange rate or asset price.

The counterparty risk from derivative transactions is taken into account when reporting the fair value of derivative positions. The adjustment to the fair value is known as the credit value adjustment ('CVA').

Treasury Risk

Overview

(Unaudited)

Treasury risk is the risk of having insufficient capital, liquidity or funding resources to meet financial obligations and satisfy regulatory requirements, including the risk of adverse impact on earnings or capital due to structural foreign exchange exposures and changes in market interest rates, together with pension and insurance risk.

Treasury risk arises from changes to the respective resources and risk profiles driven by customer behaviour, management decisions or the external environment.

Approach and policy

(Unaudited)

The main objective in the management of treasury risk is to maintain appropriate levels of capital, liquidity, funding, foreign exchange and market risk to support business strategy, and meet regulatory and stress testing-related requirements.

The approach to treasury management is driven by our strategic and organisational requirements, taking into account the regulatory, economic and commercial environment. We aim to maintain a strong capital and liquidity base to support the risks inherent in our business and invest in accordance with our strategy, meeting both consolidated and local regulatory requirements at all times.

Our policy is underpinned by our risk management framework, our internal capital adequacy assessment process ('ICAAP') and our internal liquidity adequacy assessment process ('ILAAP'). The risk framework incorporates a number of measures aligned to our assessment of risks for both internal and regulatory purposes.

Treasury risk management

Key developments in 2021

(Unaudited)

- We continued to roll out second line of defence for liquidity, capital and interest rate risk in the banking book ('IRBB') in Asia-Pacific sites during 2021.
- An internal liquidity metric ('ILM') was introduced during 2021 for all Asia-Pacific sites to supplement the Liquidity Coverage Ratio ('LCR') and Net Stable Funding Ratio ('NSFR') metrics.
- We enhanced our risk management of structural foreign exchange ('SFX') risk. We hedge structural foreign exchange positions where it is capital efficient to do so, and subject to approved limits.
- A first line team was created within the Global Treasury function to be accountable for monitoring and managing the financial risk and capital implications of the Group's employee defined benefit pension plans. This change creates clearer delineation of the roles and responsibilities of the first and second lines of defence.

Governance and structure

(Unaudited)

The Board approves the policy and risk appetite for Liquidity and Capital. It is supported and advised by the Risk Committee ('RC').

The Global Treasury function actively manages capital and liquidity risk on an on-going basis and provides support to the Asset and Liability Management Committee ('ALCO'), and is overseen by the Treasury Risk Management function and the Risk Management Meeting ('RMM'). Global Treasury also manages SFX risk, including implementing hedging strategies approved by Chief Financial Officer, supported by ALCO, and treasury risk.

The Global Treasury function further manages interest rate risk in the non-trading banking book, maintaining the transfer pricing framework and informing the ALCO and local ALCOs of the group and site's overall banking book interest rate exposure. Banking book interest rate positions may be transferred to be managed by

the Global Treasury business, within the market risk limits approved by the RMM.

Pension risk is managed through a network of local governance forums. The regional Pension Risk Management Meeting oversees all pension plans sponsored by HSBC in Asia-Pacific, and is chaired by the Regional Head of Traded and Treasury Risk Management.

The Treasury Risk Management function carries out independent review, challenge and assurance of the appropriateness of the risk management activities undertaken by Global Treasury. Internal Audit provides independent assurance that risk is managed effectively.

Capital risk

Capital management

(Audited)

Our approach to capital management is driven by our strategic and organisational requirements, taking into account the regulatory, economic and commercial environment in which we operate.

It is our objective to maintain a strong capital base to support the risks inherent in our business, to invest in accordance with our strategy and to meet regulatory capital requirements at all times. To achieve this, our policy is to hold capital in a range of different forms and all capital raising is agreed with major subsidiaries as part of their individual and the group's capital management processes.

The policy on capital management is underpinned by a capital management framework and our ICAAP. The framework incorporates key capital risk appetites for CET1, Tier1, Total Capital, Loss Absorbing Capacity ('LAC') and Leverage Ratio, which enables us to manage our capital in a consistent manner. The framework defines regulatory capital and economic capital as the two primary measures for the management and control of capital.

Capital measures:

- regulatory capital is the capital which we are required to hold in accordance with the rules established by regulators; and
- economic capital is the internally calculated capital requirement to support risks to which we are exposed and forms a core part of the ICAAP.

ICAAP is an assessment of the group's capital position, outlining both regulatory and internal capital resources and requirements resulting from our business model, strategy, risk profile and management, performance and planning, risks to capital, and the implications of stress testing. Our assessment of capital adequacy is driven by an assessment of risks. These risks include credit, market, operational, pension, insurance, structural foreign exchange, interest rate risk in the banking book. The group's ICAAP supports the determination of the capital risk appetite and target ratios, as well as enables the assessment and determination of capital requirements by regulators.

Our capital management process is articulated in our annual capital plan which is approved by the Board. The plan is drawn up with the objective of maintaining both an appropriate amount of capital and an optimal mix between the different components of capital. Each subsidiary manages its own capital to support its planned business growth and meet its local regulatory requirements within the context of the approved annual group capital plan. In accordance with the Capital Management Framework, capital generated by subsidiaries in excess of planned requirements is returned to the Bank, normally by way of dividends.

The Bank is the primary provider of capital to its subsidiaries and these investments are substantially funded by the Bank's own capital issuance and profit retention. As part of its capital management process, the Bank seeks to maintain a prudent balance between the composition of its capital and that of its investment in subsidiaries.

Risk

The principal forms of capital are included in the following balances on the consolidated balance sheet: share capital, other equity instruments, retained earnings, other reserves and subordinated liabilities.

Regulatory capital requirements

(Audited)

The Hong Kong Monetary Authority ('HKMA') supervises the group on both a consolidated and solo-consolidated basis and therefore receives information on the capital adequacy of, and sets capital requirements for, the group as a whole and on a solo-consolidated basis. Individual banking subsidiaries and branches are directly regulated by their local banking supervisors, who set and monitor their capital adequacy requirements. In most jurisdictions, non-banking financial subsidiaries are also subject to the supervision and capital requirements of local regulatory authorities.

The group uses the advanced internal ratings-based approach to calculate its credit risk for the majority of its non-securitisation exposures. For securitisation exposures, the group uses the securitisation internal ratings-based approach, securitisation external ratings-based approach, securitisation standardised approach or securitisation fall-back approach to determine credit risk for its banking book securitisation exposures. For counterparty credit risk, the group uses both the standardised (counterparty credit risk) approach and the internal models approach to calculate its default risk exposures for derivatives, and the comprehensive approach for SFTs. For market risk, the group uses an internal models approach to calculate its general market risk for the risk categories of interest rate and foreign exchange (including gold) exposures, and equity exposures. The group also uses an internal models approach to calculate its market risk in respect of specific risk for interest rate exposures and equity exposures. The group uses the standardised (market risk) approach for calculating other market risk positions, as well as trading book securitisation exposures, and the standardised (operational risk) approach to calculate its operational risk.

During the year, the individual entities within the group and the group itself complied with all of the capital requirements of the HKMA.

Basel III

(Unaudited)

The Basel III capital rules set out the minimum CET1 capital requirement of 4.5% and total capital requirement of 8%. At 31 December 2021, the capital buffers applicable to the group include the Capital Conservation Buffer ('CCB'), the Countercyclical Capital Buffer ('CCyB') and the Higher Loss Absorbency ('HLA') requirement for Domestic Systemically Important Banks ('D-SIB'). The CCB is 2.5% and is designed to ensure banks build up capital outside periods of stress. The CCyB is set on an individual country basis and is built up during periods of excess credit growth to protect against future losses. On 28 October 2021, the HKMA maintained the CCyB for Hong Kong at 1.0%. On 24 December 2021, the HKMA maintained the D-SIB designation as well as HLA requirement at 2.5% for the group.

The group is classified as a material subsidiary under the Financial Institutions (Resolution) (Loss-absorbing Capacity Requirements – Banking Sector) Rules ('LAC Rules') and therefore is subject to the LAC requirements to maintain its internal LAC risk-weighted ratio and the internal LAC leverage ratio at or above specified minimums.

Leverage ratio

(Unaudited)

Basel III introduces a simple non risk-based leverage ratio as a complementary measure to the risk-based capital requirements. It aims to constrain the build-up of excess leverage in the banking sector, introducing additional safeguards against model risk and measurement errors. The ratio is a volume-based measure calculated as tier 1 capital divided by total on- and off-balance sheet exposures.

	At	
	31 Dec 2021	31 Dec 2020
	%	%
Leverage ratio	5.8	6.4
Capital and leverage ratio exposure measure	HK\$m	HK\$m
Tier 1 capital	530,701	555,553
Total exposure measure	9,192,814	8,705,672

The decrease in the leverage ratio from 31 December 2020 to 31 December 2021 was mainly due to the rise in the exposure measure and the decrease in Tier 1 capital.

Further details regarding the group's leverage position can be viewed in the Banking Disclosure Statement 2021, which will be available in the Regulatory Disclosure Section of our website: www.hsbc.com.hk.

Capital adequacy at 31 December 2021

(Unaudited)

The following tables show the capital ratios, RWAs and capital base as contained in the 'Capital Adequacy Ratio' return submitted to the HKMA on a consolidated basis under the requirements of section 3C(1) of the Banking (Capital) Rules.

The basis of consolidation for financial accounting purposes is described in Note 1 on the Consolidated Financial Statements and differs from that used for regulatory purposes. Further information on the regulatory consolidation basis and a full reconciliation between the group's accounting and regulatory balance sheets can be viewed in the Banking Disclosure Statement 2021. Subsidiaries not included in the group's consolidation for regulatory purposes are securities and insurance companies and the capital invested by the group in these subsidiaries is deducted from regulatory capital, subject to threshold.

The Bank and its banking subsidiaries maintain regulatory reserves to satisfy the provisions of the Banking Ordinance and local regulatory requirements for prudential supervision purposes. At 31 December 2021, the effect of this requirement is to reduce the amount of reserves which can be distributed to shareholders by HK\$18,587m (31 December 2020: HK\$18,063m).

We closely monitor and consider future regulatory change and continue to evaluate the impact upon our capital requirements of regulatory developments. This includes the Basel III Reforms package, which is currently scheduled for implementation by the HKMA starting from 1 July 2023. We will continue to participate in consultations and monitor progress on the implementation. Based on the results of latest HKMA consultations, we foresee a mild positive impact on our capital ratios on initial application. The RWA output floor under the Basel III Reforms will commence once implemented, with a five-year transitional provision. Any impact from the output floor would be towards the end of the transition period. We are expecting the issuance of draft rules in 2022 which will enable us to better estimate the impact.

Capital ratios

(Unaudited)

	At	
	31 Dec 2021 %	31 Dec 2020 %
Common equity tier 1 ('CET1') capital ratio	15.4	17.2
Tier 1 capital ratio	16.8	18.8
Total capital ratio	18.7	20.8

Risk-weighted assets by risk type

(Unaudited)

	At	
	31 Dec 2021 HK\$m	31 Dec 2020 HK\$m
Credit risk	2,497,803	2,378,821
Counterparty credit risk	148,188	113,650
Market risk	172,831	107,661
Operational risk	337,731	356,861
Total	3,156,553	2,956,993

Risk-weighted assets by reportable segments

(Unaudited)

	At	
	31 Dec 2021 HK\$m	31 Dec 2020 HK\$m
Wealth and Personal Banking	621,757	583,078
Commercial Banking	1,157,241	1,072,171
Global Banking	566,587	561,332
Markets and Securities Services	410,599	322,828
Corporate Centre	334,450	356,801
Other (GBM-other)	65,919	60,783
Total	3,156,553	2,956,993

Risk

Capital base

(Unaudited)

The following table sets out the composition of the group's capital base under Basel III at 31 December 2021.

Capital base

(Unaudited)

	At	
	31 Dec 2021 HK\$m	31 Dec 2020 HK\$m
Common equity tier 1 ('CET1') capital		
Shareholders' equity	714,139	712,119
– shareholders' equity per balance sheet	856,809	845,353
– revaluation reserve capitalisation issue	(1,454)	(1,454)
– other equity instruments	(44,615)	(44,615)
– unconsolidated subsidiaries	(96,601)	(87,165)
Non-controlling interests	28,730	27,907
– non-controlling interests per balance sheet	66,702	66,178
– non-controlling interests in unconsolidated subsidiaries	(11,800)	(10,801)
– surplus non-controlling interests disallowed in CET1	(26,172)	(27,470)
Regulatory deductions to CET1 capital	(258,215)	(230,574)
– valuation adjustments	(1,834)	(1,648)
– goodwill and intangible assets	(28,883)	(23,276)
– deferred tax assets net of deferred tax liabilities	(3,353)	(3,273)
– cash flow hedging reserve	(60)	(33)
– changes in own credit risk on fair valued liabilities	1,322	1,814
– defined benefit pension fund assets	(18)	(12)
– significant Loss-absorbing capacity ('LAC') investments in unconsolidated financial sector entities	(139,239)	(119,868)
– property revaluation reserves ¹	(67,563)	(66,215)
– regulatory reserve	(18,587)	(18,063)
Total CET1 capital	484,654	509,452
Additional tier 1 ('AT1') capital		
Total AT1 capital before regulatory deductions	46,073	46,101
– perpetual subordinated loans	44,615	44,615
– allowable non-controlling interests in AT1 capital	1,458	1,486
Regulatory deductions to AT1 capital	(26)	–
– significant LAC investments in unconsolidated financial sector entities	(26)	–
Total AT1 capital	46,047	46,101
Total tier 1 capital	530,701	555,553
Tier 2 capital		
Total tier 2 capital before regulatory deductions	67,802	66,717
– perpetual subordinated debt ²	3,119	3,101
– term subordinated debt	14,972	15,698
– property revaluation reserves ¹	31,057	30,451
– impairment allowances and regulatory reserve eligible for inclusion in tier 2 capital	17,471	16,451
– allowable non-controlling interests in tier 2 capital	1,183	1,016
Regulatory deductions to tier 2 capital	(8,025)	(7,725)
– significant LAC investments in unconsolidated financial sector entities	(8,025)	(7,725)
Total tier 2 capital	59,777	58,992
Total capital	590,478	614,545

1 Includes the revaluation surplus on investment properties which is reported as part of retained earnings and adjustments made in accordance with the Banking (Capital) Rules issued by the HKMA.

2 This Tier 2 capital instrument is grandfathered under Basel III and will be phased out in full after 31 December 2021.

A detailed breakdown of the group's CET1 capital, AT1 capital, Tier 2 capital and regulatory deductions can be viewed in the Banking Disclosure Statement 2021.

Non-trading book foreign exchange exposures

Structural foreign exchange exposures

(Unaudited)

Structural foreign exchange exposures represent net assets or capital investments in subsidiaries, branches, joint arrangements or associates, the functional currencies of which are currencies other than the Hong Kong dollar. An entity's functional currency is normally that of the primary economic environment in which the entity operates.

Exchange differences on structural exposures are recognised in other comprehensive income ('OCI'). The group uses Hong Kong dollar as our presentation currency in our consolidated financial statements. Therefore, our consolidated balance sheet is affected by exchange differences between Hong Kong dollar and all the non-Hong Kong dollar functional currencies of underlying subsidiaries.

Our structural foreign exchange exposures are managed with the primary objective of ensuring, where practical, that our consolidated capital ratios and the capital ratios of individual banking subsidiaries are largely protected from the effect of changes in exchange rates.

We hedge structural foreign exchange positions where it is capital efficient to do so, and subject to approved limits. Hedging positions are monitored and rebalanced periodically to manage RWA or downside risks associated with group's foreign currency investments.

The group had the following net structural foreign currency exposures that were not less than 10% of the total net structural foreign currency exposures:

	LCYm	HK\$m equivalent
At 31 Dec 2021		
Renminbi	221,207	271,421
US dollars	10,224	79,731
At 31 Dec 2020		
Renminbi	210,707	250,116

Transactional foreign exchange exposures

(Unaudited)

Transactional foreign exchange exposures arise from transactions in the banking book generating profit and loss or OCI reserves in a currency other than the reporting currency of the operating entity. Transactional foreign exchange exposure generated through profit and loss is periodically transferred to Markets and Securities Services and managed within limits with the exception of limited residual foreign exchange exposure arising from timing differences or for other reasons. Transactional foreign exchange exposure generated through OCI reserves is managed by the Markets Treasury business within a limit framework to be agreed in the first half of 2022.

Liquidity and funding risk

Overview

(Audited)

Liquidity risk is the risk that we do not have sufficient financial resources to meet our obligations as they fall due. Liquidity risk arises from mismatches in the timing of cash flows.

Funding risk is the risk that we cannot raise funding or can only do so at excessive cost.

The group has comprehensive policies, metrics and controls, which aims to allow us to withstand severe but plausible liquidity stresses. The group manages liquidity and funding risk at an operating entity level to make sure that obligations can be met in the jurisdiction where they fall due, generally without reliance on other parts of the group.

Operating entities are required to meet internal minimum requirements and any applicable regulatory requirements at all times. These requirements are assessed through the Internal Liquidity Adequacy Assessment Process ('ILAAP'), which ensures

that operating entities have robust strategies, policies, processes and systems for the identification, measurement, management and monitoring of liquidity risk over an appropriate set of time horizons, including intra-day. The ILAAP informs the validation of risk tolerance and the setting of risk appetite. It also assesses the capability to manage liquidity and funding effectively in each major entity. These metrics are set and managed locally but are subject to robust global review and challenge to ensure consistency of approach and application of the Group's policies and controls.

Framework

(Unaudited)

Global Treasury function is responsible for the application of policies and controls at a local operating entity level. The elements of liquidity and funding risk management framework are underpinned by a robust governance framework, with the two major elements being:

- Asset and Liability Management Committees ('ALCOs') at the group and entity level; and
- annual internal liquidity adequacy assessment process ('ILAAP') used to validate risk tolerance and set risk appetite.

All operating entities are required to prepare an ILAAP document at appropriate frequency. Compliance with liquidity and funding requirements is monitored and reported to ALCO, RMM and Executive Committee on a regular basis.

Liquidity and Funding Risk management processes include:

- maintaining compliance with relevant regulatory requirements of the operating entity;
- projecting cash flows under various stress scenarios and considering the level of liquid assets necessary in relation thereto;
- monitoring liquidity and funding ratios against internal and regulatory requirements;
- maintaining a diverse range of funding sources with adequate back-up facilities;
- managing the concentration and profile of term funding;
- managing contingent liquidity commitment exposures within pre-determined limits;
- maintaining debt financing plans;
- monitoring of depositor concentration in order to avoid undue reliance on large individual depositors and ensuring a satisfactory overall funding mix; and
- maintaining liquidity and funding contingency plans. These plans identify early indicators of stress conditions and describe actions to be taken in the event of difficulties arising from systemic or other crises, while minimising adverse long-term implications for the business.

Management of liquidity and funding risk

(Audited)

Funding and liquidity plans form part of the financial resource plan that is approved by the Board. The Board-level appetite measures are the liquidity coverage ratio ('LCR') and net stable funding ratio ('NSFR'). An internal liquidity metric ('ILM') was introduced in January 2021 to supplement the LCR and NSFR metrics. An appropriate funding and liquidity profile is managed through a wider set of measures:

- a minimum LCR requirement;
- a minimum NSFR requirement or other appropriate metric;
- an ILM;
- a legal entity depositor concentration limit;
- cumulative term funding maturity concentrations limit;
- a minimum LCR requirement by currency;
- intra-day liquidity;
- the application of liquidity funds transfer pricing; and

Risk

- forward-looking funding assessments.

Sources of funding

(Unaudited)

Our primary sources of funding are customer current accounts and customer savings deposits payable on demand or at short notice. We issue wholesale securities (secured and unsecured) to supplement our customer deposits and change the currency mix, maturity profile or location of our liabilities.

Currency mismatch in the LCR

(Unaudited)

Group policy requires all operating entities to monitor material single currency LCR. Limits are set to ensure that outflows can be met, given assumptions on stressed capacity in the FX swap markets.

Additional collateral obligations

(Unaudited)

Under the terms of our current collateral obligations of derivative contracts (which are ISDA compliant CSA contracts), the additional collateral required to post in the event of one-notch and two-notch downgrade in credit ratings is immaterial.

Liquidity and funding risk in 2021

(Unaudited)

The group is required to calculate its LCR and NSFR on a consolidated basis in accordance with rule 11(1) of The Banking (Liquidity) Rules ('BLR'), and is required to maintain both LCR and NSFR of not less than 100%.

The average LCR of the group for the period are as follows:

	Quarter ended	
	31 Dec 2021	31 Dec 2020
	%	%
Average LCR	154.3	172.1

The liquidity position of the group remained strong in 2021. The average LCR decreased by 17.8 percentage points from 172.1% for the quarter ended 31 December 2020 to 154.3% for the quarter ended 31 December 2021, mainly as a result of an increase in customer loans and other securities.

The majority of high quality liquid assets ('HQLA') included in the LCR are Level 1 assets as defined in the BLR, which consist mainly of government debt securities.

The total weighted amount of HQLA of the group for the period are as follows:

	Weighted amount (average value) at quarter ended	
	31 Dec 2021	31 Dec 2020
	HK\$m	HK\$m
Level 1 assets	1,767,933	1,870,016
Level 2A assets	79,368	78,515
Level 2B assets	64,106	34,468
Total	1,911,407	1,982,999

The NSFR of the group for the period are as follows:

	Quarter ended	
	31 Dec 2021	31 Dec 2020
	%	%
Net stable funding ratio	151.9	159.3

The funding position of the group remained robust in 2021, highlighting a surplus of stable funding relative to the required stable funding requirement. The NSFR decreased by 7.4 percentage points from 159.3% for the quarter ended 31 December 2020 to 151.9% for the quarter ended 31 December 2021, mainly as a result of an increase in customer loans and other securities.

Interdependent assets and liabilities included in the group's NSFR are certificates of indebtedness held and legal tender notes issued.

Interest Rate Risk in the Banking Book

(Unaudited)

Measurement of interest rate risk in the banking book processes

Assessment and risk appetite

Interest rate risk in the banking book is the risk of an adverse impact to earnings or capital due to changes in market interest rates. It is generated by our non-traded assets and liabilities, specifically loans, deposits and financial instruments that are not held for trading intent or held in order to hedge positions held with trading intent. Interest rate risk that can be economically hedged may be transferred to the Markets Treasury business. Hedging is generally executed through interest rate derivatives or fixed-rate government bonds. Any interest rate risk that Markets Treasury cannot economically hedge is not transferred and will remain within the global business where the risks originate.

The Global Treasury function uses a number of measures to monitor and control interest rate risk in the banking book, including:

- net interest income sensitivity; and
- economic value of equity sensitivity.

Net interest income sensitivity

A principal part of our management of non-traded interest rate risk is to monitor the sensitivity of expected net interest income ('NII') under varying interest rate scenarios (i.e. simulation modelling), where all other economic variables are held constant. This monitoring is undertaken at an entity level by local ALCOs, where entities calculate both one-year and five-year NII sensitivities across a range of interest rate scenarios.

NII sensitivity figures represent the effect of pro forma movements in projected yield curves based on a static balance sheet size and structure. The exception to this is where the size of the balances or repricing is deemed interest rate sensitive, for example, non-interest-bearing current account migration and fixed-rate loan early prepayment. These sensitivity calculations do not incorporate actions that would be taken by Markets Treasury or in the business that originates the risk to mitigate the effect of interest rate movements.

The NII sensitivity calculations assume that interest rates of all maturities move by the same amount in the 'up-shock' scenario. The sensitivity calculations in the 'down-shock' scenarios reflect no floors to the shocked market rates. However, customer product-specific interest rate floors are recognised where applicable.

Economic value of equity sensitivity

Economic value of equity ('EVE') represents the present value of the future banking book cash flows that could be distributed to equity holders under a managed run-off scenario. This equates to the current book value of equity plus the present value of future NII in this scenario. EVE can be used to assess the economic capital required to support interest rate risk in the banking book. An EVE sensitivity represents the expected movement in EVE due to pre-specified interest rate shocks, where all other economic variables are held constant. Operating entities are required to monitor EVE sensitivities as a percentage of capital resources.

Pension Risk

(Unaudited)

Our global pensions strategy is to move from defined benefit to defined contribution plans, where local law allows and it is considered competitive to do so. We will continue to review and enhance our risk appetite metrics to assist the internal monitoring of our de-risking programmes.

In defined contribution pension plans, the contributions that HSBC is required to make are known, while the ultimate pension benefit will vary, typically with investment returns achieved by investment

choices made by the employee. While the market risk to HSBC of defined contribution plans is low, the group is still exposed to operational and reputational risk.

In defined benefit pension plans, the level of pension benefit is known. Therefore, the level of contributions required by HSBC will vary due to a number of risks, including:

- investments delivering a return below that required to provide the projected plan benefits;
- the prevailing economic environment leading to corporate failures, thus triggering write-downs in asset values (both equity and debt); and
- a change in interest rate expectations, causing an increase in the value of plan liabilities.

Pension risk is assessed using an economic capital model that takes into account potential variations in these factors. The impact of these variations on both pension assets and pension liabilities is assessed using a 1-in-200-year stress test. Scenario analysis and other stress tests are also used to support pension risk management. To fund the benefits associated with defined benefit plans, sponsoring group companies make regular contributions in accordance with advice from actuaries and in consultation with the plan's fiduciaries where relevant. These contributions are normally set to ensure that there are sufficient funds to meet the cost of the accruing benefits for the future service of active members. However, higher contributions are required when plan assets are considered insufficient to cover the existing pension liabilities. Contribution rates are typically revised annually or once every three years, depending on the plan.

The defined benefit plans invest contributions in a range of investments designed to limit the risk of assets failing to meet a plan's liabilities. Any changes in expected returns from the investments may also change future contribution requirements. In pursuit of these long-term objectives, an overall target allocation is established between asset classes of the defined benefit plan. In addition, each permitted asset class has its own benchmarks, such as stock-market indices. The target allocations are reviewed regularly, typically once every three to five years, and more frequently if required by local legislation or circumstances. The process generally involves an asset and liability review.

Market Risk

Overview

(Unaudited)

Market risk is the risk that movements in market factors, such as foreign exchange rates, interest rates, credit spreads, equity prices and commodity prices, will reduce our income or the value of our portfolios. Exposure to market risk is separated into two portfolios: trading portfolios and non-trading portfolios.

Market risk management

Key developments in 2021

(Unaudited)

There were no material changes to our policies and practices for the management of market risk in 2021.

Governance and structure

(Unaudited)

The following diagram summarises the main business areas where trading and non-trading market risks reside, and the market risk measures used to monitor and limit exposures.

	Trading risk	Non-trading risk
Risk types	<ul style="list-style-type: none"> • Foreign exchange and commodities • Interest rates • Credit spreads • Equities 	<ul style="list-style-type: none"> • Foreign exchange • Interest rates¹ • Credit spreads
Global business	MSS and GBM Other	MSS, GB, GBM Other, ALCM CMB and WPB
Risk measure	VaR Sensitivity Stress Testing	VaR Sensitivity Stress Testing

¹ The interest rate risk on the fixed-rate securities issued by HSBC Holdings is not included in the group value at risk.

Where appropriate, we apply similar risk management policies and measurement techniques to both trading and non-trading portfolios. Our objective is to manage and control market risk exposures to optimise return on risk while maintaining a market profile consistent with our established risk appetite.

Market risk is managed and controlled through limits approved by the group's Board of Directors. These limits are allocated across business lines and to the Group's legal entities. The group has an independent market risk management and control sub-function, which is responsible for measuring, monitoring and reporting market risk exposures against limits on a daily basis. Each operating entity is required to assess the market risks arising in its business and to transfer them either to its local Markets and Securities Services or Market Treasury unit for management, or to separate books managed under the supervision of the local ALCO. The Traded Risk function enforces the controls around trading in permissible instruments approved for each site as well as changes that follow completion of the new product approval process. Trading Risk also restricts trading in the more complex derivatives products to offices with appropriate levels of product expertise and robust control systems.

Key risk management processes

Monitoring and limiting market risk exposures

(Audited)

Our objective is to manage and control market risk exposures while maintaining a market profile consistent with our risk appetite.

We use a range of tools to monitor and limit market risk exposures including sensitivity analysis, VaR and stress testing.

Sensitivity analysis

(Unaudited)

Sensitivity analysis measures the impact of individual market factor movements on specific instruments or portfolios, including interest rates, foreign exchange rates and equity prices. We use sensitivity measures to monitor the market risk positions within each risk type. Granular sensitivity limits are set for trading desks with consideration of market liquidity, customer demand and capital constraints, among other factors.

Risk

Value at risk

(Audited)

VaR is a technique for estimating potential losses on risk positions as a result of movements in market rates and prices over a specified time horizon and to a given level of confidence. The use of VaR is integrated into market risk management and calculated for all trading positions regardless of how we capitalise them. In addition, we calculate VaR for non-trading portfolios to have a complete picture of risk. Where we do not calculate VaR explicitly, we use alternative tools as summarised in the 'Stress testing' section below.

Our models are predominantly based on historical simulation that incorporates the following features:

- historical market rates and prices, which are calculated with reference to foreign exchange rates, commodity prices, interest rates, equity prices and the associated volatilities;
- potential market movements that are calculated with reference to data from the past two years; and
- calculations to a 99% confidence level and using a one-day holding period.

The models also incorporate the effect of option features on the underlying exposures. The nature of the VaR models means that an increase in observed market volatility will lead to an increase in VaR without any changes in the underlying positions.

VaR model limitations

(Audited)

Although a valuable guide to risk, VaR is used with awareness of its limitations. For example:

- the use of historical data as a proxy for estimating future market moves may not encompass all potential market events, particularly those that are extreme in nature.
- the use of a one-day holding period for risk management purposes of trading and non-trading books assumes that this short period is sufficient to hedge or liquidate all positions.
- the use of a 99% confidence level by definition does not take into account losses that might occur beyond this level of confidence.
- VaR is calculated on the basis of exposures outstanding at the close of business and therefore does not reflect intra-day exposures.

Risk not in VaR framework

(Unaudited)

The risks not in VaR ('RNIV') framework captures and capitalises material market risks that are not adequately covered in the VaR model.

Risk factors are reviewed on a regular basis and are either incorporated directly in the VaR models, where possible, or quantified through either the VaR-based RNIV approach or a stress test approach within the RNIV framework. While VaR-based RNIVs are calculated by using historical scenarios, stress-type RNIVs are estimated on the basis of stress scenarios whose severity is calibrated to be in line with the capital adequacy requirements. The outcome of the VaR-based RNIV approach is included in the overall VaR calculation but excluded from the VaR measure used for regulatory back-testing. In addition, the stressed VaR measure also includes risk factors considered in the VaR-based RNIV approach. Stress-type RNIVs include a de-peg risk measure to capture risk to pegged and heavily-managed currencies.

Stress testing

(Unaudited)

Stress testing is an important procedure that is integrated into our market risk management framework to evaluate the potential impact on portfolio values of more extreme, although plausible, events or movements in a set of financial variables. In such scenarios, losses can be much greater than those predicted by VaR modelling.

Stress testing is implemented at legal entity, regional and overall Group levels. A set of scenarios is used consistently across all regions within the Group. The risk appetite around potential stress losses for the Group is set and monitored against a referral limit.

Market risk reverse stress tests are designed to identify vulnerabilities in our portfolios by looking for scenarios that lead to loss levels considered severe for the relevant portfolio. These scenarios may be quite local or idiosyncratic in nature, and complement the systematic top-down stress testing.

Stress testing and reverse stress testing provide senior management with insights regarding the 'tail risk' beyond VaR, for which our appetite is limited.

Trading portfolios

(Audited)

Trading portfolios comprise positions held for client servicing and market-making, with the intention of short-term resale and/or to hedge risks resulting from such positions.

Back-testing

(Audited)

We routinely validate the accuracy of our VaR models by back-testing the VaR metric against both actual and hypothetical profit and loss. Hypothetical profit and loss excludes non-modelled items such as fees, commissions and revenue of intra-day transactions.

The number of back-testing exceptions is used to gauge how well the models are performing. We consider enhanced internal monitoring of a VaR model if more than five profit exceptions or more than five loss exceptions occur in a 250-day period.

We back-test our VaR at set levels of our Group entity hierarchy.

Market risk in 2021

(Unaudited)

Financial markets were resilient in 2021. During the first half of the year, the rollout of Covid vaccination programmes, loose financial conditions and continued fiscal support contributed to a gradual reopening of major economies. Concerns of rising inflationary pressures were mainly interpreted as transitory. Whilst the path of monetary policies remained uncertain, central banks continued to provide liquidity. This supported risk assets valuations, while volatility in most asset classes remained subdued. In the second half of 2021, amid the emergence of new Covid variants, global equities reached further record highs, as investors focused on global economic resilience and corporate earnings. Yields followed a downward trend for most of 3Q-21, before reversing in the final weeks of the year, when markets began pricing a faster pace of interest rate rise in some of the major economies, due to persistently elevated inflation and the expectation of a tighter monetary policies. Credit markets remained strong, with credit benchmark indices for investment-grade and high-yield debt close to pre-pandemic levels. Nevertheless a wave of volatility and uncertainty in the Chinese property sector due to liquidity crunch resulting numerous rating downgrades and defaults during the second half of 2021.

We continued to manage market risk prudently during 2021. Sensitivity exposures and VaR remained within appetite as the business pursued its core market-making activity in support of our customers. Market risk was managed using a complementary set of risk measures and limits, including stress and scenario analysis.

Trading portfolios

(Audited)

Value at risk of the trading portfolios

Trading VaR was predominantly generated by Markets and Securities Services business. Interest rate risks from market-making activities were the main drivers of trading VaR. Total trading VaR was higher as at 31 December 2021 compared to 31 December 2020 mainly due to the reduction in portfolio diversification across different asset class VaR.

The trading VaR for the year is shown in the table below.

Trading value at risk, 99% 1 day¹

(Audited)

	Foreign exchange and commodity HK\$m	Interest rate HK\$m	Equity HK\$m	Credit spread HK\$m	Portfolio diversification ² HK\$m	Total ³ HK\$m
At 31 Dec 2021						
Year end	36	135	60	31	(74)	188
Average	49	158	77	34		177
Maximum	78	218	108	62		241
At 31 Dec 2020						
Year end	50	130	62	45	(143)	144
Average	48	140	62	49		172
Maximum	96	250	118	106		251

1 Trading portfolios comprise positions arising from the market-making and warehousing of customer-derived positions.

2 Portfolio diversification is the market risk dispersion effect of holding a portfolio containing different risk types. It represents the reduction in unsystematic market risk that occurs when combining a number of different risk types, for example, interest rate, equity and foreign exchange, together in one portfolio. It is measured as the difference between the sum of the VaR by individual risk type and the combined total VaR. A negative number represents the benefit of portfolio diversification. As the maximum and minimum occur on different days for different risk types, it is not meaningful to calculate a portfolio diversification benefit for these measures.

3 The total VaR is non-additive across risk types due to diversification effects.

Resilience risk

(Unaudited)

Overview

Resilience risk is the risk that we are unable to provide critical services to our customers, affiliates and counterparties, as a result of sustained and significant operational disruption. Resilience risk arises from failures or inadequacies in processes, people, systems or external events.

Resilience risk management

Key developments in 2021

The Operational and Resilience Risk sub-function provides robust non-financial risk steward oversight of the management of risk by the Group businesses, functions and legal entities. It also provides effective and timely independent challenge. During the year we carried out a number of initiatives to strengthen the management of non-financial risks:

- We developed a more robust understanding of our risk and control environment, by updating our material risk taxonomy and control libraries, and refreshing material risk and control assessments.
- We further strengthened our non-financial risk governance and senior leadership focus.
- We created a consolidated view of all risk issues across the Group enabling better senior management focus, read across on material control issues and intervention as required.
- We improved how we provide better analysis and reporting of non-financial risks, with more risk practitioners having access to a wider range of management information on their risks and controls.
- We increased the capability of risk stewards to allow for effective stewardship to be in place across the Group.
- We strengthened read across of issues and near misses by implementing a Group-wide harmonized approach across businesses, functions and regions.
- We enhanced risk management oversight across our most material change initiatives to support growth in our strategic transformation in 2021.

We prioritise our efforts on material risks and areas undergoing strategic growth, aligning our location strategy to this need. We also remotely provide oversight and stewardship, including support of chief risk officers, in territories where we have no physical presence.

Governance and structure

The Operational and Resilience Risk target operating model provides a globally consistent view across resilience risks, strengthening our risk management oversight while operating effectively as part of a simplified non-financial risk structure. We view resilience risk across seven risk types related to: third parties and supply chains; information, technology and cybersecurity; payments and manual processing; physical security; business interruption and contingency risk; building unavailability; and workplace safety.

The principal senior management meeting for operational and resilience risk governance is the Non-Financial Risk Management Board, chaired by the Group Chief Risk and Compliance Officer, with an escalation path to the Group Risk Management Meeting.

Key risk management processes

Operational resilience is our ability to anticipate, prevent, adapt, respond to, recover and learn from internal or external disruption, protecting customers, the markets we operate in and economic stability. Resilience is determined by assessing whether we are able to continue to provide our most important services, within an agreed level. We accept we will not be able to prevent all disruption, we prioritise investment to continually improve the response and recovery strategies for our most important business services.

Business operations continuity

Business Continuity, in response to the Covid 19 pandemic, remains in place across a number of locations where the Group operates, allowing the majority of service level agreements to be maintained. There were no significant impacts to service delivery in locations where the Group operates.

Regulatory compliance risk

(Unaudited)

Overview

Regulatory compliance risk is the risk that we fail to observe the letter and spirit of all relevant laws, codes, rules, regulations and standards of good market practice, which as a consequence incur fines and penalties and suffer damage to our business.

Regulatory compliance risk arises from the risks associated with breaching our duty to our customers and inappropriate market conduct, as well as breaching regulatory licensing, permissions and rules.

Regulatory compliance risk management

Key developments in 2021

We have continued to embed the structural changes made in the prior year to our wider approach to Compliance Risk Management. The integration of the Risk and Compliance functions in May 2021 brought together two complementary functions which will strengthen the Regulatory Conduct mandate and our capability to drive ever greater standards in regard to conduct of our business.

In June 2021, we also announced HSBC's new purpose-led approach to conduct. As part of this, we took the opportunity to align and simplify our approach, making conduct easier to understand and showing how it fulfils our value: 'we take responsibility'.

Governance and structure

Following the creation of the Group Regulatory Conduct capability in May 2020, we have continued to evolve our structure in response to the ever-changing business and industry needs. In March 2021, a new Regulatory Conduct Strategic Delivery and Analytics team was created to drive the Regulatory Conduct strategic priorities, and provides oversight of Regulatory Conduct sponsored projects.

The Regulatory Conduct capability continues to work closely with the Chief Compliance Officers and their respective teams to help them identify and manage regulatory compliance risks across the Bank. They also work together to ensure good conduct outcomes and provide enterprise-wide support on the regulatory agenda.

Key risk management processes

The Group Regulatory Conduct capability is responsible for setting global policies, standards and risk appetite to guide the Group's management of regulatory compliance. It also devises clear frameworks and support processes to protect against regulatory compliance risks. The capability at the Group level provides oversight, review and challenge to the local Chief Compliance Officers and their teams to help them identify, assess and mitigate regulatory compliance risks, where required. Global policies are reviewed regularly and procedures are in place for prompt identification and escalation of actual or potential regulatory breach. Relevant reportable events are escalated to the RMM and the Risk Committee, as appropriate.

Conduct of business

Our new simplified Conduct Approach, which was launched in June 2021, guides us to do the right thing and to recognise the real impact we have for our customers and the financial markets in which we operate. It complements our Purpose and Values, setting outcomes to be achieved for our customers and markets. It recognises cultural and behavioural drivers of good conduct outcomes and applies across all risk disciplines, operational processes and technologies.

During 2021:

- We understood and serviced our customers' ongoing needs and continued to champion a strong conduct and customer-focused culture. This was demonstrated through providing support to our customers facing financial difficulties as a result of the prolonged impacts of the pandemic and the resulting uncertainty in trading conditions.

- We began the integration of climate risk into the Group's risk management approach to recognise the importance of strengthened controls and oversight for our related activities.
- We operated resiliently and securely to avoid harm to our customers and markets by continuing to embed conduct within our business line processes and through our Non-Financial and Financial Risk Steward activities.
- We continued our focus on culture and behaviours as a driver of good conduct outcomes.
- We placed a particular focus on the importance of well-being and collaborative working as we continued to adapt to changing working practices as the pace of change resulting from the pandemic varied across our markets.
- We continued to emphasise and worked to create an environment in which employees are encouraged and feel safe to speak up.
- We delivered our annual global mandatory training course on conduct to reinforce the importance of conduct for all colleagues.
- The Board continues to maintain oversight of conduct matters through the Risk Committee.

Financial crime risk

(Unaudited)

Overview

Financial crime risk is the risk of knowingly or unknowingly helping parties to commit or to further potentially illegal activity through HSBC, including money laundering, fraud, bribery and corruption, tax evasion, sanctions breaches, and terrorist and proliferation financing.

Financial crime risk management

Key developments in 2021

We consistently review the effectiveness of our financial crime risk management framework, which includes consideration of geopolitical and wider economic factors, and 2021 was no exception. We continued to support the Business in navigating the complex and dynamic nature of geopolitics as it relates to sanctions and export control risk. A key focus area in this regard relates to the array of new regulations and designations in 2021 and in alignment with our policy, which is to comply with all applicable sanctions regulations in the jurisdictions in which we operate.

We also continued to progress several key financial crime risk management initiatives, including:

- We deployed a key component of our intelligence-led, dynamic risk assessment capabilities for customer account monitoring in one of our home markets, and undertook important enhancements to our traditional transaction monitoring systems.
- We strengthened our anti-fraud capabilities, notably with respect to the early identification of first party lending fraud and the identification of new strategic detection tools.
- We continued to develop leading-edge surveillance technology and capabilities to identify potential market abuse, including testing machine learning capabilities to detect unauthorised trading.
- We invested in the use of artificial intelligence (AI) and advanced analytics techniques to manage financial crime risk, notably new automated capabilities in name and transaction screening.
- We implemented a market leading gifts and entertainment recording and approval system, which, in combination with an expenses reconciliation tool, allows us to manage our gifts and entertainment risk consistently and effectively.

Governance and structure

We have continued to review the effectiveness of our governance framework to manage financial crime risk. The framework aims to enable us to comply with the letter and the spirit of all applicable financial crime laws and regulations, as well as our own standards, values and policies relating to financial crime risks.

In 2021, the Risk and Compliance functions were integrated at Group level, allowing us to make better use of a broader range of perspectives from other risk disciplines.

Key risk management processes

We assess the effectiveness of our end-to-end financial crime risk management framework on an ongoing basis and invest in enhancing our operational control capabilities and technology solutions to deter and detect criminal activity. We have simplified our framework by streamlining and de-duplicating policy requirements. We also strengthened our financial crime risk taxonomy and control libraries, improving our investigative and monitoring capabilities through technology deployments, as well as developing more targeted metrics. We have also enhanced governance and reporting.

We are committed to working in partnership with the wider industry and the public sector in managing financial crime risk, protecting the integrity of the financial system and the communities we serve. We participate in numerous public-private partnerships and information-sharing initiatives around the world also supporting national governments and international standard setters' reform activity. In 2021, there was a particular focus on reform activity in Singapore where we are active participants in a key initiative undertaken by the Monetary Authority of Singapore, known as Project Cosmic, which establishes a framework to enable financial institutions to share information with each other when certain financial crime risk concerns have been identified. We took part in a number of roundtables organised by the Financial Action Task Force, the global money laundering and terrorist financing watchdog, supporting its strategic review. We also supported its work on digitisation and beneficial ownership registers. These align with our objectives of promoting a public policy and regulatory environment that embraces the use of technology in building the future financial crime framework to ensure our bank is more resilient and secure, while enabling benefits for customers.

Skilled Person/Independent Consultant

In December 2012, HSBC Holdings entered into a number of agreements, including an undertaking with the UK Financial Services Authority (replaced with a Direction issued by the UK Financial Conduct Authority ('FCA') in 2013 and again in 2020), as well as a cease-and-desist order with the US Federal Reserve Board ('FRB'), both of which contained certain forward-looking anti-money laundering and sanctions-related obligations. HSBC also agreed to retain an independent compliance monitor (who was, for FCA purposes, a 'Skilled Person' under section 166 of the Financial Services and Markets Act and, for FRB purposes, an 'Independent Consultant') to produce periodic assessments of the Group's AML and sanctions compliance programme.

In 2020, HSBC's engagement with the independent compliance monitor, acting in his roles as both Skilled Person and Independent Consultant, concluded. The role of FCA Skilled Person was assigned to a new individual in the second quarter of 2020. Separately, a new FRB Independent Consultant was appointed in the second quarter of 2021 pursuant to the cease-and-desist order.

The new Skilled Person issued his final report in June 2021, concluding his review. The 2021 FCA Firm Evaluation Letter confirmed that there is no requirement for a further Skilled Person review. The new Independent Consultant carried out the eighth annual review for the FRB and issued his report in November 2021.

In accordance with the Direction issued by the FCA to HSBC Holdings in 2020, the Group Risk Committee retains oversight of matters relating to anti-money laundering, sanctions, terrorist financing and proliferation financing. Throughout 2021, the Group

Risk Committee received regular updates on the Skilled Person's and the Independent Consultant's reviews.

Model risk

(Unaudited)

Overview

Model risk is the risk of inappropriate or incorrect business decisions arising from the use of models that have been inadequately designed, implemented or used, or from models that do not perform in line with expectations and predictions.

Key developments in 2021

In 2021, we continued to make improvements in our model risk management processes, amid regulatory changes in model requirements. Initiatives during the year included:

- Re-development, validation, and submission of critical Internal Rating Based ('IRB') Approach models for credit risk, Internal Model Method ('IMM') for counterparty credit risk and Internal Model Approach ('IMA') models for market risk, to the HKMA in response to regulatory capital changes. These new models have been built to enhance standards using improved data as a result of investment in processes and systems.
- Redeveloped and validated models impacted by changes to alternative rate setting mechanisms due to IBOR transition.
- Further enhancements to our control framework for our Sarbanes-Oxley were made to address the control weaknesses that emerged as a result of significant increases in model adjustments and overlays that were applied to compensate for the impact of COVID-19 on models and to introduce a requirement for second line to approve material models prior to use.
- Model owners in Business and Functions continued to embed the requirements included in the Model Risk Policy and Standards introduced in 2020. On-going training on model risk continued to be delivered to front line teams to improve their awareness of model risk and their adherence to the governance framework.
- New Model Risk Appetite measures were rolled out in HBAP, aligned across the Bank. The new measures are more forward looking and helped Businesses and Functions manage model risk more effectively.
- There has been greater level of involvement by Businesses and Functions in the development and management of models. This included hiring of staff with strong model risk skills and enhanced focus on key model risk drivers such as data quality and model methodology.
- The transformation of the Model Risk Management team continued with changes to the model validation processes including new system and process. Key hires were made during the year to strengthen oversight and expertise within the Function. Also, changes to the Model Inventory system provided Businesses and Functions improved functionality and more detailed information related to model risk.
- HBAP regional engagement strategy has been established in response to the growing maturity of model risk management and demand across the Region.
- Models related to climate risk and models using advanced analytics and machine learning became a critical area of focus and would grow in importance in 2022 and beyond. In response, qualified specialist skills were added to the model risk teams to manage the increased model risk in these areas.

Governance

The governance structure implemented in 2020 is fully operational. The HBAP Model Risk Committee (MRC) established in 2021 provides oversight of models used in HBAP. The Committee is chaired by the HBAP Chief Risk Officer and the Regional Heads of Businesses participate in these meetings. Authorised sub-forums

Risk

operating under the remit of the HBAP MRC, oversee model risk management activities based on associated model categories.

Key risk management processes

A variety of modelling approaches, including regression, simulation, sampling, machine learning and judgemental scorecards for a range of business applications were used. These activities include customer selection, product pricing, financial crime transaction monitoring, creditworthiness evaluation and financial reporting.

Our model risk management policies and procedures were regularly reviewed, and required the First Line of Defence to demonstrate comprehensive and effective controls based on a library of model risk controls provided by Model Risk Management.

Model Risk Management also reports on model risk to senior management on a regular basis through the use of the risk map, risk appetite metrics and regular key updates.

The effectiveness of these processes, including the Regional model oversight committee structure, were regularly reviewed to ensure clarity in authority, coverage and escalations and that appropriate understanding and ownership of model risk continued to be embedded in the Businesses and Functions.

Insurance manufacturing operations risk

Overview

(Unaudited)

The key risks for our insurance manufacturing operations are market risks, in particular interest rate and equity, credit risks and insurance underwriting and operational risks. These have a direct impact on the financial results and capital positions of the insurance operations. Liquidity risk, whilst significant in other parts of the group, is relatively minor for our insurance operations.

HSBC's Insurance business

(Unaudited)

We sell insurance products through a range of channels including our branches, direct channels and third-party distributors. The majority of sales are through an integrated bancassurance model that provides insurance products principally for customers with whom we have a banking relationship.

The insurance contracts we sell relate to the underlying needs of our customers, which we can identify from our point-of-sale contacts and customer knowledge. For the products we manufacture, the majority of sales are of savings, universal life and protection contracts.

We choose to manufacture these insurance products in HSBC subsidiaries based on an assessment of operational scale and risk appetite. Manufacturing insurance allows us to retain the risks and rewards associated with writing insurance contracts by keeping part of the underwriting profit and investment income within the group.

We have life insurance manufacturing operations in Hong Kong, Singapore and mainland China. We also have a life insurance manufacturing associate in India.

Where we do not have the risk appetite or operational scale to be an effective insurance manufacturer, we engage with a small number of leading external insurance companies in order to provide insurance products to our customers through our banking network and direct channels. These arrangements are generally structured with our exclusive strategic partners and earn the group a combination of commissions, fees and a share of profits. We distribute insurance products in all of our geographical regions

Insurance products are sold through all global businesses, but predominantly by WPB and CMB through our branches and direct channels.

Insurance manufacturing operations risk management

Key developments in 2021

(Unaudited)

The insurance manufacturing subsidiaries follow the group's risk management framework. In addition, there are specific policies and practices relating to the risk management of insurance contracts. There were no material changes to these policies and practices over 2021, although enhancements were made to the product pricing and profitability framework to allow for the transition to HKFRS 17.

Governance and structure

(Unaudited)

Insurance risks are managed to a defined risk appetite, which is aligned to the group's risk appetite and risk management framework, including the group's 'Three lines of defence' model. The Global Insurance Risk Management Meeting oversees the risk and control framework for insurance business in the group.

The monitoring of the risks within our insurance operations is carried out by Insurance Risk teams. The Bank's risk stewardship functions support the Insurance Risk teams in their respective areas of expertise.

Stress and scenario testing

(Unaudited)

Stress testing forms a key part of the risk management framework for the insurance business. We participate in local and Group-wide regulatory stress tests, as well as internally developed stress and scenario tests, including Group internal stress test exercises. The results of these stress tests and the adequacy of management action plans to mitigate these risks are considered in the group ICAAP and the entities' regulatory Own Risk and Solvency Assessments ('ORSA's').

Key risk management processes

Market risk

(Audited)

All our insurance manufacturing subsidiaries have market risk mandates that specify the investment instruments in which they are permitted to invest and the maximum quantum of market risk that they may retain. They manage market risk by using, among others, some or all of the techniques listed below, depending on the nature of the contracts written:

- We are able to adjust bonus rates to manage the liabilities to policyholders for products with discretionary participating features ('DPF'). The effect is that a significant portion of the market risk is borne by the policyholder.
- We use asset and liability matching where asset portfolios are structured to support projected liability cash flows. The group manages its assets using an approach that considers asset quality, diversification, cash flow matching, liquidity, volatility and target investment return. We use models to assess the effect of a range of future scenarios on the values of financial assets and associated liabilities, and ALCOs employ the outcomes in determining how best to structure asset holdings to support liabilities.
- We use derivatives to protect against adverse market movements.
- We design new products to mitigate market risk, such as changing the investment return sharing portion between policyholders and the shareholder.
- We exit, to the extent possible, investment portfolios whose risk is considered unacceptable.

Credit risk

(Audited)

Our insurance manufacturing subsidiaries also have credit risk mandates and limits within which they are permitted to operate, which consider the credit risk exposure, quality and performance of their investment portfolios. Our assessment of the creditworthiness of issuers and counterparties is based primarily upon internationally recognised credit ratings and other publicly available information.

Stress testing is performed on investment credit exposures using credit spread sensitivities and default probabilities.

We use a number of tools to manage and monitor credit risk. These include a credit report containing a watch-list of investments with current credit concerns, primarily investments that may be at risk of future impairment or where high concentrations to counterparties are present in the investment portfolio. Sensitivities to credit spread risk are assessed and monitored regularly.

Capital and liquidity risk

(Audited)

Capital risk for our insurance manufacturing subsidiaries is assessed in the ICAAP based on their financial capacity to support the risks to which they are exposed. Capital adequacy is assessed on both the group's economic capital basis, and the relevant local insurance regulatory basis. The group's economic capital basis is largely aligned to European Solvency II regulations, other than in Hong Kong where this is based on the emerging Hong Kong Risk Based Capital regulations.

Risk appetite buffers are set to ensure that the operations are able to remain solvent on both bases, allowing for business-as-usual volatility and extreme but plausible stress events.

Liquidity risk is managed by cash flow matching and maintaining sufficient cash resources, investing in high credit-quality investments with deep and liquid markets, monitoring investment concentrations and restricting them where appropriate, and establishing committed contingency borrowing facilities.

Insurance manufacturing subsidiaries complete quarterly liquidity risk reports and an annual review of the liquidity risks to which they are exposed.

Insurance underwriting risk

(Unaudited)

Our insurance manufacturing subsidiaries primarily use the following frameworks and processes to manage and mitigate insurance underwriting risks:

- a formal approval process for launching new products or making changes to products;
- a product pricing and profitability framework which requires initial and ongoing assessment of the adequacy of premiums charged on new insurance contracts to meet the risks associated with them;
- a framework for customer underwriting;
- reinsurance which cedes risks above our appetite thresholds to third party reinsurer thereby limiting our exposure; and
- oversight of expense and reserving risks by entity Actuarial Control Committees.

Insurance manufacturing operations risk in 2021

Measurement

(Unaudited)

The tables below show the composition of assets and liabilities by contract type. 91% (2020: 92%) of both assets and liabilities are derived from Hong Kong.

Risk

Balance sheet of insurance manufacturing subsidiaries by type of contract

(Audited)

	Non-linked HK\$m	Unit-linked HK\$m	Shareholders' assets and liabilities HK\$m	Total HK\$m
At 31 Dec 2021				
Financial assets	637,317	37,382	46,971	721,670
– financial assets designated and otherwise mandatorily measured at fair value through profit or loss	160,555	35,906	457	196,918
– derivatives	631	6	3	640
– financial investments measured at amortised cost	432,733	479	37,734	470,946
– financial investments measured at fair value through other comprehensive income	5,780	–	592	6,372
– other financial assets ¹	37,618	991	8,185	46,794
Reinsurance assets	28,874	6	–	28,880
PVIF ²	–	–	63,765	63,765
Other assets and investment properties	13,626	4	5,304	18,934
Total assets	679,817	37,392	116,040	833,249
Liabilities under investment contracts designated at fair value	28,397	7,030	–	35,427
Liabilities under insurance contracts	608,590	29,645	–	638,235
Deferred tax ³	9	–	10,579	10,588
Other liabilities	–	–	35,269	35,269
Total liabilities	636,996	36,675	45,848	719,519
Total equity	–	–	113,730	113,730
Total equity and liabilities	636,996	36,675	159,578	833,249
At 31 Dec 2020				
Financial assets	577,666	42,621	40,776	661,063
– financial assets designated and otherwise mandatorily measured at fair value through profit or loss	129,597	41,366	384	171,347
– derivatives	1,323	20	3	1,346
– financial investments measured at amortised cost	410,169	222	34,824	445,215
– financial investments measured at fair value through other comprehensive income	4,971	–	502	5,473
– other financial assets ¹	31,606	1,013	5,063	37,682
Reinsurance assets	27,299	6	–	27,305
PVIF ²	–	–	65,052	65,052
Other assets and investment properties	13,422	1	4,652	18,075
Total assets	618,387	42,628	110,480	771,495
Liabilities under investment contracts designated at fair value	31,786	7,732	–	39,518
Liabilities under insurance contracts	547,128	34,348	–	581,476
Deferred tax ³	9	–	10,436	10,445
Other liabilities	–	–	37,220	37,220
Total liabilities	578,923	42,080	47,656	668,659
Total equity	–	–	102,836	102,836
Total equity and liabilities	578,923	42,080	150,492	771,495

1 Comprise mainly loans and advances to banks, cash and inter-company balances with other non-insurance legal entities.

2 Present value of in-force long-term insurance business.

3 'Deferred tax' includes the deferred tax liabilities arising on recognition of PVIF.

4 Balance sheet of insurance manufacturing operations are shown before elimination of inter-company transactions with HSBC non-insurance operations.

Key risk types

Market risk

(Audited)

Description and exposure

Market risk is the risk of changes in market factors affecting capital or profit. Market factors include interest rates, equity and growth assets and foreign exchange rates.

Our exposure varies depending on the type of contract issued. Our most significant life insurance products are contracts with discretionary participating features ('DPF'). These products typically include some form of capital guarantee or guaranteed return on the sums invested by the policyholders, to which discretionary bonuses are added if allowed by the overall performance of the funds. These funds are primarily invested in fixed interest assets, with a proportion allocated to other asset classes to provide customers with the potential for enhanced returns.

DPF products expose the group to the risk of variation in asset returns, which will impact our participation in the investment performance. In addition, in some scenarios the asset returns can become insufficient to cover the policyholders' financial guarantees, in which case the shortfall has to be met by the group. Reserves are held against the cost of such guarantees.

The cost of such guarantees is accounted for as a deduction from the present value of in-force 'PVIF' asset, unless the cost of such guarantees is already explicitly allowed for within the insurance contracts liabilities.

For unit-linked contracts, market risk is substantially borne by the policyholders, but some market risk exposure typically remains as fees earned are related to the market value of the linked assets.

Sensitivities

(Unaudited)

Where appropriate, the effects of the sensitivity tests on profit after tax and total equity incorporate the impact of the stress on the PVIF. The relationship between the profit and total equity and the risk factors is non-linear; therefore the results disclosed should not be extrapolated to measure sensitivities to different levels of stress. For the same reason, the impact of the stress is not symmetrical on the upside and downside. The sensitivities reflect the established risk sharing mechanism with policyholders for participating products, and are stated before allowance for management actions which may mitigate the effect of changes in

the market environment. The sensitivities presented allow for adverse changes in policyholders' behaviour that may arise in response to changes in market rates.

The following table illustrates the effects of selected interest rate, equity price and foreign exchange rate scenarios on our profit for the year and the total equity of our insurance manufacturing subsidiaries.

The differences between the impacts on profit after tax and equity are driven by the changes in value of the bonds measured at fair value through other comprehensive income, which are only accounted for in equity.

Sensitivity of the group's insurance manufacturing subsidiaries to market risk factors

(Audited)

	31 Dec 2021		31 Dec 2020	
	Effect on profit after tax HK\$m	Effect on total equity HK\$m	Effect on profit after tax HK\$m	Effect on total equity HK\$m
+100 basis points parallel shift in yield curves	(1,257)	(2,036)	(1,673)	(2,283)
-100 basis points parallel shift in yield curves	1,201	1,980	1,613	2,223
10% increase in equity prices	2,388	2,388	2,167	2,167
10% decrease in equity prices	(2,426)	(2,426)	(2,183)	(2,183)
10% increase in USD exchange rate compared to all currencies	635	635	673	673
10% decrease in USD exchange rate compared to all currencies	(635)	(635)	(673)	(673)

Credit risk

(Audited)

Description and exposure

Credit risk is the risk of financial loss if a customer or counterparty fails to meet their obligation under a contract. It arises in two main areas for our insurance manufacturers:

- risk associated with credit spread volatility and default by debt security counterparties after investing premiums to generate a return for policyholders and shareholders; and
- risk of default by reinsurance counterparties and non-reimbursement for claims made after ceding insurance risk.

The amounts outstanding at the balance sheet date in respect of these items are shown in the table on page 64.

The credit quality of the reinsurers' share of liabilities under insurance contracts is assessed as 'strong' or 'good' (as defined on page 30), with 100% of the exposure being neither past due nor impaired (2020: 100%).

Credit risk on assets supporting unit-linked liabilities is predominantly borne by the policyholders. Therefore our exposure is primarily related to liabilities under non-linked insurance and investment contracts and shareholders' funds. The credit quality of insurance financial assets is included in the table on page 42. The risk associated with credit spread volatility is to a large extent mitigated by holding debt securities to maturity, and sharing a degree of credit spread experience with policyholders.

Liquidity risk

(Audited)

Description and exposure

Liquidity risk is the risk that an insurance operation, though solvent, either does not have sufficient financial resources available to meet its obligations when they fall due, or can secure them only at excessive cost.

The following table shows the expected undiscounted cash flows for insurance liabilities at 31 December 2021. The liquidity risk exposure is wholly borne by the policyholders in the case of unit-linked business and is shared with the policyholders for non-linked insurance.

The profile of the expected maturity of insurance contracts at 31 December 2021 remained comparable with 2020.

The remaining contractual maturity of investment contract liabilities is included in the table on page 111.

Expected maturity of insurance contract liabilities

(Audited)

	Expected cash flows (undiscounted)				
	Within 1 year HK\$m	1-5 years HK\$m	5-15 years HK\$m	Over 15 years HK\$m	Total HK\$m
At 31 Dec 2021					
Non-linked insurance contracts	53,098	187,589	324,654	662,058	1,227,399
Unit-linked	8,073	14,353	14,852	8,115	45,393
	61,171	201,942	339,506	670,173	1,272,792
At 31 Dec 2020					
Non-linked insurance contracts	47,444	168,811	311,975	517,761	1,045,991
Unit-linked	8,558	18,308	14,708	9,162	50,736
	56,002	187,119	326,683	526,923	1,096,727

Risk

Insurance underwriting risk

Description and exposure

(Unaudited)

Insurance underwriting risk is the risk of loss through adverse experience, in either timing or amount, of insurance underwriting parameters (non-economic assumptions). These parameters include mortality, morbidity, longevity, lapses and expense rates.

The principal risk we face is that, over time, the cost of the contract, including claims and benefits may exceed the total amount of premiums and investment income received.

The table on page 64 analyses our life insurance risk exposures by type of contract.

The insurance risk profile and related exposures remain largely consistent with those observed at 31 December 2020.

Sensitivities

(Audited)

The table below shows the sensitivity of profit and total equity to reasonably possible changes in non-economic assumptions across all our insurance manufacturing subsidiaries.

Sensitivity analysis

(Audited)

	2021 HK\$m	2020 HK\$m
Effect on profit after tax and total equity at 31 Dec		
10% increase in mortality and/or morbidity rates	(637)	(613)
10% decrease in mortality and/or morbidity rates	650	629
10% increase in lapse rates	(606)	(575)
10% decrease in lapse rates	680	676
10% increase in expense rates	(368)	(352)
10% decrease in expense rates	359	360

Mortality and morbidity risk is typically associated with life insurance contracts. The effect on profit of an increase in mortality or morbidity depends on the type of business being written.

Sensitivity to lapse rates depends on the type of contracts being written. For a portfolio of term assurance, an increase in lapse rates typically has a negative effect on profit due to the loss of future income on the lapsed policies. However, some contract lapses have a positive effect on profit due to the existence of policy surrender charges. We are most sensitive to a change in lapse rates on unit-linked and universal life contracts.

Expense rate risk is the exposure to a change in the allocated cost of administering insurance contracts. To the extent that increased expenses cannot be passed on to policyholders, an increase in expense rates will have a negative effect on our profits. The risk is generally greater for Singapore and mainland China than for Hong Kong.

EXHIBIT C

FURTHER INFORMATION ON CREDIT RATINGS

These are guidelines issued by Moody's and S&P on what each of their investment-grade ratings means as of the day immediately preceding the date of this base listing document. While we have correctly extracted and reproduced such information and take responsibility for such extraction and reproduction, there can be no assurance that the meaning of any such rating will not be revised by the relevant rating agency in the future and we have no responsibility to notify you of such change. If you are unsure about any information provided under this Exhibit C and/or what a credit rating means, you should seek independent professional advice.

A credit rating is forward looking opinion by a credit rating agency of a company's overall ability to meet its financial obligations. The focus is on the company's capacity to pay its debts as they become due. The rating does not necessarily apply to any specific obligation.

These are guidelines issued by Moody's and S&P on what each of their investment-grade ratings means as of the day immediately preceding the date of this base listing document.

Moody's long-term ratings definitions

Aaa

Obligations rated Aaa are judged to be of the highest quality, with minimal risk.

Aa

Obligations rated Aa are judged to be of high quality and are subject to very low credit risk.

A

Obligations rated A are considered upper medium-grade and are subject to low credit risk.

Baa

Obligations rated Baa are subject to moderate credit risk. They are considered medium-grade and as such may possess speculative characteristics.

Modifiers "1", "2" and "3"

Moody's appends numerical modifiers 1, 2 and 3 to each of the above generic rating classifications (except for Aaa). The modifier 1 indicates that the obligation ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic rating category.

Please refer to <https://ratings.moody's.io/ratings> for further details. If you do not understand what these credit ratings mean, you should obtain independent advice.

S&P long-term issuer credit ratings definitions

AAA

An obligor rated 'AAA' has extremely strong capacity to meet its financial commitments. 'AAA' is the highest issuer credit rating assigned by S&P.

AA

An obligor rated 'AA' has very strong capacity to meet its financial commitments.

A

An obligor rated 'A' has strong capacity to meet its financial commitments, but is somewhat susceptible to economic conditions and changes in circumstances.

BBB

An obligor rated 'BBB' has adequate capacity to meet its financial commitments, but is more subject to adverse economic conditions.

Plus (+) or minus (-)

The above ratings (except for 'AAA') may be modified by the addition of a plus or minus sign to show relative standing within the major rating categories.

Please refer to <https://www.spglobal.com/ratings/en/about/intro-to-credit-ratings> (in English language version only) for further details. If you do not understand what these credit ratings mean, you should obtain independent advice.

Rating outlooks

A rating outlook is an opinion regarding the likely rating direction over the medium term. The rating outlook assigned by Moody's and S&P will usually indicate whether the rating direction is likely to be positive, negative, stable or developing.

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