BASE LISTING DOCUMENT

Non-collateralised Structured Products

Base Listing Document relating to Hong Kong Listed Structured Products

to be issued by

HSBC

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 unit funds ("**Unit 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 unit funds ("**Unit 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 asset, (b) the trustee or the manager of the underlying fund, 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 7 April 2021

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 to you for inspection during usual business hours on any weekday (Saturdays, Sundays and public holidays excepted) at the office of The Hongkong and Shanghai Banking Corporation Limited, which is presently at HSBC Main Building, 1 Queen's Road Central, Hong Kong:

(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，下列文件可於結構性產品在聯交所上市的期間內於任何平日 （星期六、星期日及公眾假期除外）的一般辦公時間內，在香港上海滙豐銀行有限公司辦事處(地址現為香港皇后大道中 1 號滙豐總行大廈）供閣下查閱：

(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。

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 for the purpose of 17 C.F.R. § 23.23(a)(23) (2020) (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 US Executive Order 13959, *Addressing the Threat from Securities Investments that Finance Communist Chinese Military Companies*, as amended by US Executive Order 13974 (so amended, "**E.O. 13959**" and each such United States person, an "**E.O. 13959 U.S. Person**"), to the extent that the underlyings for the relevant structured products include indices or equities that are restricted by E.O. 13959.

E.O. 13959 U.S. Persons are restricted from purchasing and selling the structured products (to the extent the underlyings include E.O. 13959 restricted indices or equities) and investors should seek their own legal advice regarding compliance with E.O. 13959.

TABLE OF CONTENTS

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.
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: (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 unit fund ("**Unit Fund Warrants**").
What types of Inline Warrants may be issued under the programme?	The **Inline Warrants** which we may issue under the programme include: (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: (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 unit fund ("**Unit 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.
Exercise	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.
Settlement Basis	The holder of the structured products will be entitled to a cash payment upon exercise (assuming that the cash payment is greater than zero).
Issue price	The launch announcement and supplemental listing document will specify the issue price of the structured product.
Underlying	The launch announcement and supplemental listing document will specify the **underlying** for the structured product, which may be a share, an index or a fund.
Expiry Date	The launch announcement and supplemental listing document will specify the expiry date for the series of structured products offered.
Liquidity Provider	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?	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. 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.

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.

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 manager or trustee of the underlying fund (in respect of unit 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 119 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) Geopolitical and macroeconomic risks

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 can manifest themselves in divergent regulatory, standards and compliance regimes, presenting long-term strategic challenges for multinational businesses. The occurrence of any of these events or circumstances could have a material adverse effect on our business, financial condition, results of operations, prospects and customers, which in turn may adversely affect the value of the structured products. For further information, please refer to the section headed "Risk management system" in Exhibit B of this document.

(4) Risks related to Covid-19

The Covid-19 outbreak and its effect on the global economy have impacted our customers and our performance, and the future effects of the outbreak remain uncertain. The outbreak 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 varying government measures in response have added challenges, given the rapid pace of change and significant operational demands. The speed at which countries and territories will be able to unwind the government measures and return to pre-Covid-19 economic levels will vary based on the levels of infection, local political decisions and access and ability to rollout vaccines. There remains a risk of subsequent waves of infection, as evidenced by the new, more transmissible variants of the virus. Renewed outbreaks emphasise the ongoing threat of Covid-19 even in countries and territories that have recorded lower than average cases so far.

There remain significant uncertainties in assessing the duration of the Covid-19 outbreak and its impact. The actions taken by the various governments and central banks, in particular in the UK, mainland China, Hong Kong and the US, provide an indication of the potential severity of the downturn and post-recovery environment, which from a commercial, regulatory and risk perspective could be significantly different to past crises and persist for a prolonged period. A continued prolonged period of significantly reduced economic activity as a result of the impact of the outbreak would have a materially adverse effect on our financial condition, results of operations, prospects, liquidity, capital position and credit ratings, which in turn may adversely affect the value of the structured products. For further information, please refer to the section headed "Risk management system" in Exhibit B of this document.

(5) 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 authorised 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 authorised 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. The implementation of FIRO remains untested and certain details relating to FIRO will be set out through secondary legislation and supporting rules. Therefore, we are unable to assess the full impact of 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.**

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

The US government's recent and future actions against the People's Republic of 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 the People's Republic of China and Hong Kong will not have an adverse effect on the trading price or value of the structured products.

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

E.O. 13959 U.S. Persons are restricted from purchasing and selling the structured products (to the extent the underlyings include E.O. 13959 restricted indices or equities), which may adversely affect the prevailing trading price of the structured products.

(8) The underlyings of the structured products may include indices or equities that are restricted under E.O. 13959

If the underlyings of the structured products include indices or equities that are restricted by E.O. 13959, E.O. 13959 U.S. Persons are restricted from purchasing and selling the structured products, which may adversely affect the prevailing trading price of the structured products.

(9) 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).

(10) 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.

(11) 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.

(12) 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.

(13) 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.

(14) 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. The value of the Warrants or the CBBCs will 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), without taking into account interim interest rates and expected dividend payments on the underlying shares (in respect of equity-linked structured products) or on any components comprising the underlying index (in respect of index-linked structured products) and assuming all other factors remain constant. 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.

(15) 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.

(16) Time decay

The value of the Warrants and CBBCs will 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 or upper strike level and the lower strike price or lower strike level (both inclusive), without taking into account interim interest rates and expected dividend payments on the underlying or on any components comprising the underlying index and assuming all other factors remain constant. Therefore, the structured product should not be viewed as a product for long term investments.

(17) 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) 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.

(18) 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, where the underlying is a share, as holder of our structured products you will not have the same rights (including voting rights and rights to dividends) as if you were a direct holder of the underlying.

(19) 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 on the underlying 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.

(20) 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 asset and/or the underlying asset 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 asset and/or the underlying asset 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.

(21) 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.

(22) 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.

(23) 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.

(24) 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.

(25) 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.

(26) 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.

(27) 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.

(28) 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.

(29) 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 splits 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.

(30) 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.

(31) 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.

(32) 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.

(33) Liquidation or termination of the underlying trust or fund

In the case of structured products linked to fund units, in the event of (i) a liquidation, dissolution or termination of the fund or (ii) 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 or (iii) 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.

(34) Commodity market risk

In the case of structured products linked to fund units and the value of the underlying units 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 units. 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.

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

Some of our structured products may be linked to an exchange-traded fund ("**ETF**"). An ETF is exposed to the political, economic, currency and other risks related to the underlying equity(ies), assets or index that the ETF is designed to track. 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.

(36) 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.

(37) Risks relating to structured products linked to an ETF investing through QFII, RQFII and/or China Connect

Some of our structured products may be linked to units of an ETF ("**China ETF**") issued and traded outside mainland China with direct investment in the mainland Chinese securities markets through the Qualified Foreign Institutional Investor ("**QFII**") regime, the Renminbi Qualified Foreign Institutional Investor ("**RQFII**") regime 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 make China ETFs riskier than traditional ETFs investing directly in more developed markets. The policy and rules for QFII, RQFII and China Connect prescribed by the mainland Chinese 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 mainland China may adversely impact on the performance of the China ETFs and the trading price of the units;

(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 the 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 units of such China ETF, and therefore may affect liquidity in unit trading of such China ETF. In such event, the trading price of a unit 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 published detailed implementation rules removing the investment quota allocated to a China ETF under the QFII and RQFII 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 units 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 mainland Chinese tax laws applicable to China ETFs investing in mainland China through QFII, RQFII 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 units 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.

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

Some of our structured products may be linked to units of an ETF traded through the dual counters model. If our structured products are linked to units of an ETF that adopt the dual counters model for trading its units on the stock exchange in Renminbi ("**RMB**") and Hong Kong dollars ("**HKD**") 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 HKD-traded or RMB-traded units. If the underlying asset is HKD-traded units, movements in the trading prices of RMB-traded units should not directly affect the price of our structured products. Similarly, if the underlying asset is RMB traded units, movements in the trading prices of HKD-traded units should not directly affect the price of our structured products;

(b) if there is a suspension of inter-counter transfer of such units between the HKD counter and the RMB counter for any reason, such units 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 units and have an adverse effect on the price of our structured products; and

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

Risk Factors relating to Inline Warrants

(39) 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.

(40) 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.

(41) 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.

(42) 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

(43) 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.

(44) 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.

(45) 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.

(46) 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.

(47) 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.

(48) 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.

(49) 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 share or unit and the strike price or the initial reference spot level of the 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 dividends in respect of the underlying shares or any securities comprising the index (as the case may be) and the margin financing provided by us.

(50) 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 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 gives each Warrantholder, 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, 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 (as defined below) 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:

"**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:

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

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

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

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 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 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:

$$\begin{array}{c}\text{Adjusted Exercise Price}\\ \text{(rounded to the nearest 0.001)}\end{array} = \text{Exercise Price} \times \frac{1}{\text{Adjustment Factor}}$$

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:

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:

$$\begin{array}{c}\text{Adjusted Exercise Price} \\ \text{(rounded to the nearest 0.001)}\end{array} = \text{Exercise Price} \times \frac{1}{\text{Adjustment Factor}}$$

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

(c) *Share Splits 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:

$$\text{Adjusted Exercise Price (rounded to the nearest 0.001)} = \text{Exercise Price} \times \frac{1}{\text{Adjustment Factor}}$$

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. Warrantholders will not be entitled to definitive certificates in respect of any Warrants issued or transferred to them.

10. Meetings of Warrantholders; Modification

(a) *Meetings of Warrantholders.* The Instrument contains provisions for convening meetings of the Warrantholders 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 Warrantholders shall be decided by poll. Such a meeting may be convened by the Issuer or by Warrantholders 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 Warrantholders 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 Warrantholders who, being entitled to do so, vote in person or by proxy.

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

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

(b) *Modification.* The Issuer may, without the consent of the Warrantholders, 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 Warrantholders generally (without considering the circumstances of any individual Warrantholder 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 Warrantholders 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 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 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 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 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 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 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 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:

$$\text{Cash Settlement Amount per Board Lot} = \frac{\text{(Closing Level – Strike Level) x one Board Lot x Index Currency Amount}}{\text{Divisor}}$$

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

$$\text{Cash Settlement Amount per Board Lot} = \frac{\text{(Strike Level – Closing Level) x one Board Lot x Index Currency Amount}}{\text{Divisor}}$$

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. Warrantholders will not be entitled to definitive certificates in respect of any Warrants issued or transferred to them.

10. Meetings of Warrantholders; Modification

(a) *Meetings of Warrantholders.* The Instrument contains provisions for convening meetings of the Warrantholders 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 Warrantholders shall be decided by poll. Such a meeting may be convened by the Issuer or by Warrantholders 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 Warrantholders 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 Warrantholders who, being entitled to do so, vote in person or by proxy.

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

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

(b) *Modification.* The Issuer may, without the consent of the Warrantholders, 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 Warrantholders generally (without considering the circumstances of any individual Warrantholder 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 Warrantholders 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 UNIT 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 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 gives each Warrantholder, 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, 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 (as defined below) 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:

"**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:

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

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

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

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 fund 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 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 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 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:

$$\begin{array}{c}\text{Adjusted Exercise Price}\\ \text{(rounded to the nearest 0.001)}\end{array} = \text{Exercise Price} \times \frac{1}{\text{Adjustment Factor}}$$

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 distribution or similar scheme for the time being operated by the Fund or otherwise in lieu of a cash 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:

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

Where:

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:

$$\begin{array}{c}\text{Adjusted Exercise Price}\\ \text{(rounded to the nearest 0.001)}\end{array} = \text{Exercise Price} \times \frac{1}{\text{Adjustment Factor}}$$

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

(c) *Unit Splits or Consolidations.* If and whenever the Fund shall subdivide its Units or any class of its outstanding units into a greater number of units (a "**Subdivision**") or consolidate the Units or any class of its outstanding units into a smaller number of units (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 with or into any other fund 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 of the fund(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:

$$\text{Adjusted Exercise Price (rounded to the nearest 0.001)} = \text{Exercise Price} \times \frac{1}{\text{Adjustment Factor}}$$

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. Warrantholders will not be entitled to definitive certificates in respect of any Warrants issued or transferred to them.

10. Meetings of Warrantholders; Modification

(a) *Meetings of Warrantholders.* The Instrument contains provisions for convening meetings of the Warrantholders 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 Warrantholders shall be decided by poll. Such a meeting may be convened by the Issuer or by Warrantholders 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 Warrantholders 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 Warrantholders who, being entitled to do so, vote in person or by proxy.

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

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

(b) *Modification.* The Issuer may, without the consent of the Warrantholders, 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 Warrantholders generally (without considering the circumstances of any individual Warrantholder 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 Warrantholders 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) 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 or (iii) 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 its 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:

Adjusted Upper Strike Price (rounded to the nearest 0.001) = Upper Strike Price ÷ Adjustment Factor

Adjusted Lower Strike Price (rounded to the nearest 0.001) = Lower Strike Price ÷ 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:

Adjusted Upper Strike Price (rounded to the nearest 0.001)	=	Upper Strike Price ÷ Adjustment Factor
Adjusted Lower Strike Price (rounded to the nearest 0.001)	=	Lower Strike Price ÷ Adjustment Factor

Where:

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 Splits 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 Warrantholders 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:

Adjusted Upper Strike Price (rounded to the nearest 0.001)	=	Upper Strike Price ÷ Adjustment Factor
Adjusted Lower Strike Price (rounded to the nearest 0.001)	=	Lower Strike Price ÷ 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 Warrantholders generally (without considering the circumstances of any individual Inline 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.

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 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 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 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 Inline Warrant held by such Inline 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 Inline Warrantholders 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 Warrantholders will not be entitled to definitive certificates in respect of any Inline Warrants issued or transferred to them.

10. Meetings of Inline Warrantholders; Modification

(a) *Meetings of Inline Warrantholders.* The Instrument contains provisions for convening meetings of the Inline Warrantholders 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 Warrantholders shall be decided by poll. Such a meeting may be convened by the Issuer or by Inline Warrantholders 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 Warrantholders 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 Warrantholders who, being entitled to do so, vote in person or by proxy.

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

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

(b) *Modification.* The Issuer may, without the consent of the Inline Warrantholders, 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 Warrantholders generally (without considering the circumstances of any individual Inline Warrantholder 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 Warrantholders and shall be notified to them by the Issuer as soon as practicable in accordance with Condition 11.

11. Notices

All notices to Inline 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 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 Warrantholders, 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 Warrantholders generally are not materially prejudiced as a consequence of such delisting (without considering the individual circumstances of any Inline 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 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 Warrantholders, make such adjustments to the entitlements of Inline 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 Inline Warrantholders save in the case of manifest error. Notice of any adjustments or amendments shall be given to the Inline 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 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 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 entitles each Inline Warrantholder, 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 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 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:

"**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 Warrantholders generally (without considering the circumstances of any individual Inline 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 Inline 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 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 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 Inline Warrant held by such Inline 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 Inline Warrantholders 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 Warrantholders will not be entitled to definitive certificates in respect of any Inline Warrants issued or transferred to them.

10. Meetings of Inline Warrantholders; Modification

(a) *Meetings of Inline Warrantholders.* The Instrument contains provisions for convening meetings of the Inline Warrantholders 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 Warrantholders shall be decided by poll. Such a meeting may be convened by the Issuer or by Inline Warrantholders 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 Warrantholders 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 Warrantholders who, being entitled to do so, vote in person or by proxy.

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

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

(b) *Modification.* The Issuer may, without the consent of the Inline Warrantholders, 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 Warrantholders generally (without considering the circumstances of any individual Inline Warrantholder 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 Warrantholders and shall be notified to them by the Issuer as soon as practicable in accordance with Condition 11.

11. Notices

All notices to Inline 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 Inline Warrantholders, 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 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.

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:

$$\text{Cash Settlement Amount per Board Lot} = \frac{\text{Entitlement x (Closing Price – Strike Price) x one Board Lot}}{\text{Number of CBBCs per Entitlement}}$$

(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:

$$\text{Cash Settlement Amount per Board Lot} = \frac{\text{Entitlement x (Strike Price – Closing Price) x one Board Lot}}{\text{Number of CBBCs per Entitlement}}$$

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:

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

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

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

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:

$$\underset{\text{(rounded to the nearest 0.001)}}{\text{Adjusted Call Price}} = \text{Call Price} \times \frac{1}{\text{Adjustment Factor}}$$

$$\underset{\text{(rounded to the nearest 0.001)}}{\text{Adjusted Strike Price}} = \text{Strike Price} \times \frac{1}{\text{Adjustment Factor}}$$

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:

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:

$$\begin{array}{c}\text{Adjusted Call Price}\\ \text{(rounded to the nearest 0.001)}\end{array} = \text{Call Price} \times \frac{1}{\text{Adjustment Factor}}$$

$$\begin{array}{c}\text{Adjusted Strike Price}\\ \text{(rounded to the nearest 0.001)}\end{array} = \text{Strike Price} \times \frac{1}{\text{Adjustment Factor}}$$

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

(c) *Share Splits 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:

$$\text{Adjusted Call Price (rounded to the nearest 0.001)} = \text{Call Price} \times \frac{1}{\text{Adjustment Factor}}$$

$$\text{Adjusted Strike Price (rounded to the nearest 0.001)} = \text{Strike Price} \times \frac{1}{\text{Adjustment Factor}}$$

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:

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

(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:

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

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 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 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 UNIT 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:

$$\text{Cash Settlement Amount per Board Lot} = \frac{\text{Entitlement x (Closing Price – Strike Price) x one Board Lot}}{\text{Number of CBBCs per Entitlement}}$$

(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:

$$\text{Cash Settlement Amount per Board Lot} = \frac{\text{Entitlement x (Strike Price – Closing Price) x one Board Lot}}{\text{Number of CBBCs per Entitlement}}$$

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 fund 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:

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

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

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

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 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:

$$\begin{array}{c}\text{Adjusted Call Price} \\ \text{(rounded to the nearest 0.001)}\end{array} = \text{Call Price} \times \frac{1}{\text{Adjustment Factor}}$$

$$\begin{array}{c}\text{Adjusted Strike Price} \\ \text{(rounded to the nearest 0.001)}\end{array} = \text{Strike Price} \times \frac{1}{\text{Adjustment Factor}}$$

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 distribution or similar scheme for the time being operated by the Fund or otherwise in lieu of a cash 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:

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:

$$\begin{array}{c}\text{Adjusted Call Price}\\ \text{(rounded to the nearest 0.001)}\end{array} = \text{Call Price} \times \frac{1}{\text{Adjustment Factor}}$$

$$\begin{array}{c}\text{Adjusted Strike Price}\\ \text{(rounded to the nearest 0.001)}\end{array} = \text{Strike Price} \times \frac{1}{\text{Adjustment Factor}}$$

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

(c) *Unit Splits or Consolidations.* If and whenever the Fund shall subdivide its Units or any class of its outstanding units into a greater number of units (a "**Subdivision**") or consolidate the Units or any class of its outstanding units into a smaller number of units (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 with or into any other fund 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 of the fund(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:

$$\begin{array}{c}\text{Adjusted Call Price}\\ \text{(rounded to the nearest 0.001)}\end{array} = \text{Call Price} \times \frac{1}{\text{Adjustment Factor}}$$

$$\text{Adjusted Strike Price (rounded to the nearest 0.001)} = \text{Strike Price} \times \frac{1}{\text{Adjustment Factor}}$$

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) 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 or (iii) 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 its 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 organised into five geographical regions: 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

Laura May Lung Cha*, GBM, *Chairman*
Peter Tung Shun Wong, GBS, JP, *Deputy Chairman and Chief Executive*
Zia Mody*, *Deputy Chairman*
Graham John Bradley*
Dr Christopher Wai Chee Cheng*, GBS, OBE
Sonia Chi Man Cheng*
Yiu Kwan Choi*
Beau Khoon Chen Kuok*
Irene Yun-lien Lee*
Jennifer Xinzhe Li*
Victor Tzar Kuoi Li#
Bin Hwee Quek (née Chua)*, PBM, BBM, JP
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, FCS

Main Subsidiaries

The main subsidiaries of the Bank as at 31 December 2020 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 and its subsidiaries (the "**Bank Group**") as at 31 December 2020:

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 2020 was HK$845,353 million comprising HK$172,335 million of share capital, HK$44,615 million of other equity instruments, HK$149,500 million of other reserves and HK$478,903 million of retained earnings.

Subordinated liabilities

Subordinated liabilities of the Bank Group issued to third parties measured at amortised cost, as at 31 December 2020 and 2019, 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.

	2020	**2019**
	HK$m	*HK$m*
Subordinated liabilities	4,065	4,066

Debt Securities in Issue

The debt securities in issue of the Bank Group measured at amortised cost as at 31 December 2020 were HK$79,419 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 U.S. Securities Act of 1933, as amended (the "**Securities Act**"), or the securities laws of any U.S. state. The structured products are being offered outside the United States in accordance with Regulation S under the Securities Act ("**Regulation S**"), and may not at any time be offered, sold, resold or delivered, directly or indirectly, within the United States or to, or for the account or benefit of, any U.S. person or to others for offer or sale within the United States or to, or for the account or benefit of, any such U.S. person. Offers and sales of structured products or interests therein or the effectuation of hedging transactions with respect to structured products, within the United States or to U.S. persons would constitute a violation of U.S. federal and state securities laws, unless made in compliance with Regulation S or an exemption from the registration requirements of the Securities Act and any applicable U.S. state securities laws. Terms used in this paragraph have the meanings given to them by Regulation S.

The structured products may not at any time be offered, sold, resold or delivered, directly or indirectly, to or for the account or benefit of any 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.

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

In respect of the United Kingdom, each dealer has further represented and agreed that, and each further dealer to be appointed will be required to further represent and agree,

(a) in respect of structured products having 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 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 any 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 such 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-US 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-US 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.

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 (Rating under review for downgrade)
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 2020.

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.

You may also inspect copies of the following documents at the office of The Hongkong and Shanghai Banking Corporation Limited during usual business hours on any weekday (Saturdays, Sundays and public holidays excepted) 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 6 April 2020 for the extract of the Annual Report and Accounts 2019 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 2019.

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 23 February 2021 on the consolidated financial statements of the Issuer as at and for the year ended 31 December 2020, 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?

The stock exchange charges a trading fee currently at the rate of 0.005 per cent. and the Securities and Futures Commission charges a transaction levy currently at the rate of 0.0027 per cent. in respect of each transaction effected on the stock exchange payable by each of the seller and the buyer and calculated on the value of the consideration for the relevant securities. 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 arising on the transfer of underlying shares following 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 2020

The information in this Exhibit A has been extracted from the Annual Report and Accounts 2020 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 2020. The extracts set out in this Exhibit A are not complete and reference should be made to the Annual Report and Accounts 2020 which is available for inspection at the Issuer's office at HSBC Main Building, 1 Queen's Road Central, Hong Kong.

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') set out on pages 71 to 125, which comprise:

- the consolidated balance sheet as at 31 December 2020;
- 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 notes[1] on the consolidated financial statements, which include a summary of significant accounting policies.

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 2020*, 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 2020, 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 ('HKSAs') 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:

- 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
- IT access management

Expected credit losses on loans and advances to customers

Nature of the Key Audit Matter

At 31 December 2020, the group recorded expected credit loss ('ECL') allowances on loans and advances to customers of HK$28.9bn.

The determination of the ECL allowances requires the use of complex credit risk methodologies based on the group's historic experience of the correlations between defaults and losses, borrower creditworthiness and economic conditions, which can result in limitations in their reliability to appropriately estimate ECL. Significant judgement and subjectivity are involved in determining whether these methodologies and their application in models remain appropriate and in determining the quantum of any management judgemental adjustments required to account for late breaking events, model deficiencies and expert credit judgement applied following management review and challenge.

Significant judgement is also required to determine assumptions, which involve subjectivity and estimation uncertainty. The significant assumptions include those with greater levels of management judgement and for which variations have the most significant impact on ECL. Specifically, these include likelihoods of economic scenarios, any alternative and additional scenarios used, customer risk ratings and probabilities of default, and the prospects of future recoverability of credit impaired wholesale exposures. Likewise, there is inherent uncertainty with the consensus economic forecasts data from external economists.

The ongoing Covid-19 pandemic and continued geopolitical tensions between the US and China increases the inherent risk and estimation uncertainty involved in determining the ECL allowances and the level of credit risk associated with the group's customers. The speed and severity of the economic shock caused specifically by the Covid-19 pandemic and consequent government and regulator responses may have altered the correlations between losses, borrower creditworthiness and economic conditions, as well as impacted economic factors such as GDP and unemployment, and consequently the extent and timing of customer defaults. This broadens the range of possible outcomes in estimating ECLs, which increases the judgement required in assessing the appropriateness of existing methodologies and economic forecasts data from external economists, and in determining assumptions. ECLs have been adjusted through management judgemental adjustments to reflect these limitations. In addition, certain changes to models used for the ECL determination have been made during 2020.

Matters discussed with the Audit Committee

We discussed the appropriateness of the methodologies, their application, significant assumptions, significant data and disclosures with the Audit Committee, giving consideration to the ongoing Covid-19 pandemic and continued geopolitical tensions between the US and China. We further discussed the governance and controls over ECL, with a focus on the impact from the Covid-19 pandemic.

In relation to the methodologies, we focused our discussions on:

- Methodology application and model validation, including where models were changed during the year; and
- the identification and assessment of model limitations and resulting management judgemental adjustments made to derive the ECL allowances, in particular for approaches adopted in response to the Covid-19 pandemic.

In relation to significant assumptions and data, we focused on those which are most sensitive including:

- the severity and likelihood of economic scenarios and the probabilities assigned to those scenarios;
- the determination and migration of customer risk ratings; and
- assumptions around the future recoverability of significant credit impaired wholesale exposures.

We further discussed the associated disclosures in the *Annual Report and Accounts 2020*, in particular the impact of the Covid-19 pandemic on determining the ECL allowances and continued geopolitical tensions between the US and China, and the resulting estimation uncertainty.

How our audit addressed the Key Audit Matter

We tested controls in place over the methodologies, their application, significant assumptions and data used to determine the ECL allowances. Specifically, these included controls over:

- Model development, validation and monitoring;
- Determination and approval of consensus and alternative economic scenarios;
- Approval of the probability weightings assigned to economic scenarios;
- Assigning Customer Risk Ratings and probabilities of default;
- The input of critical data into source systems and the flow and transformation of critical data between source systems to the impairment ECL models;
- Determination and approval of management judgemental adjustments; and
- Review of input and assumptions applied in estimating the recoverability of credit-impaired wholesale exposures.

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, we 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, giving specific consideration to the Covid-19 pandemic and whether management judgemental adjustments were needed. Where management judgemental adjustments were made, we assessed the ECL allowances determined and the analysis supporting them.

We further performed the following to assess the significant assumptions, data and disclosures:

- We challenged the Bank's basis for determining significant assumptions and, where relevant, their interrelationships;
- We involved our economic experts in assessing the reasonableness of the severity and likelihood of the group's economic scenarios. These assessments considered the sensitivity of the ECL allowances to variations in the severity and likelihood of different economic scenarios;
- We tested a sample of customer risk ratings assigned to wholesale exposures;
- We have independently assessed other significant 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 various substantive audit procedures over critical data used in the determination of the ECL allowances to ensure these are relevant and reliable; and
- We assessed the adequacy of the disclosures in relation to expected credit losses on loans and advances to customers made in the *Annual Report and Accounts 2020* in the context of the applicable financial reporting framework.

Relevant references in the Annual Report and Accounts 2020

Risk: Credit Risk, page 27-48

Note 1.2 (i) on the consolidated financial statements: Basis of preparation and significant accounting policies, page 82-85

Note 2 (e) on the consolidated financial statements: Operating profit - Change in expected credit losses and other credit impairment charges, page 89

Note 10 on the consolidated financial statements: Loans and advances to customers, page 97

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
At 31 December 2020, the market value of the investment in BoCom, based on the share price, was HK$107.6bn lower than the carrying value of HK$165.4bn. 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$3.9bn in excess of the carrying value. On this basis, no impairment was recorded and the share of BoCom's profits has been recognised in the consolidated income statement. 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 and market data. The significant 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, expected credit losses, effective tax rates, and capital requirements. **Matters discussed with the Audit Committee** We discussed the appropriateness of the methodology, its application and significant assumptions with the Audit Committee, giving consideration to the macroeconomic environment and the overall outlook for the Chinese banking market. We considered reasonably possible alternatives for the significant assumptions. We also discussed the disclosures made in relation to BoCom, including the use of sensitivity analysis to explain estimation uncertainty and the conditions that would result in an impairment being recognised.	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: • Challenged the basis for determining 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 comparing 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. We observed meetings in April, May, September and November 2020 between management and senior BoCom executive management, held specifically to identify facts and circumstances impacting assumptions relevant to the determination of the VIU. Representations were obtained from the Bank that assumptions used were consistent with information currently available to them, both as a shareholder of BoCom and to which HSBC are entitled through their participation on BoCom's Board of Directors. We assessed the adequacy of the disclosures in relation to BoCom made in the *Annual Report and Accounts 2020* in the context of the applicable financial reporting framework.

Relevant references in the Annual Report and Accounts 2020

Note 1.2 (a) on the consolidated financial statements: Basis of preparation and significant accounting policies, page 78-79

Note 14 on the consolidated financial statements: Interests in associates and joint ventures, page 100-103

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

At 31 December 2020, the group has recorded an asset for PVIF of HK$65.1bn and liabilities under non-linked life insurance contracts of HK$547.1bn.

The determination of these balances requires the use of complex actuarial methodologies that are applied in models and involves significant judgement about future outcomes. Specifically, significant judgement is required in deriving the economic assumptions, and assumptions related to longevity, mortality, persistency and expenses. These assumptions are subject to estimation uncertainty, and movements in certain of these can have a material impact on the PVIF asset and the liabilities under non-linked life insurance contracts.

Matters discussed with the Audit Committee

We discussed the appropriateness of the methodologies, their application, significant assumptions and 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, including economic assumptions and assumptions related to longevity, mortality, persistency and expenses.

How our audit addressed the Key Audit Matter

We tested controls in place over the determination of PVIF asset and the liabilities under non-linked life insurance contracts. Specifically, these included controls over:

- policy data reconciliations from the policyholder administration system to the actuarial valuation system;
- assumptions setting;
- review and determination of valuation methodologies and corresponding models;
- restriction of user access to the models; and
- production and approval of the actuarial results.

With the assistance of our actuarial experts, we performed the following audit procedures to assess the methodologies used, their application, significant assumptions, data and disclosures:

- We assessed the appropriateness of the methodologies used, their application and the mathematical accuracy of the calculations;
- We challenged the group's basis for determining 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 *Annual Report and Accounts 2020* in the context of the applicable financial reporting framework.

Relevant references in the Annual Report and Accounts 2020

Risk: Insurance manufacturing operations risk, page 59-63

Note 1.2 (j) on the consolidated financial statements: Basis for preparation and significant accounting policies, page 85-86

Note 3 on the consolidated financial statements: Insurance business, page 90

Note 15 on the consolidated financial statements: Goodwill and intangible assets, page 103-104

IT access management

Nature of the Key Audit Matter	How our audit addressed the Key Audit Matter
The group has operations across a number of countries supporting a wide range of products and services, resulting in an IT environment that is large, complex and increasingly reliant on third parties. The Bank's financial reporting processes rely upon a significant element of this IT environment, both within the group's operations and financial reporting. Access management controls are an important part of the IT environment to ensure both access and changes made to systems and data are appropriate. Our audit approach relies extensively on the effectiveness of IT access management. **Matters discussed with the Audit Committee** The significance of IT access management to our audit was discussed at Audit Committee meetings during the year. We further presented identified control observations related to IT access management and discussed our related audit response.	IT access management controls were tested for systems and data relevant to financial reporting that we relied upon as part of our audit. Specifically, these included controls over: • Authorising new access requests; • The timely removal of access rights; • Periodic monitoring of the appropriateness of access rights to systems and data; • Restricting highly privileged access to appropriate personnel; • The accuracy of information about IT users to facilitate access management; • Segregation of access across IT and business functions; • Changes made to systems and data; and • Understanding and assessing reliance on third parties, including Service Organisation controls reports. We also independently assessed controls related to password policies and system configurations, and performed substantive audit procedures in relation to access right removal, privileged access, IT user information and segregation of duties. We performed further testing where control deficiencies were identified, including: • Where inappropriate access was identified, we understood and assessed the nature of the access, and when required, obtained additional evidence on the appropriateness of activities performed; and • Where necessary, we identified and tested compensating business controls and performed other audit procedures that addressed the risk that inappropriate changes were made to systems and data.
Relevant references in the Annual Report and Accounts 2020	
Risk: Our material banking risks, page 25-26	

Other Information

The directors of the Bank are responsible for the other information. The other information comprises the information included in the Financial Highlights, Report of the Directors, Financial Review, Risk and Statement of Directors' Responsibilities sections of the *Annual Report and Accounts 2020* (but does not include the consolidated financial statements and our auditor's report thereon), which we obtained prior to the date of this auditor's report, and the Banking Disclosure Statement 2020 and the list of the directors of the Bank's subsidiary undertakings (consolidated in the financial statements) during the period from 1 January 2020 to 23 February 2021, which are 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 Banking Disclosure Statement 2020 and the list of the directors of the Bank's subsidiary undertakings (consolidated in the financial statements) during the period from 1 January 2020 to 23 February 2021, 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.

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, 23 February 2021

Consolidated Financial Statements

Consolidated income statement

for the year ended 31 December

	Notes	2020 HK$m	2019 HK$m
Net interest income	2a	**111,513**	130,903
– interest income		**147,376**	191,322
– interest expense		**(35,863)**	(60,419)
Net fee income	2b	**41,670**	41,505
– fee income		**52,370**	53,099
– fee expense		**(10,700)**	(11,594)
Net income from financial instruments held for trading or managed on a fair value basis	2c	**32,172**	36,388
Net income from assets and liabilities of insurance businesses, including related derivatives, measured at fair value through profit or loss	2c	**13,128**	14,257
Changes in fair value of designated debts issued and related derivatives	2c	**(171)**	(305)
Changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss	2c	**138**	118
Gains less losses from financial investments		**1,624**	638
Net insurance premium income	3	**61,563**	60,275
Other operating income	2d	**5,612**	15,758
Total operating income		**267,249**	299,537
Net insurance claims and benefits paid and movement in liabilities to policyholders	3	**(77,911)**	(80,156)
Net operating income before change in expected credit losses and other credit impairment charges		**189,338**	219,381
Change in expected credit losses and other credit impairment charges	2e	**(17,719)**	(5,672)
Net operating income		**171,619**	213,709
Employee compensation and benefits	4	**(36,183)**	(38,048)
General and administrative expenses	2f	**(46,304)**	(44,769)
Depreciation and impairment of property, plant and equipment	2g	**(9,405)**	(8,230)
Amortisation and impairment of intangible assets		**(3,936)**	(2,447)
Total operating expenses		**(95,828)**	(93,494)
Operating profit		**75,791**	120,215
Share of profit in associates and joint ventures		**14,405**	16,218
Profit before tax		**90,196**	136,433
Tax expense	5	**(14,505)**	(21,393)
Profit for the year		**75,691**	115,040
Attributable to:			
– ordinary shareholders of the parent company		**66,997**	104,200
– other equity holders		**2,450**	1,522
– non-controlling interests		**6,244**	9,318
Profit for the year		**75,691**	115,040

Consolidated statement of comprehensive income

for the year ended 31 December

	2020 HK$m	2019 HK$m
Profit for the year	**75,691**	115,040
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	**2,238**	1,674
– fair value gains	**4,642**	2,782
– fair value gains transferred to the income statement	**(1,648)**	(606)
– expected credit losses recognised in the income statement	**112**	23
– income taxes	**(868)**	(525)
Cash flow hedges	**969**	5
– fair value gains/(losses)	**(4,393)**	681
– fair value (gains)/losses reclassified to the income statement	**5,551**	(673)
– income taxes	**(189)**	(3)
Share of other comprehensive income/(expense) of associates and joint ventures	**(726)**	167
Exchange differences	**17,891**	(3,606)
Items that will not be reclassified subsequently to profit or loss:		
Property revaluation	**(5,774)**	3,673
– fair value gains/(losses)	**(6,914)**	4,426
– income taxes	**1,140**	(753)
Equity instruments designated at fair value through other comprehensive income	**1,647**	2,854
– fair value gains	**1,654**	2,859
– income taxes	**(7)**	(5)
Changes in fair value of financial liabilities designated at fair value upon initial recognition arising from changes in own credit risk	**257**	(2,060)
– before income taxes	**320**	(2,467)
– income taxes	**(63)**	407
Remeasurement of defined benefit asset/liability	**(315)**	192
– before income taxes	**(384)**	245
– income taxes	**69**	(53)
Other comprehensive income for the year, net of tax	**16,187**	2,899
Total comprehensive income for the year	**91,878**	117,939
Attributable to:		
– ordinary shareholders of the parent company	**82,738**	106,187
– other equity holders	**2,450**	1,522
– non-controlling interests	**6,690**	10,230
Total comprehensive income for the year	**91,878**	117,939

Consolidated balance sheet

at 31 December

	Notes	2020 HK$m	2019 HK$m
Assets			
Cash and balances at central banks		**347,999**	202,746
Items in the course of collection from other banks		**21,943**	21,140
Hong Kong Government certificates of indebtedness		**313,404**	298,944
Trading assets	*7*	**600,414**	622,761
Derivatives	*8*	**422,945**	280,642
Financial assets designated and otherwise mandatorily measured at fair value through profit or loss	*9*	**178,960**	153,511
Reverse repurchase agreements – non-trading		**520,344**	422,333
Loans and advances to banks		**403,884**	328,905
Loans and advances to customers	*10*	**3,668,681**	3,720,875
Financial investments	*11*	**2,175,432**	1,900,298
Amounts due from Group companies	*32*	**83,203**	87,632
Interests in associates and joint ventures	*14*	**168,754**	151,917
Goodwill and intangible assets	*15*	**89,968**	81,643
Property, plant and equipment	*16*	**128,537**	137,930
Deferred tax assets	*5*	**3,325**	2,179
Prepayments, accrued income and other assets	*17*	**288,610**	248,258
Total assets		**9,416,403**	8,661,714
Liabilities			
Hong Kong currency notes in circulation		**313,404**	298,944
Items in the course of transmission to other banks		**25,699**	25,576
Repurchase agreements – non-trading		**136,157**	106,396
Deposits by banks		**248,628**	179,819
Customer accounts	*18*	**5,911,396**	5,432,424
Trading liabilities	*19*	**60,812**	87,532
Derivatives	*8*	**428,211**	292,231
Financial liabilities designated at fair value	*20*	**167,013**	160,291
Debt securities in issue	*21*	**79,419**	106,933
Retirement benefit liabilities	*4*	**2,701**	2,595
Amounts due to Group companies	*32*	**296,308**	311,111
Accruals and deferred income, other liabilities and provisions	*22*	**215,987**	203,252
Liabilities under insurance contracts	*3*	**581,406**	528,760
Current tax liabilities		**2,669**	12,614
Deferred tax liabilities	*5*	**30,997**	29,889
Subordinated liabilities	*23*	**4,065**	4,066
Total liabilities		**8,504,872**	7,782,433
Equity			
Share capital	*24*	**172,335**	172,335
Other equity instruments	*25*	**44,615**	44,615
Other reserves		**149,500**	133,099
Retained earnings		**478,903**	464,629
Total shareholders' equity		**845,353**	814,678
Non-controlling interests		**66,178**	64,603
Total equity		**911,531**	879,281
Total liabilities and equity		**9,416,403**	8,661,714

Consolidated statement of cash flows

for the year ended 31 December

	2020 HK$m	2019 HK$m
Profit before tax	**90,196**	136,433
Adjustments for non-cash items:		
Depreciation and amortisation	**13,341**	10,677
Net gain from investing activities	**(567)**	(790)
Share of profits in associates and joint ventures	**(14,405)**	(16,218)
Loss on disposal of subsidiaries, businesses, associates and joint ventures	**70**	14
Change in expected credit losses gross of recoveries and other credit impairment charges	**18,452**	6,535
Provisions	**114**	568
Share-based payment expense	**735**	878
Other non-cash items included in profit before tax	**(3,896)**	(16,869)
Elimination of exchange differences	**(22,323)**	4,819
Changes in operating assets and liabilities		
Change in net trading securities and derivatives	**(10,696)**	(78,600)
Change in loans and advances to banks and customers	**11,959**	(189,346)
Change in reverse repurchase agreements – non-trading	**(60,741)**	(33,521)
Change in financial assets designated and otherwise mandatorily measured at fair value through profit or loss	**(25,449)**	(20,652)
Change in other assets	**(119,373)**	6,146
Change in deposits by banks and customer accounts	**547,781**	239,913
Change in repurchase agreements – non-trading	**29,761**	36,117
Change in debt securities in issue	**(27,514)**	48,697
Change in financial liabilities designated at fair value	**6,722**	(852)
Change in other liabilities	**42,517**	(28,243)
Dividends received from associates	**5,053**	4,962
Contributions paid to defined benefit plans	**(602)**	(391)
Tax paid	**(25,466)**	(9,420)
Net cash from operating activities	**455,669**	100,857
Purchase of financial investments	**(875,648)**	(836,492)
Proceeds from the sale and maturity of financial investments	**823,410**	762,125
Purchase of property, plant and equipment	**(3,768)**	(3,334)
Proceeds from sale of property, plant and equipment and assets held for sale	**72**	1,828
Proceeds from disposal of customer loan portfolios	**6,284**	2,057
Net investment in intangible assets	**(7,331)**	(6,019)
Net cash inflow on sale of subsidiaries	**69**	299
Net cash from investing activities	**(56,912)**	(79,536)
Issue of ordinary share capital and other equity instruments	**–**	8,617
Dividends paid to shareholders of the parent company and non-controlling interests	**(59,121)**	(74,015)
Net cash from financing activities	**(59,121)**	(65,398)
Net increase/(decrease) in cash and cash equivalents	**339,636**	(44,077)
Cash and cash equivalents at 1 Jan[2]	**677,664**	721,609
Exchange differences in respect of cash and cash equivalents	**30,507**	132
Cash and cash equivalents at 31 Dec[3]	**1,047,807**	677,664
Cash and cash equivalents comprise		
– cash and balances at central banks	**347,999**	202,746
– items in the course of collection from other banks	**21,943**	21,140
– loans and advances to banks of one month or less	**286,356**	217,879
– net settlement accounts and cash collateral	**43,570**	18,706
– reverse repurchase agreements with banks of one month or less	**186,599**	155,587
– treasury bills, other bills and certificates of deposit less than three months	**187,039**	87,182
– less: items in the course of transmission to other banks	**(25,699)**	(25,576)
Cash and cash equivalents at 31 Dec[3]	**1,047,807**	677,664

Interest received was HK$160,120m (2019: HK$195,528m), interest paid was HK$46,104m (2019: HK$62,557m) and dividends received were HK$3,946m (2019: HK$5,410m).

1 *During 2019, the change in subordinated liabilities included amounts from repayment of HK$92,384m and re-issuance of HK$92,343m to Group companies with no cash movement. Changes in subordinated liabilities included non-cash changes from foreign exchange gain of HK$303m in 2020 (2019: exchange loss of HK$1,012m) and fair value gain after hedging of HK$8,261m (2019: HK$9,736m). There is no change in subordinated loan capital during 2020.*
2 *From the fourth quarter of 2019, settlement accounts with bank counterparties of one month or less are included on a net basis to align with Group's presentation. Comparatives have not been re-presented.*
3 *At 31 December 2020 HK$149,565m (2019: HK$110,076m) was not available for use by the group, of which HK$71,049m (2019:HK$66,943m) related to mandatory deposits at Central banks.*

Consolidated statement of changes in equity

for the year ended 31 December

				Other reserves							
	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]	Total share-holders' equity	Non-controlling interests	Total equity
	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[4]	–	–	(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[5]	–	–	(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**

Consolidated statement of changes in equity (continued)

for the year ended 31 December

				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 share-holders' equity	Non-controlling interests	Total equity
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
At 31 Dec 2018	172,335	35,879	429,595	57,914	2,953	(99)	(24,649)	78,830	752,758	60,162	812,920
Impact on transition to HKFRS 16	—	—	—	13,483	—	—	—	—	13,483	—	13,483
At 1 Jan 2019	172,335	35,879	429,595	71,397	2,953	(99)	(24,649)	78,830	766,241	60,162	826,403
Profit for the year	—	—	105,722	—	—	—	—	—	105,722	9,318	115,040
Other comprehensive income/(expense) (net of tax)	—	—	(1,949)	3,395	4,006	(5)	(3,469)	9	1,987	912	2,899
– debt instruments at fair value through other comprehensive income	—	—	—	—	1,676	—	—	—	1,676	(2)	1,674
– equity instruments designated at fair value through other comprehensive income	—	—	—	—	2,169	—	—	—	2,169	685	2,854
– cash flow hedges	—	—	—	—	—	(5)	—	—	(5)	10	5
– changes in fair value of financial liabilities designated at fair value upon initial recognition arising from changes in own credit risk	—	—	(2,058)	—	—	—	—	—	(2,058)	(2)	(2,060)
– property revaluation	—	—	—	3,395	—	—	—	—	3,395	278	3,673
– remeasurement of defined benefit asset/liability	—	—	112	—	—	—	—	—	112	80	192
– share of other comprehensive income/(expense) of associates and joint ventures	—	—	(3)	—	161	—	—	9	167	—	167
– exchange differences	—	—	—	—	—	—	(3,469)	—	(3,469)	(137)	(3,606)
Total comprehensive income/(expense) for the year	—	—	103,773	3,395	4,006	(5)	(3,469)	9	107,709	10,230	117,939
Other equity instruments issued[3]	—	44,615	—	—	—	—	—	—	44,615	—	44,615
Other equity instruments repaid[3]	—	(35,879)	—	—	—	—	—	—	(35,879)	—	(35,879)
Dividends paid[4]	—	—	(68,369)	—	—	—	—	—	(68,369)	(5,646)	(74,015)
Movement in respect of share-based payment arrangements	—	—	(42)	—	—	—	—	249	207	2	209
Transfers and other movements[5]	—	—	(328)	(2,779)	—	—	—	3,261	154	(145)	9
At 31 Dec 2019	172,335	44,615	464,629	72,013	6,959	(104)	(28,118)	82,349	814,678	64,603	879,281

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 *In 2019, there were US$1,100m additional tier 1 capital instruments issued. In addition, US$4,600m of additional tier 1 capital instruments were repaid and reissued in 2019 with no actual cash movement.*

4 *Including distributions paid on perpetual subordinated loans classified as equity under HKFRS.*

5 *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. 'Interest Rate Benchmark Reform – Phase 2' which amends HKFRS 9, HKAS 39 'Financial Instruments', HKFRS 7 'Financial Instruments,' HKFRS 4 'Insurance Contracts and HKFRS 16 'Leases' has been early adopted as set out below. 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 2020

Interest Rate Benchmark Reform – Phase 2

Interest Rate Benchmark Reform Phase 2: Amendments to HKFRS 9, HKAS 39, HKFRS 7, HKFRS 4 and HKFRS 16 issued in October 2020 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 the 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, but instead 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.

These amendments apply from 1 January 2021 with early adoption permitted. The group has adopted the amendments from 1 January 2020 and has made the additional disclosures as required by the amendments.

Other changes

In addition, the group has adopted a number of interpretations and amendments to standards, which have had an insignificant effect on the consolidated financial statements of the group.

(b) Future accounting developments

Minor amendments to HKFRSs

The HKICPA has not published any minor amendments effective from 1 January 2021 that are applicable to the group. However, 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 numerical 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 PVIF asset recognised; rather the estimated future profit will be included in the measurement of the Insurance contract liability as the contractual service margin ('CSM') and gradually recognised in revenue as services are provided over the duration of the insurance contract. 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. Depending on the measurement model, changes in market conditions for certain products (measured under the General Measurement Approach) are immediately recognised in the income statement, whilst for other products (measured under the Variable Fee Approach), they will be included in the measurement of CSM;
- In accordance with HKFRS 17, directly attributable costs will be included in the results of insurance services as profit is recognised over the duration of insurance contracts and costs that are not directly attributable will remain in operating expenses. This will result in a reduction in operating expenses compared to the current accounting policy.

(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.

(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 global business 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 pages 20 to 21 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 25 to 55 and pages 59 to 63 as specified as 'Audited'.
- Capital disclosures are included in the 'Treasury Risk' section on pages 49 to 51 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 increasing uncertainty that the global Covid-19 outbreak 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 pro-rated 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
	• Management's best estimate of BoCom's earnings are based on management's explicit forecasts over the short to medium term and the capital maintenance charge which is management's forecast of the earnings that need to be withheld in order for BoCom to meet regulatory requirements over the forecast period, both of which are subject to uncertain factors. • 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 most brokerage trades the group acts as agent in the transaction and 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 we have 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.

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
• 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).	• Details on the group's level 3 financial instruments 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. If the initial fair value is lower than the cash amount advanced, such as in the case of some leveraged finance and syndicated lending activities, the difference is deferred and recognised over the life of the loan through the recognition of interest income.

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;
- when 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; and
- where 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 unlikeliness 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.

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.

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 27.

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 leverages the Basel II IRB framework where possible, with recalibration to meet the differing HKFRS 9 requirements as set out in the following table:

Model	Regulatory capital	HKFRS 9
PD	• 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	• 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	• Cannot be lower than current balance.	• Amortisation captured for term products
LGD	• 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	• 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		• 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 our 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 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 33 to 37.

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
• 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; and • selecting model inputs and economic forecasts, including determining whether sufficient and appropriately weighted economic forecasts are incorporated to calculate unbiased expected loss.	• The sections marked as audited on pages 33 to 37, 'Measurement uncertainty and sensitivity analysis of ECL estimates' 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**
• 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 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.	• 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 59 to 63, '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.

(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 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, contractual commitments 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 by global business.

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:

	2020 HK$m	2019 HK$m
Interest income recognised on impaired financial assets	220	309
Interest income recognised on financial assets measured at amortised cost	127,178	160,387
Interest income recognised on financial assets measured at FVOCI	20,167	30,974
Interest expense on financial instruments, excluding interest on financial liabilities held for trading or designated or otherwise mandatorily measured at fair value	(33,135)	(56,493)

(b) Net fee income

Net fee income by global business[1]

	Wealth and Personal Banking HK$m	Commercial Banking HK$m	Global Banking and Markets HK$m	Corporate Centre[2] HK$m	Total HK$m
Account services	864	864	367	3	2,098
Funds under management	5,071	677	1,796	—	7,544
Cards	5,564	1,291	83	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	1,521	(12)	1,511
Remittances	290	1,630	697	(18)	2,599
Global custody	942	53	2,998	—	3,993
Insurance agency commission	1,308	107	1	—	1,416
Other	2,312	2,363	5,566	(2,121)	8,120
Fee income	28,165	10,709	15,642	(2,146)	52,370
Fee expense	(6,139)	(1,607)	(5,262)	2,308	(10,700)
Year ended 31 Dec 2020	22,026	9,102	10,380	162	41,670
Account services	1,304	893	340	1	2,538
Funds under management	4,874	646	1,694	1	7,215
Cards	6,755	1,726	85	1	8,567
Credit facilities	232	1,693	1,367	1	3,293
Broking income	2,821	43	696	—	3,560
Imports/exports	—	2,590	690	—	3,280
Unit trusts	6,992	158	—	—	7,150
Underwriting	3	2	1,559	(9)	1,555
Remittances	287	1,945	665	(14)	2,883
Global custody	755	51	2,936	—	3,742
Insurance agency commission	1,602	131	2	—	1,735
Other	2,530	2,148	5,297	(2,394)	7,581
Fee income	28,155	12,026	15,331	(2,413)	53,099
Fee expense	(6,682)	(2,076)	(5,366)	2,530	(11,594)
Year ended 31 Dec 2019	21,473	9,950	9,965	117	41,505

1 *Effective from 2020, the reportable segments have been changed to reflect the merging of Retail Banking and Wealth Management and Global Private Banking to form Wealth and Personal Banking ('WPB'), and the re-allocation of Balance Sheet Management from Corporate Centre to the global businesses. 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' on the consolidated financial statements.*
2 *Includes inter-segment elimination.*

Net fee income includes:

	2020 HK$m	2019 HK$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)	9,373	11,400
– fee income	13,850	16,324
– fee expense	(4,477)	(4,924)
Fee earned on trust and other fiduciary activities	9,745	9,234
– fee income	11,012	10,421
– fee expense	(1,267)	(1,187)

(c) Net income from financial instruments measured at fair value through profit or loss

	2020 HK$m	2019 HK$m
Net income/(expense) arising on:		
Net trading activities	**35,141**	42,813
Other instruments managed on a fair value basis	**(2,969)**	(6,425)
Net income from financial instruments held for trading or managed on a fair value basis	**32,172**	36,388
Financial assets held to meet liabilities under insurance and investment contracts	**15,873**	16,245
Liabilities to customers under investment contracts	**(2,745)**	(1,988)
Net income from assets and liabilities of insurance businesses, including related derivatives, measured at fair value through profit or loss	**13,128**	14,257
Change in fair value of designated debt issued and related derivatives[1]	**(171)**	(305)
Changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss	**138**	118
Year ended 31 Dec	**45,267**	50,458

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

	2020 HK$m	2019 HK$m
Movement in present value of in-force insurance business	**3,840**	12,546
Gains/(losses) on investment properties	**(996)**	154
Losses on disposal of property, plant and equipment and assets held for sale	**(61)**	(2)
Losses on disposal of subsidiaries, associates and business portfolios	**(70)**	(14)
Rental income from investment properties	**370**	423
Dividend income	**165**	161
Other	**2,364**	2,490
Year ended 31 Dec	**5,612**	15,758

There was a loss on disposal of loans and receivables of HK$52m in the year (2019: loss of HK$3m). There were no gains or losses on disposal of financial liabilities measured at amortised cost in the year (2019: nil).

(e) Change in expected credit losses and other credit impairment charges

	2020 HK$m	2019 HK$m
Loans and advances to banks and customers	**16,509**	5,420
– new allowances net of allowance releases	**17,242**	6,283
– recoveries of amounts previously written off	**(733)**	(863)
Loan commitments and guarantees	**654**	95
Other financial assets	**556**	157
Year ended 31 Dec	**17,719**	5,672

Change in expected credit losses as a percentage of average gross customer advances was 0.44% for 2020 (2019: 0.15%).

(f) General and administrative expenses

	2020 HK$m	2019 HK$m
Premises and equipment	**2,804**	3,246
Marketing and advertising expenses	**1,959**	2,815
Other administrative expenses[1]	**41,541**	38,708
Year ended 31 Dec	**46,304**	44,769

1 Include intercompany expenses. Further details are set out in Note 32.

Included in operating expenses were direct operating expenses of HK$31m (2019: HK$34m) 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$3m (2019: HK$2m).

(g) Depreciation and impairment of property, plant and equipment

	2020 HK$m	2019 HK$m
Owned property, plant and equipment	**6,059**	5,620
Other right-of-use assets	**3,346**	2,610
Year ended 31 Dec	**9,405**	8,230

(h) Auditors' remuneration

Auditors' remuneration amounted to HK$163m (2019: HK$125m).

3 Insurance business

Net insurance premium Income

	Non-linked insurance HK$m	Unit-linked HK$m	Total HK$m
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**
Gross insurance premium income	69,719	1,381	71,100
Reinsurers' share of gross insurance premium income	(10,798)	(27)	(10,825)
Year ended 31 Dec 2019	58,921	1,354	60,275

Net insurance claims and benefits paid and movement in liabilities to policyholders

	Non-linked insurance HK$m	Unit-linked HK$m	Total HK$m
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**
Gross claims and benefits paid and movement in liabilities to policyholders	84,921	5,910	90,831
– claims, benefits and surrenders paid	26,960	6,095	33,055
– movement in liabilities	57,961	(185)	57,776
Reinsurers' share of claims and benefits paid and movement in liabilities	(10,677)	2	(10,675)
– claims, benefits and surrenders paid	(2,658)	(107)	(2,765)
– movement in liabilities	(8,019)	109	(7,910)
Year ended 31 Dec 2019	74,244	5,912	80,156

Liabilities under insurance contracts

	2020			2019		
	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	**494,181**	**(26,247)**	**467,934**	433,668	(17,758)	415,910
Claims and benefits paid	**(25,876)**	**2,773**	**(23,103)**	(26,960)	2,658	(24,302)
Increase/(decrease) in liabilities to policyholders	**74,810**	**(2,459)**	**72,351**	84,921	(10,677)	74,244
Exchange differences and other movements[1]	**3,943**	**572**	**4,515**	2,552	(470)	2,082
At 31 Dec	**547,058**	**(25,361)**	**521,697**	494,181	(26,247)	467,934
Unit-linked						
At 1 Jan	**34,579**	**(35)**	**34,544**	34,921	(34)	34,887
Claims and benefits paid	**(5,990)**	**50**	**(5,940)**	(6,095)	107	(5,988)
Increase/(decrease) in liabilities to policyholders	**5,594**	**(34)**	**5,560**	5,910	2	5,912
Exchange differences and other movements[1]	**165**	**15**	**180**	(157)	(110)	(267)
At 31 Dec	**34,348**	**(4)**	**34,344**	34,579	(35)	34,544
Total liabilities to policyholders	**581,406**	**(25,365)**	**556,041**	528,760	(26,282)	502,478

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

	2020	2019
	HK$m	HK$m
Wages and salaries[1]	**33,367**	34,674
Social security costs	**893**	1,264
Post-employment benefits	**1,923**	2,110
– defined contribution pension plans	**1,528**	1,516
– defined benefit pension plans	**395**	594
Year ended 31 Dec	**36,183**	38,048

1 *'Wages and salaries' includes the effect of share-based payments arrangements of HK$694m (2019: HK$882m).*

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	Present value of defined benefit obligations	Net defined benefit liability
	HK$m	HK$m	HK$m
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**
At 1 Jan 2019	13,856	(17,197)	(3,341)
Service cost	—	(511)	(511)
– current service cost	—	(511)	(511)
Net interest income/ (expense) on the net defined benefit asset/(liability)	206	(274)	(68)
Re-measurement effects recognised in other comprehensive income	927	(682)	245
– return on plan assets (excluding interest income)	927	—	927
– actuarial losses	—	(682)	(682)
Contributions by the group	391	—	391
Benefits paid	(1,290)	1,376	86
Exchange differences and other movements[1]	(3,788)	4,440	652
At 31 Dec 2019	10,302	(12,848)	(2,546)
Retirement benefit liabilities recognised on the balance sheet			(2,595)
Retirement benefit assets recognised on the balance sheet (within 'Prepayment, accrued income and other assets')			49

1 *Other movements in 2019 included the impact from transfer of employees from the group to HSBC Global Services (Hong Kong) Limited (the 'ServCo'), which is a fellow subsidiary of the Group.*

Fair value of plan assets by asset classes

	At 31 Dec 2020			At 31 Dec 2019		
	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	10,453	10,453	219	10,302	10,302	177
– equities	1,547	1,547	—	1,354	1,354	—
– bonds	5,562	5,562	—	6,034	6,034	—
– alternative investments[1]	2,838	2,838	—	2,391	2,391	
– other[2]	506	506	219	523	523	177

1 *Alternative investments included HK$1,722m previously reported under 'equities', and HK$669m reported under 'other'. Comparatives have been re-presented to conform to the current year's presentation.*
2 *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 has been updated in December 2019 to: Fixed income investments 75% and Equity 25% following an update to the investment strategy to de-risk the investment portfolio. 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	Present value of defined benefit obligations	Net defined benefit liability	Fair value of plan assets	Present value of defined benefit obligations	Net defined benefit liability
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
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)
At 1 Jan 2019	8,402	(9,749)	(1,347)	478	(618)	(140)
Service cost	—	(194)	(194)	—	(182)	(182)
– current service cost	—	(194)	(194)	—	(182)	(182)
Net interest income/ (expense) on the net defined benefit asset/(liability)	68	(80)	(12)	63	(73)	(10)
Re-measurement effects recognised in other comprehensive income	390	(255)	135	416	(168)	248
– return on plan assets (excluding interest income)	390	—	390	416	—	416
– actuarial gains	—	(255)	(255)	—	(168)	(168)
Contributions	198	—	198	184	—	184
Benefits paid	(637)	637	—	(460)	460	—
Exchange differences and other movements[1]	(3,767)	4,389	622	3,764	(4,379)	(615)
At 31 Dec 2019	4,654	(5,252)	(598)	4,445	(4,960)	(515)
Retirement benefit liabilities recognised on the balance sheet			(598)			(515)

1 *Other movements in 2019 included the impact from transfer of employees from the group to ServCo.*

The group expects to make HK$175m of contributions to the defined benefit scheme of the Principal Plan and ServCo expects to make HK$162m contributions to the defined benefit scheme of the Principal Plan during 2021. 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 Plan[1]

	2021	2022	2023	2024	2025	2025-2030
As reported by:	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
– The group	413	547	508	426	411	1,874
– ServCo	323	524	350	394	417	1,885

1 *The duration of the defined benefit obligation is seven years for the Principal Plan under the disclosure assumptions adopted (2019: seven years).*

Fair value of plan assets of the defined benefit scheme of the Principal Plan by asset classes

	At 31 Dec 2020			At 31 Dec 2019		
	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	8,775	8,775	124	9,099	9,099	66
– equities	2,448	2,448	–	2,228	2,228	–
– bonds	4,537	4,537	–	5,433	5,433	–
– alternative investments[1]	1,676	1,676	–	1,311	1,311	
– other[2]	114	114	124	127	127	66

1 *Alternative investments included HK$1,311m reported under 'other'. Comparatives have been re-presented to conform to the current year's presentation.*
2 *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	Mortality table
	% p.a.	% p.a.	
At 31 Dec 2020	**0.50**	**2% p.a. for 2020 and 2021 and 3% p.a. thereafter**	**HKLT 2019[1]**
At 31 Dec 2019	1.75	3.00	HKLT 2018[2]

1 *HKLT 2019 – Hong Kong Life Tables 2019.*
2 *HKLT 2018 – Hong Kong Life Tables 2018.*

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	
	2020	2019	2020	2019
	HK$m	HK$m	HK$m	HK$m
Discount rate – increase/decrease of 0.25%	(180)	(173)	185	178
Pay – increase/decrease of 0.25%	182	183	(178)	(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$106m (2019: HK$110m). This comprises fees of HK$26m (2019: HK$17m) and other emoluments of HK$80m (2019: HK$93m) there is nil contributions to pension schemes for 2020 (2019: HK$1m). Non-cash benefits which are included in other emoluments mainly relate to share-based payment awards, and the provision of housing and furnishing. Comparatives for 'fees' and 'other emoluments' had been re-presented as HK$6m of fees paid to non-executive directors' were reported as 'other emoluments' in 2019.

Details on loans to directors are set out in Note 32.

5 Tax

The Bank and its subsidiaries in Hong Kong have provided for Hong Kong profits tax at the rate of 16.5% (2019: 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 2020. Deferred taxation is provided for in accordance with the group's accounting policy in Note 1.2(m).

Tax expense

	2020	2019
	HK$m	HK$m
Current tax	**14,279**	19,461
– Hong Kong taxation – on current year profit	**7,316**	11,058
– Hong Kong taxation – adjustments in respect of prior years	**(457)**	(7)
– overseas taxation – on current year profit	**7,668**	8,813
– overseas taxation – adjustments in respect of prior years	**(248)**	(403)
Deferred tax	**226**	1,932
– origination and reversal of temporary differences	**(414)**	1,975
– effect of changes in tax rates	**36**	–
– adjustments in respect of prior years	**604**	(43)
Year ended 31 Dec	**14,505**	21,393

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

	2020	2019
	HK$m	HK$m
Profit before tax	**90,196**	136,433
Notional tax on profit before tax, calculated at the rates applicable to profits in the countries concerned	**18,058**	25,855
Effects of profits in associates and joint ventures	**(2,523)**	(2,676)
Non-taxable income and gains	**(3,291)**	(3,969)
Local taxes and overseas withholding taxes	**2,270**	2,503
Permanent disallowables	**523**	606
Others	**(532)**	(926)
Year ended 31 Dec	**14,505**	21,393

Movements of deferred tax assets and liabilities

	Accelerated capital allowances	**Insurance business**	**Expense provisions**	**Impairment allowance on financial instruments**	**Revaluation of properties**	**Other**	**Total**
	HK$m	**HK$m**	**HK$m**	**HK$m**	**HK$m**	**HK$m**	**HK$m**
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)**
Assets	111	–	1,419	1,314	–	1,870	4,714
Liabilities	(583)	(8,057)	–	–	(13,673)	(4,599)	(26,912)
At 31 Dec 2018	(472)	(8,057)	1,419	1,314	(13,673)	(2,729)	(22,198)
Impact on transition to HKFRS 16	–	–	–	–	(2,664)	–	(2,664)
At 1 Jan 2019	(472)	(8,057)	1,419	1,314	(16,337)	(2,729)	(24,862)
Exchange and other adjustments	(1)	–	7	(107)	25	118	42
Charge/(credit) to income statement	324	(2,083)	(138)	271	603	(909)	(1,932)
Charge/(credit) to other comprehensive income	–	–	2	–	(753)	(207)	(958)
At 31 Dec 2019	(149)	(10,140)	1,290	1,478	(16,462)	(3,727)	(27,710)
Assets[1]	183	–	1,290	1,478	–	2,280	5,231
Liabilities[1]	(332)	(10,140)	–	–	(16,462)	(6,007)	(32,941)

1 *After netting off balances within countries, the balances as disclosed in the Consolidated Financial Statements are as follows: deferred tax assets HK$3,325m (2019: HK$2,179m); and deferred tax liabilities HK$30,997m (2019: HK$29,889m).*

The amount of unused tax losses for which no deferred tax asset is recognised in the balance sheet is HK$3,969m (2019: HK$3,497m). Of this amount, HK$1,917m (2019: HK$1,939m) has no expiry date and the remaining will expire within 10 years.

Deferred tax of HK$4,295m (2019: HK$3,197m) has been provided in respect of distributable reserves or post-acquisition reserves of associates that, on distribution or sale, would attract withholding tax.

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

	2020		2019	
	HK$ per share	HK$m	HK$ per share	HK$m
Dividends paid on ordinary shares				
In respect of previous year:				
– fourth interim dividend	0.58	27,026	0.47	21,958
In respect of current year:				
– first interim dividend paid	0.13	5,814	0.32	14,963
– second interim dividend paid	0.19	8,915	0.32	14,963
– third interim dividend paid	0.22	10,063	0.32	14,963
Total	1.12	51,818	1.43	66,847
Distributions on other equity instruments		2,450		1,522
Dividends to shareholders		54,268		68,369

The Directors have declared a fourth interim dividend in respect of the financial year ended 31 December 2020 of HK$0.47 per ordinary share (HK$21,665m) (2019: HK$0.58 per ordinary share (HK$27,026m)).

Total coupons on capital securities classified as equity

	2020	2019
	HK$m	HK$m
US$1,900m Floating rate perpetual subordinated loans (interest rate at one year US dollar LIBOR plus 3.840%)[1]	–	497
US$1,400m Floating rate perpetual subordinated loans (interest rate at three months US dollar LIBOR plus 3.510%)[1]	–	373
US$600m Floating rate perpetual subordinated loan (interest rate at three months US dollar LIBOR plus 3.620%)[1]	–	178
US$700m Floating rate perpetual subordinated loan (interest rate at three months US dollar LIBOR plus 4.980%)[1]	–	214
US$900m Fixed rate perpetual subordinated loan (interest rate fixed at 6.510%)[2]	454	150
US$900m Fixed rate perpetual subordinated loan (interest rate fixed at 6.030%)[2]	420	110
US$1,000m Fixed rate perpetual subordinated loan (interest rate fixed at 6.090%)[2]	370	–
US$1,200m Fixed rate perpetual subordinated loan (interest rate fixed at 6.172%)[2]	445	–
US$600m Fixed rate perpetual subordinated loan (interest rate fixed at 5.910%)[2]	249	–
US$1,100m Fixed rate perpetual subordinated loan (interest rate fixed at 6.000%)[2]	512	–
Total	2,450	1,522

1 *These subordinated loans were early repaid in the first half of 2019 and distributions were made on repayment.*
2 *These subordinated loans were issued in May and June 2019 and discretionary coupons are paid annually.*

7 Trading assets

	2020	2019
	HK$m	HK$m
Treasury and other eligible bills	113,668	131,967
Debt securities	265,255	281,555
Equity securities	166,385	177,463
Other[1]	55,106	31,776
At 31 Dec	600,414	622,761

1 *'Other' includes reverse repos, stock borrowing 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	Hedging	Trading	Hedging	Total	Trading	Hedging	Total
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
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**
Foreign Exchange	20,494,866	75,324	150,019	800	150,819	164,831	279	165,110
Interest rate	30,656,367	342,609	236,110	3,436	239,546	226,951	3,495	230,446
Equity	657,760	—	13,666	—	13,666	17,751	—	17,751
Credit	664,590	—	6,500	—	6,500	7,170	—	7,170
Commodity and other	140,553	—	2,983	—	2,983	4,626	—	4,626
Gross total	52,614,136	417,933	409,278	4,236	413,514	421,329	3,774	425,103
Offset					(132,872)			(132,872)
At 31 Dec 2019					280,642			292,231

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, foreign exchange and net investment in foreign operations. 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, cash flow hedges, or hedges of net investments in foreign operations.

Fair value hedges

The group enters into to 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 2020, HK$192,048m (2019: HK$252,443m) of the notional amounts of interest rate derivatives designated in hedge accounting relationships represent the extent of the risk exposure managed by the group that is directly affected by market-wide Ibors reform. The group has also designated hedge accounting relationships which involve cross currency swaps, although the amount is not significant.

Further details regarding the impact of the market-wide benchmarks reform is set out in the 'Top and emerging risks' section on pages 20 to 21 as specified as 'Audited'.

9 Financial assets designated and otherwise mandatorily measured at fair value through profit or loss

	2020			2019		
	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	**94**	**200**	**294**	—	234	234
Debt securities	**14,400**	**8,455**	**22,855**	13,350	6,733	20,083
Equity securities	**—**	**143,815**	**143,815**	—	120,047	120,047
Other[1]	**—**	**11,996**	**11,996**	—	13,147	13,147
At 31 Dec	**14,494**	**164,466**	**178,960**	13,350	140,161	153,511

1 *'Other' primarily includes loans and advance to banks and customers.*

10 Loans and advances to customers

	2020	2019
	HK$m	HK$m
Gross loans and advances to customers	**3,697,568**	3,738,269
Expected credit loss allowances	**(28,887)**	(17,394)
At 31 Dec	**3,668,681**	3,720,875

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

	2020	2019
	HK$m	HK$m
Residential mortgages	**1,097,760**	1,027,087
Credit card advances	**86,735**	94,582
Other personal	**267,852**	281,087
Total personal	**1,452,347**	1,402,756
Real estate	**638,560**	666,380
Wholesale and retail trade	**394,624**	418,669
Manufacturing	**379,853**	418,822
Transportation and storage	**97,204**	86,912
Other	**489,737**	494,416
Total corporate and commercial	**1,999,978**	2,085,199
Non-bank financial institutions	**245,243**	250,314
At 31 Dec	**3,697,568**	3,738,269
By geography[1]		
Hong Kong	**2,357,375**	2,399,867
Rest of Asia Pacific	**1,340,193**	1,338,402

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.*

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

	2020			2019		
	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	3,715	(811)	2,904	3,214	(639)	2,575
– one to two years	3,439	(678)	2,761	2,955	(572)	2,383
– two to three years	2,717	(554)	2,163	2,593	(529)	2,064
– three to four years	2,135	(475)	1,660	2,204	(496)	1,708
– four to five years	1,913	(415)	1,498	1,936	(464)	1,472
– after five years	22,186	(3,014)	19,172	23,195	(3,567)	19,628
	36,105	(5,947)	30,158	36,097	(6,267)	29,830
Expected credit loss allowances			(392)			(175)
At 31 Dec			29,766			29,655

11 Financial investments

	2020	2019
	HK$m	HK$m
Financial investments measured at fair value through other comprehensive income	1,700,406	1,465,998
– treasury and other eligible bills	790,627	606,738
– debt securities	899,193	850,623
– equity securities	10,586	8,637
Debt instruments measured at amortised cost	475,026	434,300
– treasury and other eligible bills	4,443	5,049
– debt securities	470,583	429,251
At 31 Dec	2,175,432	1,900,298

Equity instruments measured at fair value through other comprehensive income

	2020		2019	
	Fair value	Dividends recognised	Fair value	Dividends recognised
Type of equity instruments	HK$m	HK$m	HK$m	HK$m
Business facilitation	9,826	157	7,906	141
Investments required by central institutions	413	3	376	7
Others	347	6	355	5
At 31 Dec	10,586	166	8,637	153

12 Assets pledged, assets transferred and collateral received

Assets pledged

Financial assets pledged to secure liabilities

	2020	2019
	HK$m	HK$m
Treasury bills and other eligible securities	46,846	88,365
Loans and advances to banks	1,830	228
Loans and advances to customers	28,307	12,806
Debt securities	76,913	76,019
Equity securities	17,608	11,648
Other	86,240	52,473
Assets pledged at 31 Dec	257,744	241,539
Amount of liabilities secured	210,185	208,436

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. HSBC 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$30,386m (2019: HK$63,194m).

Assets transferred

Transferred financial assets not qualifying for full derecognition and associated financial liabilities

	2020		2019	
	Carrying amount of:		Carrying amount of:	
	Transferred assets	Associated liabilities	Transferred assets	Associated liabilities
	HK$m	HK$m	HK$m	HK$m
Repurchase agreements	**85,715**	**77,322**	98,929	94,296
Securities lending agreements	**18,946**	**35**	15,270	114
	104,661	**77,357**	114,199	94,410

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

	2020	2019
	HK$m	HK$m
Fair value of collateral permitted to sell or repledge in the absence of default	**709,091**	556,634
Fair value of collateral actually sold or repledged	**128,783**	95,154

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

	2020	2019
Hang Seng Bank Limited		
Proportion of ownership interests and voting rights held by non-controlling interests	**37.86%**	37.86%
	HK$m	HK$m
Profit attributable to non-controlling interests	**6,300**	9,386
Accumulated non-controlling interests of the subsidiary	**64,975**	63,363
Dividends paid to non-controlling interests	**4,849**	5,646
Summarised financial information (before intra-group eliminations):		
– total assets	**1,759,787**	1,676,721
– total liabilities	**1,576,592**	1,497,804
– net operating income before change in expected credit losses and other credit impairment charges	**35,433**	43,549
– profit for the year	**16,670**	24,822
– other comprehensive income for the year	**1,079**	2,376
– total comprehensive income for the year	**17,749**	27,198

14 Interests in associates and joint ventures

Associates

	2020 HK$m	2019 HK$m
Share of net assets	**164,767**	148,154
Goodwill	**4,011**	3,787
Impairment	**(24)**	(24)
At 31 Dec	**168,754**	151,917

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$57,815m at 31 December 2020 (2019: HK$78,311m).

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 2020, the fair value of the group's investment in BoCom had been below the carrying amount for approximately nine years. As a result, the group performed an impairment test on the carrying amount, which confirmed that there was no impairment at 31 December 2020 as the recoverable amount as determined by a value-in-use ('VIU') calculation was higher than the carrying value.

	At					
	31 Dec 2020			31 Dec 2019		
	VIU	**Carrying value**	**Fair value**	VIU	Carrying value	Fair value
	HK$bn	**HK$bn**	**HK$bn**	HK$bn	HK$bn	HK$bn
BoCom	**169.3**	**165.4**	**57.8**	167.8	148.4	78.3

Compared with 31 December 2019, the extent to which the VIU exceeds the carrying value ('headroom') has decreased by HK$15.5bn. The reduction in headroom was principally due to the impact on the VIU from BoCom's actual performance, which was lower than earlier forecasts due to the impact of the Covid-19 outbreak and the disruption to global economic activity, downward 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. Both the VIU and the CV increased due to the impact of foreign exchange movements.

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 under-performance 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 as a result of an increase in the risk premium or risk-free rates 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. 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 regulatory capital requirements over the forecast period (i.e. 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 minimum regulatory capital requirements. An increase in the CMC as a result of a change to these principal inputs would reduce VIU. Additionally, management considers other factors (including 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% (2019: 3%) for periods after 2024, which does not exceed forecast GDP growth in mainland China and is consistent with forecasts by external analysts.
- Long-term asset growth rate: 3% (2019: 3%) for periods after 2024, which is the rate that assets are expected to grow to achieve long-term profit growth of 3%.
- Discount rate: 11.37% (2019: 11.24%) which is based on a Capital Asset Pricing Model ('CAPM') calculation for BoCom, using market data. Management also compares the rate derived from the CAPM with discount rates from external sources. The discount rate used is within the range of 10.3% to 15.0% (2019: 10.0% to 15.0%) indicated by external sources. The increased rate reflects the net impact of updates to certain components of CAPM due to elevated levels of risk arising from the impact of the Covid-19 outbreak and the disruption to global economic activity.
- Expected credit losses as a percentage of customer advances ('ECLs'): ranges from 0.98% to 1.22% (2019: 0.95%) in the short to medium term, reflecting increases due to the Covid-19 outbreak and BoCom's actual results. For periods after 2024, the ratio is 0.88% (2019: 0.76%), which is slightly higher than BoCom's average ECLs in recent years. This ratio was increased to reflect trends in BoCom's actual results in recent years of increasing ECLs and of changes to BoCom's loan portfolio.
- Risk-weighted assets as a percentage of total assets: ranges from 61% to 62% (2019: 61%) in the short to medium term, reflecting increases that may arise from higher ECLs in the short term, followed by reductions that may arise from a subsequent lowering of ECLs and a continuation of the trend of strong retail loan growth. For periods after 2024, the ratio is 61% (2019: 61%). These rates are similar to BoCom's actual results in recent years and are slightly below forecasts disclosed by external analysts.
- Operating income growth rate: ranges from 3.5% to 6.7% (2019: 4.9% to 9.4%) in the short to medium term, and are lower than BoCom's actual results in recent years and the forecasts disclosed by external analysts, reflecting economic pressures from the Covid-19 outbreak, global trade tensions and industry developments in mainland China.
- Cost-income ratio: ranges from 36.3% to 36.8% (2019: 37.1% to 38.8%) in the short to medium term. These ratios are similar to BoCom's actual results in recent years and slightly higher than forecasts disclosed by external analysts.
- Effective tax rate ('ETR'): ranges from 7.8% to 16.5% (2019: 12.0% to 17.0%) 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 2024, the rate is 16.8% (2019: 22.5%), which is higher than the recent historical average. This rate was reduced on expectations of a lower ETR in the long term, reflecting BoCom's actual results in recent years and forecast financial asset composition, and forecasts disclosed by external analysts.
- Capital requirements: Capital adequacy ratio: 11.5% (2019: 11.5%) and Tier 1 capital adequacy ratio: 9.5% (2019: 9.5%), based on the minimum regulatory requirements.

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 19 basis points
• Long-term asset growth rate	• Increase by 17 basis points
• Discount rate	• Increase by 22 basis points
• Expected credit losses as a percentage of customer advances	• Increase by 3 basis points
• Risk-weighted assets as a percentage of total assets	• Increase by 115 basis points
• Operating income growth rate	• Decrease by 24 basis points
• Cost-income ratio	• Increase by 66 basis points
• Long-term effective tax rate	• Increase by 183 basis points
• Capital requirements – capital adequacy ratio	• Increase by 22 basis points
• Capital requirements – tier 1 capital adequacy ratio	• Increase by 86 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	VIU		Decrease in VIU	VIU
	bps	HK$bn	HK$bn	bps	HK$bn	HK$bn
At 31 December 2020						
Long-term profit growth rate	**—**	**—**	**169.3**	**-50**	**(10.0)**	**159.3**
Long-term asset growth rate	**-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**
At 31 December 2019						
Long-term profit growth rate	—	—	167.8	-50	(10.6)	157.2
Long-term asset growth rate	-50	10.6	178.4	—	—	167.8
Discount rate	-54	10.9	178.7	+56	(9.9)	157.9
Expected credit losses as a percentage of customer advances	2019 to 2023: 90 2024 onwards: 70	7.5	175.3	2019 to 2023: 108 2024 onwards: 81	(9.4)	158.4
Risk-weighted assets as a percentage of total assets	-96	2.9	170.7	+12	(0.4)	167.4
Operating income growth rate	+14	1.9	169.7	-102	(14.1)	153.7
Cost-income ratio	-175	7.7	175.5	+95	(9.4)	158.4
Long-term effective tax rate	-352	7.8	175.6	+250	(5.6)	162.2
Capital requirements – capital adequacy ratio	—	—	167.8	+337	(64.1)	103.7
Capital requirements – tier 1 capital adequacy ratio	—	—	167.8	+322	(47.2)	120.6

Considering the interrelationship of the changes set out in the table above, management estimates that the reasonably possible range of VIU is HK$140.9bn to HK$187.9bn (2019: HK$144.3bn to HK$177.2bn). The range is based on the favourable/unfavourable change in the earnings in the short to medium term, and long-term expected credit losses as a percentage of customer advances as set out in the table above. All other long-term assumptions, the discount rate 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 2020, the group included the associate's results on the basis of financial statements made up for the 12 months to 30 September 2020, but taking into account the financial effect of significant transactions or events in the period from 1 October 2019 to 31 December 2020.

Selected balance sheet information of BoCom

	At 30 Sep	
	2020	2019
	HK$m	HK$m
Cash and balances at central banks	**945,836**	874,238
Loans and advances to banks and other financial institutions	**832,226**	841,420
Loans and advances to customers	**6,751,280**	5,689,981
Other financial assets	**3,941,375**	3,394,004
Other assets	**349,120**	315,310
Total assets	**12,819,837**	11,114,953
Deposits by banks and other financial institutions	**2,122,220**	2,262,654
Customer accounts	**7,852,322**	6,765,782
Other financial liabilities	**1,605,846**	1,026,377
Other liabilities	**241,177**	179,723
Total liabilities	**11,821,565**	10,234,536
Total equity	**998,272**	880,417

Reconciliation of BoCom's net assets to carrying amount in the group's consolidated financial statements

	At 30 Sep	
	2020	2019
	HK$m	HK$m
The group's share of ordinary shareholders' equity	**161,433**	144,727
Goodwill	**3,912**	3,687
Carrying amount	**165,345**	148,414

Selected income statement information of BoCom

	For the 12 months ended 30 Sep	
	2020	2019
	HK$m	HK$m
Net interest income	**170,586**	161,079
Net fee and commission income	**49,624**	50,233
Change in expected credit losses	**(75,220)**	(58,603)
Depreciation and amortisation	**(16,069)**	(15,152)
Tax expense	**(6,656)**	(12,822)
– profit for the year	**79,585**	87,556
– other comprehensive income	**(5,965)**	2,470
Total comprehensive income	**73,620**	90,026
Dividends received from BoCom	**4,907**	4,810

At 31 December 2020, the group's share of associates' contingent liabilities was HK$356,609m (2019: HK$305,291m).

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.

	2020	2019
	HK$m	HK$m
Goodwill	**7,109**	6,315
Present value of in-force long-term insurance business	**65,052**	61,075
Other intangible assets[1]	**17,807**	14,253
At 31 Dec	**89,968**	81,643

1 *Included within other intangible assets is internally generated software with a net carrying value of HK$15,283m (2019: HK$11,851m). During the year, capitalisation of internally generated software was HK$7,241m (2019: HK$6,219m), amortisation charge was HK$3,233m (2019: HK$2,264m) and impairment charge was HK$603m (2019: HK$103m).*

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.

Movements in PVIF

	2020	2019
	HK$m	HK$m
At 1 Jan	**61,075**	48,522
Changes in PVIF of long-term insurance business	**3,840**	12,546
– value of new business written during the year	**5,360**	8,779
– expected return[1]	**(6,743)**	(5,531)
– assumption changes and experience variances (see below)	**5,268**	9,386
– other adjustments	**(45)**	(88)
Exchange differences and other	**137**	7
At 31 Dec	**65,052**	61,075

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$1,022m (2019: HK$8,829m), directly offsetting interest rate-driven changes to the valuation of liabilities under insurance contracts.
- HK$1,916m (2019: HK$282m), 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$2,330m (2019: HK$275m), 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:

	2020	2019
	%	%
Weighted average risk free rate	**0.71**	1.84
Weighted average risk discount rate	**4.96**	5.44
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 62 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 63 for further details on the impact of changes in non-economic assumptions on our insurance manufacturing operations.

16 Property, plant and equipment

	2020	2019
	HK$m	HK$m
Owned property, plant and equipment[1]	**118,747**	128,603
Other right-of-use assets	**9,790**	9,327
At 31 Dec	**128,537**	137,930

1 *Included leasehold land and buildings of HK$108,320m (2019: HK$119,264m) 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

	2020				2019			
	Land and buildings	**Investment properties**	**Equipment**	**Total**	Land and buildings	Investment properties	Equipment	Total
	HK$m	**HK$m**	**HK$m**	**HK$m**	HK$m	HK$m	HK$m	HK$m
Cost or valuation								
At 31 Dec of prior year	**111,473**	**13,335**	**16,922**	**141,730**	94,037	12,875	22,728	129,640
Impact on transition to HKFRS 16	**–**	**–**	**–**	**–**	16,284	–	–	16,284
At 1 Jan	**111,473**	**13,335**	**16,922**	**141,730**	110,321	12,875	22,728	145,924
Exchange and other adjustments	**453**	**31**	**365**	**849**	(119)	(12)	(152)	(283)
Additions	**770**	**635**	**2,363**	**3,768**	1,034	447	1,853	3,334
Disposals	**(12)**	**–**	**(4,384)**	**(4,396)**	(2)	–	(903)	(905)
Transfers[1]	**–**	**–**	**–**	**–**	–	–	(6,604)	(6,604)
Elimination of accumulated depreciation on revalued land and buildings	**(4,737)**	**–**	**–**	**(4,737)**	(4,306)	–	–	(4,306)
(Deficit) / surplus on revaluation	**(6,914)**	**(996)**	**–**	**(7,910)**	4,426	154	–	4,580
Reclassifications	**(242)**	**162**	**–**	**(80)**	119	(129)	–	(10)
At 31 Dec	**100,791**	**13,167**	**15,266**	**129,224**	111,473	13,335	16,922	141,730
Accumulated depreciation								
At 1 Jan	**84**	**–**	**13,043**	**13,127**	73	–	17,487	17,560
Exchange and other adjustments	**10**	**–**	**305**	**315**	6	–	(56)	(50)
Charge for the year	**4,734**	**–**	**1,325**	**6,059**	4,312	–	1,308	5,620
Disposals	**(1)**	**–**	**(4,286)**	**(4,287)**	(1)	–	(874)	(875)
Transfers[1]	**–**	**–**	**–**	**–**	–	–	(4,822)	(4,822)
Elimination of accumulated depreciation on revalued land and buildings	**(4,737)**	**–**	**–**	**(4,737)**	(4,306)	–	–	(4,306)
At 31 Dec	**90**	**–**	**10,387**	**10,477**	84	–	13,043	13,127
Net book value at 31 Dec	**100,701**	**13,167**	**4,879**	**118,747**	111,389	13,335	3,879	128,603

1 *In 2019, certain equipment was transferred to a fellow subsidiary as part of the Recovery and Resolution Plan. The balance represented the carrying value of this equipment on the date of transfer.*

The carrying amount of land and buildings, had they been stated at cost less accumulated depreciation, would have been as follows:

	2020	2019
	HK$m	HK$m
Cost less accumulated depreciation	17,085	16,895

Valuation of land and buildings and investment properties

The group's land and buildings and investment properties were revalued as at 31 December 2020. 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$7,189m (2019: HK$7,859m) 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

	2020	2019
	HK$m	HK$m
Prepayments and accrued income	24,301	28,326
Bullion	61,269	53,163
Acceptances and endorsements	46,705	47,302
Reinsurers' share of liabilities under insurance contracts (Note 3)	25,365	26,282
Current tax assets	2,783	1,521
Settlement accounts	33,796	27,289
Cash collateral and margin receivables	58,584	35,824
Other assets	35,807	28,551
At 31 Dec	288,610	248,258

Prepayments, accrued income and other assets included HK$197,362m (2019: HK$165,497m) of financial assets, the majority of which were measured at amortised cost.

18 Customer accounts

Customer accounts by country/territory

	2020	2019
	HK$m	HK$m
Hong Kong	4,120,955	3,894,175
Mainland China	440,608	376,390
Singapore	427,537	378,303
Australia	227,072	180,637
India	156,615	116,330
Malaysia	124,036	113,907
Taiwan	124,375	114,250
Indonesia	40,304	36,861
Other	249,894	221,571
At 31 Dec	5,911,396	5,432,424

19 Trading liabilities

	2020	2019
	HK$m	HK$m
Deposits by banks[1]	222	159
Customer accounts[1]	835	1,150
Net short positions in securities	59,755	86,223
At 31 Dec	60,812	87,532

1 *'Deposits by banks' and 'Customer accounts' include repos, stock lending and other amounts.*

20 Financial liabilities designated at fair value

	2020	2019
	HK$m	HK$m
Deposits by banks and customer accounts	77,822	74,761
Debt securities in issue	49,673	48,506
Liabilities to customers under investment contracts	39,518	37,024
At 31 Dec	**167,013**	160,291

The carrying amount of financial liabilities designated at fair value was HK$735m higher than the contractual amount at maturity (2019: HK$1,216m higher). The cumulative loss in fair value attributable to changes in credit risk was HK$25m (2019: HK$6m).

21 Debt securities in issue

	2020	2019
	HK$m	HK$m
Bonds and medium-term notes	94,894	90,365
Other debt securities in issue	34,198	65,074
Total debt securities in issue	**129,092**	155,439
Included within:		
– financial liabilities designated at fair value (Note 20)	(49,673)	(48,506)
At 31 Dec	**79,419**	106,933

22 Accruals and deferred income, other liabilities and provisions

	2020	2019
	HK$m	HK$m
Accruals and deferred income	21,588	25,600
Acceptances and endorsements	46,775	47,355
Settlement accounts	30,056	35,807
Cash collateral and margin payables	60,714	40,299
Share-based payment liability to HSBC Holdings plc	1,124	1,417
Lease liabilities	10,057	9,291
Other liabilities	43,881	41,687
Provisions for liabilities and charges	1,792	1,796
At 31 Dec	**215,987**	203,252

Accruals and deferred income, other liabilities and provisions included HK$207,899m (2019: HK$195,122m) of financial liabilities which were measured at amortised cost.

Movement in provisions

	Restructuring costs	Other	Total
Provisions (excluding contractual commitments)	HK$m	HK$m	HK$m
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[1]			
At 31 Dec 2019			776
Net change in expected credit loss provision and other movements			481
At 31 Dec 2020			**1,257**
Total Provisions at 31 Dec 2020			**1,792**
At 31 Dec 2018	74	640	714
Additions	563	383	946
Amounts utilised	(402)	(85)	(487)
Unused amounts reversed	(29)	(254)	(283)
Exchange and other movements	2	128	130
At 31 Dec 2019	208	812	1,020
Contractual commitments			
At 31 Dec 2018			691
Net change in expected credit loss provision and other movements			85
At 31 Dec 2018			776
Total Provisions at 31 Dec 2019			1,796

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 below.

		2020	2019
		HK$m	HK$m
US$400m	Undated floating rate primary capital notes	3,101	3,114
MYR500m	Fixed rate (5.050%) subordinated bonds due 2027, callable from 2022[1]	964	952
At 31 Dec		**4,065**	4,066

1 The interest rate on the MYR500m 5.05% callable subordinated bonds due 2027 will increase by 1% from November 2022.

24 Share capital

	2020	2019
	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

	2020		2019	
	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 2020 (2019: 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.

		2020	2019
		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 table provides 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 included in the 'Due over 5 years' time bucket. 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	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
Total 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**

Maturity analysis of assets and liabilities (continued)

	Due not more than1 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	202,746	—	—	—	—	—	—	—	202,746
Items in the course of collection from other banks	21,140	—	—	—	—	—	—	—	21,140
Hong Kong Government certificates of indebtedness	298,944	—	—	—	—	—	—	—	298,944
Trading assets	618,856	2,253	1,219	—	—	433	—	—	622,761
Derivatives	279,698	115	96	28	81	324	300	—	280,642
Financial assets designated and otherwise mandatorily measured at fair value through profit or loss	8,883	393	1,330	938	706	4,605	10,273	126,383	153,511
Reverse repurchase agreements – non-trading	260,716	97,168	32,322	6,856	11,772	9,624	3,875	—	422,333
Loans and advances to banks	180,357	46,565	23,409	19,174	15,502	30,018	10,097	3,783	328,905
Loans and advances to customers	643,208	356,953	285,049	144,180	141,465	404,131	795,421	950,468	3,720,875
Financial investments	201,596	406,723	186,055	70,922	89,852	197,506	310,398	437,246	1,900,298
Amounts due from Group companies	79,091	3,043	1,318	79	—	—	3,911	190	87,632
Accrued income and other financial assets	108,167	30,046	15,491	3,935	1,947	1,265	572	4,074	165,497
Financial assets at 31 Dec 2019	2,903,402	943,259	546,289	246,112	261,325	647,906	1,134,847	1,522,144	8,205,284
Non-financial assets	—	—	—	—	—	—	—	456,430	456,430
Total assets at 31 Dec 2019	2,903,402	943,259	546,289	246,112	261,325	647,906	1,134,847	1,978,574	8,661,714
Financial liabilities									
Hong Kong currency notes in circulation	298,944	—	—	—	—	—	—	—	298,944
Items in the course of transmission to other banks	25,576	—	—	—	—	—	—	—	25,576
Repurchase agreements – non-trading	90,565	3,131	2,713	1,566	447	—	—	7,974	106,396
Deposits by banks	169,344	8,474	1,888	30	5	52	26	—	179,819
Customer accounts	4,657,422	467,294	190,460	45,681	42,479	18,388	10,700	—	5,432,424
Trading liabilities	87,532	—	—	—	—	—	—	—	87,532
Derivatives	290,808	113	15	41	73	339	662	180	292,231
Financial liabilities designated at fair value	38,524	24,493	12,173	4,833	4,694	18,962	12,703	43,909	160,291
Debt securities in issue	5,113	31,769	18,816	5,614	7,757	17,038	17,640	3,186	106,933
Amounts due to Group companies	88,108	32,414	246	37	118	35	79,308	110,808	311,074
Accruals and other financial liabilities	114,974	38,591	18,130	5,573	4,846	3,704	4,626	4,678	195,122
Subordinated liabilities[1]	—	—	—	—	—	—	—	4,066	4,066
Financial liabilities at 31 Dec 2019	5,866,910	606,279	244,441	63,375	60,419	58,518	125,665	174,801	7,200,408
Non-financial liabilities	—	—	—	—	—	—	—	582,025	582,025
Total liabilities at 31 Dec 2019	5,866,910	606,279	244,441	63,375	60,419	58,518	125,665	756,826	7,782,433

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	Due over 1 month but not more than 3 months	Due between 3 and 12 months	Due between 1 and 5 years	Due after 5 years	Total
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
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%**	
At 31 Dec 2019						
Hong Kong currency notes in circulation	298,944	—	—	—	—	298,944
Items in the course of transmission to other banks	25,576	—	—	—	—	25,576
Repurchase agreements – non-trading	90,675	3,131	4,857	—	8,068	106,731
Deposits by banks	169,744	8,474	1,960	84	—	180,262
Customer accounts	4,664,306	467,294	283,081	31,564	—	5,446,245
Trading liabilities	87,532	—	—	—	—	87,532
Derivatives	290,016	113	2	846	180	291,157
Financial liabilities designated at fair value	39,636	24,493	22,589	32,873	44,188	163,779
Debt securities in issue	5,418	31,769	33,538	36,214	3,892	110,831
Amounts due to Group companies	98,361	32,414	5,344	100,805	126,697	363,621
Other financial liabilities	109,482	38,591	25,715	8,313	4,756	186,857
Subordinated liabilities	29	—	86	457	5,789	6,361
	5,879,719	606,279	377,172	211,156	193,570	7,267,896
Loan and other credit-related commitments	2,750,332	—	—	—	—	2,750,332
Financial guarantees	49,199	—	—	—	—	49,199
	8,679,250	606,279	377,172	211,156	193,570	10,067,427
Proportion of cash flows payable in period	86%	6%	4%	2%	2%	

The balances in the above tables incorporate all cash flows relating to principal and future coupon payments on an undiscounted basis (except for trading liabilities and trading derivatives). 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

	2020 HK$m	2019 HK$m
Guarantees and contingent liabilities:		
– financial guarantees[1]	**39,923**	49,199
– performance and other guarantees[2]	**286,139**	266,272
– other contingent liabilities	**3,644**	3,299
At 31 Dec	**329,706**	318,770
Commitments[3]:		
– documentary credits and short-term trade-related transactions	**29,581**	22,455
– forward asset purchases and forward forward deposits placed	**38,246**	30,268
– undrawn formal standby facilities, credit lines and other commitments to lend	**2,747,756**	2,697,609
At 31 Dec	**2,815,583**	2,750,332

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$1,725,963m of commitments at 31 December 2020 (2019: HK$1,630,005m) 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 capital commitments), 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 2020 included provisions made in relation to legal and regulatory matters as set out in Note 37.

29 Other commitments

Capital commitments

At 31 December 2020, capital commitments, mainly related to the commitment for purchase of premises, were HK$8,531m (2019: HK$7,413m).

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								
				Amounts not offset in the balance sheet					
	Gross amounts	Amounts offset	Net amounts reported in the balance sheet	Financial instruments	Non-cash collateral	Cash collateral	Net amount	Amounts not subject to enforceable netting arrangements[1]	Balance sheet total
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
At 31 Dec 2020									
Financial assets[2]									
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	**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 liabilities[3]									
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	**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**
At 31 Dec 2019									
Financial assets[2]									
Derivatives	384,173	(132,872)	251,301	(213,466)	(8,155)	(15,070)	14,610	29,341	280,642
Reverse repos, stock borrowing and similar agreements classified as:	470,307	(17,667)	452,640	—	(451,866)	(125)	649	20,387	473,027
– trading assets	28,779	(90)	28,689	—	(28,680)	—	9	—	28,689
– non-trading assets	441,528	(17,577)	423,951	—	(423,186)	(125)	640	20,387	444,338
	854,480	(150,539)	703,941	(213,466)	(460,021)	(15,195)	15,259	49,728	753,669
Financial liabilities[3]									
Derivatives	396,052	(132,872)	263,180	(213,466)	(13,444)	(14,238)	22,032	29,051	292,231
Repos, stock lending and similar agreements classified as:	148,626	(17,667)	130,959	—	(130,399)	(37)	523	43,022	173,981
– trading liabilities	1,978	(90)	1,888	—	(1,823)	—	65	—	1,888
– non-trading liabilities	146,648	(17,577)	129,071	—	(128,576)	(37)	458	43,022	172,093
	544,678	(150,539)	394,139	(213,466)	(143,843)	(14,275)	22,555	72,073	466,212

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$79,027m (2019: HK$85,124m).*
3 *Amounts presented in the balance sheet included balances due to Group companies of HK$129,230m (2019: HK$133,693m).*

31 Segmental analysis

The Executive Committee ('EXCO') is considered the Chief Operating Decision Maker ('CODM') for the purpose of identifying the group's reportable segments. Global business 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 global business, and the segmental analysis is presented on that basis. The global businesses are therefore considered our reportable segments 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 global businesses 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 global businesses are presented in the Corporate Centre.

Change in reportable segments

Effective from 2020, we made the following realignments within our internal reporting to the CODM:

- We simplified our matrix organisational structure by combining Global Private Banking and Retail Banking and Wealth Management to form Wealth and Personal Banking.
- We reallocated our reporting of Balance Sheet Management from Corporate Centre to the global businesses.

Comparative data have been re-presented accordingly.

Our global businesses

The group provides a comprehensive range of banking and related financial services to our customers in our three global businesses. The products and services offered to customers are organised by these global businesses.

- Wealth and Personal Banking ('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.
- Commercial Banking ('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 Global Banking and Markets, which include foreign exchange products, raising capital on debt and equity markets and advisory services.
- Global Banking and Markets ('GBM') 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, a markets business that provides services in credit, rates, foreign exchange, equities, money markets and securities services, and principal investment activities.

Performance by global business is presented in the 'Financial Review' on page 10 as specified as 'Audited'.

Information by geographical region

	Hong Kong	Rest of Asia-Pacific	Intra-segment elimination	Total
	HK$m	HK$m	HK$m	HK$m
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**
For the year ended 31 Dec 2019				
Total operating income	218,525	81,030	(18)	299,537
Profit before tax	88,957	47,476	—	136,433
At 31 Dec 2019				
Total assets	6,221,486	3,155,935	(715,707)	8,661,714
Total liabilities	5,724,204	2,773,936	(715,707)	7,782,433
Credit commitments and contingent liabilities (contract amounts)	1,705,308	1,363,794	—	3,069,102

Information by country/territory

	Revenue[1]		Non-current assets[2]	
	For the year ended 31 Dec		At 31 Dec	
	2020	2019	**2020**	2019
	HK$m	HK$m	**HK$m**	HK$m
Hong Kong	**120,873**	147,456	**126,286**	132,935
Mainland China	**16,974**	18,153	**176,462**	158,215
Australia	**6,665**	7,337	**2,229**	2,130
India	**10,296**	9,339	**2,241**	2,339
Indonesia	**3,649**	3,701	**3,701**	3,932
Malaysia	**5,415**	6,107	**1,932**	1,820
Singapore	**9,924**	10,776	**3,040**	2,820
Taiwan	**2,932**	3,064	**2,687**	2,802
Other	**12,610**	13,448	**3,627**	3,421
Total	**189,338**	219,381	**322,205**	310,414

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).

For the year ended 31 December 2020, the group recognised a management charge of HK$14,846m (2019: HK$15,718m) for the services provided by HSBC Global Services (Hong Kong) Limited (the 'ServCo'), which is a fellow subsidiary of the Group set up in Hong Kong as part of recovery and resolution planning to provide functional support services to the group. These costs are reported under 'General and administrative expenses', mainly in relation to the remuneration and other costs associated with employees and assets transferred to ServCo.

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 activities were on substantially the same terms, including interest rates and security, as for comparable transactions with third-party counterparties.

The group shared the costs of certain IT projects with its fellow subsidiaries and also used certain processing services of fellow subsidiaries. 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. These transactions and services are priced on an arm's length basis.

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:

	2020			2019		
	Immediate holding company	**Ultimate holding company**	**Fellow subsidiaries**	Immediate holding company	Ultimate holding company	Fellow subsidiaries
	HK$m	**HK$m**	**HK$m**	HK$m	HK$m	HK$m
Income and expenses for the year						
Interest income	**–**	**339**	**480**	1	6	1,450
Interest expense	**6,489**	**–**	**39**	3,678	3,967	2,022
Fee income	**–**	**–**	**2,744**	–	–	2,383
Fee expense	**–**	**–**	**1,272**	–	–	1,296
Net income from financial instruments held for trading or managed on a fair value basis	**–**	**2**	**18**	–	2	152
Other operating income	**–**	**787**	**916**	–	976	773
Other operating expenses[1]	**–**	**5,270**	**33,632**	–	3,846	31,657
At 31 Dec						
Assets	**–**	**2,707**	**157,916**	–	823	151,094
– trading assets[2]	**–**	**14**	**159**	–	67	1,989
– derivative assets	**–**	**2,488**	**74,932**	–	633	63,652
– other assets[2,5]	**–**	**205**	**82,825**	–	123	85,453
Liabilities	**198,211**	**3,676**	**182,145**	189,690	1,290	187,550
– trading liabilities[2]	**–**	**11**	**572**	–	–	622
– financial liabilities designated at fair value[2,3]	**131,370**	**–**	**8**	126,237	–	9
– derivative liabilities	**–**	**–**	**87,724**	–	–	67,419
– other liabilities[2,5]	**1,448**	**3,593**	**93,841**	1,492	1,221	119,500
– subordinated liabilities[2,4,5]	**65,393**	**72**	**–**	61,961	69	–
Guarantees	**–**	**–**	**19,907**	–	–	19,179
Commitments	**–**	**–**	**2,189**	–	–	2,388

1 *In 2020, payments of HK$137m (2019: HK$428m) were made for software costs which were capitalised as intangible assets in the balance sheet of the group.*
2 *These balances are presented under 'Amounts due from/to Group companies' in the consolidated balance sheet.*
3 *The balance at 31 December 2020 included subordinated liabilities of HK$131,370m to meet Total Loss Absorbing Capacity ('TLAC') requirements (2019 HK$126,237m). The carrying amount of financial liabilities designated at fair value was HK$12,518m higher than the contractual amount at maturity (2019: HK$7,482m). The cumulative loss in fair value attributable to changes in credit risk was HK$2,490m (2019: HK$2,313m). The balances are largely under Level 2.*
4 *The balance at 31 December 2020 included subordinated liabilities of HK$65,393m to meet TLAC requirements (2019: HK$61,961m).*
5 *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.*

(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 2020 amounted to HK$3,609m and HK$1,124m respectively (2019: HK$3,396m and HK$1,417m respectively).

(c) Post-employment benefit plans

At 31 December 2020, HK$9.3bn (2019: HK$9.1bn) of the group's post-employment plan assets were under management by group companies, earning management fees of HK$59m in 2020 (2019: HK$22m). At 31 December 2020, the group's post-employment benefit plans had placed deposits of HK$641m (2019: HK$581m) with its banking subsidiaries, earning interest payable to the schemes of HK$0.2m (2019: HK$2.6m). 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

	2020		2019	
	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 – unsubordinated	**33,577**	**22,811**	34,813	16,001
Amounts due to associates	**42,377**	**17,263**	19,602	4,016
Commitments	**1**	**1**	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 Managing Directors of HSBC Holdings plc.

Compensation of Key Management Personnel

	2020	2019
	HK$m	HK$m
Salaries and other short-term benefits	**315**	336
Post employment benefits	**9**	9
Termination benefits	**4**	1
Share-based payments	**103**	104
Total	**431**	450

Transactions, arrangements and agreements involving Key Management Personnel

	2020	2019
	HK$m	HK$m
During the year		
Highest average assets[1]	**100,834**	48,944
Highest average liabilities[1]	**71,488**	47,211
Contribution to group's profit before tax	**1,733**	1,144
At the year end		
Guarantees[2]	**12,452**	8,052
Commitments[2]	**16,701**	5,235

1 *The disclosure of the highest average balance during the year is considered the most meaningful information to represent transactions during the year.*
2 *Comparatives have been re-presented to incorporate certain balances previously not included.*

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 (2019: 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	
	2020	2019	**2020**	2019
	HK$m	HK$m	**HK$m**	HK$m
By the Bank[1]	**2,690**	4,101	**4,291**	4,301
By subsidiaries	**4**	6	**9**	8
	2,694	4,107	**4,300**	4,309

1 Comparatives have been re-presented to exclude certain balances previously included.

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 GBM 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 GBM 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.

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					
	Level 1	Level 2	Level 3	Third-party total	Inter-company[2]	Total
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
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**
At 31 Dec 2019						
Assets						
Trading assets[1]	426,072	196,132	557	622,761	—	622,761
Derivatives	2,282	213,242	833	216,357	64,285	280,642
Financial assets designated and otherwise mandatorily measured at fair value through profit or loss	89,152	32,068	32,291	153,511	—	153,511
Financial investments	1,096,572	363,804	5,622	1,465,998	—	1,465,998
Liabilities						
Trading liabilities[1]	78,111	9,421	—	87,532	—	87,532
Derivatives	2,892	219,498	2,422	224,812	67,419	292,231
Financial liabilities designated at fair value[1]	—	139,720	20,571	160,291	—	160,291

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	Trading assets	Designated and otherwise mandatorily measured at fair value	Derivatives	Trading liabilities	Designated at fair value	Derivatives
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
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**	**—**	**—**
At 31 Dec 2019							
Transfers from Level 1 to Level 2	32,281	9,198	—	—	131	—	—
Transfers from Level 2 to Level 1	16,872	15,069	2,359	—	599	—	—

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.

Movements in Level 3 financial instruments

There were no material transfers between Level 3 and Level 1 or Level 2 as a result of change in observability of valuation inputs, settlement, nor material gains/loss recognised in the income statement/other comprehensive income during the year in relation to financial instruments carried at fair value in Level 3 (2019: immaterial). The increase in Level 3 assets was mainly due to the purchase of private equity fund and other alternative investments of HK$16,715m (2019: HK$11,463m) to back policyholder liabilities to support growth in the insurance business.

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 strategic 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.

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			
	Carrying amount	Quoted market price Level 1	Observable inputs Level 2	Significant unobservable inputs Level 3	Total
	HK$m	HK$m	HK$m	HK$m	HK$m
At 31 Dec 2020					
Assets					
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**
Liabilities					
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[1]	**4,065**	**–**	**3,749**	**–**	**3,749**
At 31 Dec 2019					
Assets					
Reverse repurchase agreements – non-trading	422,333	–	417,294	5,385	422,679
Loans and advances to banks	328,905	–	323,304	5,501	328,805
Loans and advances to customers	3,720,875	–	56,475	3,654,716	3,711,191
Financial investments – at amortised cost	434,300	77,108	382,368	356	459,832
Liabilities					
Repurchase agreements – non-trading	106,396	–	106,398	–	106,398
Deposits by banks	179,819	–	179,823	–	179,823
Customer accounts	5,432,424	–	5,432,803	–	5,432,803
Debt securities in issue	106,933	–	107,641	–	107,641
Subordinated liabilities	4,066	–	952	2,999	3,951

1 *As at 31 December 2020, fair value of subordinated liabilities was reported under 'Level 2 - Observable inputs'. HK$2,999m of the balance was previously included under 'Level 3 - Significant unobservable input'. Comparatives have not been re-presented.*

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 and Hong Kong currency notes in circulation, 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.

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$bn)					
0–4	52	62	104	25	243
4–15	9	34	107	1	151
15–39	–	18	56	–	74
39–196	–	3	46	–	49
196+	–	1	5	–	6
Number of entities at 31 Dec 2020	61	118	318	26	523
	HK$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

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$bn)					
0–4	58	47	95	40	240
4–15	8	25	89	2	124
15–39	—	6	41	—	47
39–196	—	1	26	—	27
196+	—	1	4	—	5
Number of entities at 31 Dec 2019	66	80	255	42	443
	HK$m	HK$m	HK$m	HK$m	HK$m
Total assets in relation to the group's interests in the unconsolidated structured entities	27,636	24,258	50,241	13,140	115,275
– trading assets	—	774	—	—	774
– financial assets designated and otherwise mandatorily measured at fair value through profit or loss	—	23,484	50,241	—	73,725
– derivatives	—	—	—	—	—
– loans and advances to customers	27,636	—	—	12,742	40,378
– financial investments	—	—	—	—	—
– other assets	—	—	—	398	398
Total liabilities in relation to the group's interests in the unconsolidated structured entities	—	—	—	—	—
Other off balance sheet commitments	857	1,797	14,664	3,958	21,276
The group's maximum exposure at 31 Dec 2019	28,493	26,055	64,905	17,098	136,551

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 2020 and 2019 were not significant.

36 Bank balance sheet and statement of changes in equity

Bank balance sheet at 31 December 2020

	2020 HK$m	2019 HK$m
Assets		
Cash and balances at central banks	**291,071**	156,273
Items in the course of collection from other banks	**16,836**	15,437
Hong Kong Government certificates of indebtedness	**313,404**	298,944
Trading assets	**486,764**	496,660
Derivatives	**396,126**	267,018
Financial assets designated and otherwise mandatorily measured at fair value through profit or loss	**5,945**	7,087
Reverse repurchase agreements – non-trading	**299,876**	235,823
Loans and advances to banks	**243,107**	184,429
Loans and advances to customers	**1,928,622**	2,024,194
Financial investments	**950,866**	830,648
Amounts due from Group companies	**400,073**	332,865
Investments in subsidiaries	**95,241**	93,355
Interests in associates and joint ventures	**39,830**	39,830
Goodwill and intangible assets	**14,009**	11,242
Property, plant and equipment	**71,523**	79,208
Deferred tax assets	**1,266**	819
Prepayments, accrued income and other assets	**165,667**	131,368
Total assets	**5,720,226**	5,205,200
Liabilities		
Hong Kong currency notes in circulation	**313,404**	298,944
Items in the course of transmission to other banks	**18,404**	17,878
Repurchase agreements – non-trading	**73,606**	61,793
Deposits by banks	**194,778**	129,703
Customer accounts	**3,610,409**	3,287,463
Trading liabilities	**29,039**	49,399
Derivatives	**396,212**	277,421
Financial liabilities designated at fair value	**41,507**	44,748
Debt securities in issue	**29,452**	53,584
Retirement benefit liabilities	**1,574**	1,426
Amounts due to Group companies	**413,865**	384,490
Accruals and deferred income, other liabilities and provisions	**121,091**	110,893
Current tax liabilities	**616**	7,556
Deferred tax liabilities	**9,192**	9,199
Subordinated liabilities	**3,101**	3,114
Total liabilities	**5,256,250**	4,737,611
Equity		
Share capital	**172,335**	172,335
Other equity instruments	**44,615**	44,615
Other reserves	**25,726**	27,101
Retained earnings	**221,300**	223,538
Total equity	**463,976**	467,589
Total equity and liabilities	**5,720,226**	5,205,200

Bank statement of changes in equity for the year ended 31 December 2020

				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 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[4]	**–**	**–**	**(54,268)**	**–**	**–**	**–**	**–**	**–**	**(54,268)**
Movement in respect of share-based payment arrangements	**–**	**–**	**103**	**–**	**–**	**–**	**–**	**173**	**276**
Transfers and other movements[5]	**–**	**–**	**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**
At 1 Jan 2019	172,335	35,879	212,860	39,506	1,037	(84)	(12,846)	(4,267)	444,420
Profit for the year	–	–	79,694	–	–	–	–	–	79,694
Other comprehensive income/(expense) (net of tax)	–	–	(1,993)	2,836	2,467	(35)	(481)	–	2,794
– debt instruments at fair value through other comprehensive income	–	–	–	–	1,438	–	–	–	1,438
– equity instruments designated at fair value through other comprehensive income	–	–	–	–	1,029	–	–	–	1,029
– cash flow hedges	–	–	–	–	–	(35)	–	–	(35)
– changes in fair value of financial liabilities designated at fair value upon initial recognition arising from changes in own credit risk	–	–	(2,007)	–	–	–	–	–	(2,007)
– property revaluation	–	–	–	2,836	–	–	–	–	2,836
– remeasurement of defined benefit asset/ liability	–	–	14	–	–	–	–	–	14
– exchange differences	–	–	–	–	–	–	(481)	–	(481)
Total comprehensive income/(expense) for the year	–	–	77,701	2,836	2,467	(35)	(481)	–	82,488
Other equity instruments issued[3]	–	44,615	–	–	–	–	–	–	44,615
Other equity instruments repaid[3]	–	(35,879)	–	–	–	–	–	–	(35,879)
Dividends paid[4]	–	–	(68,369)	–	–	–	–	–	(68,369)
Movement in respect of share-based payment arrangements	–	–	(30)	–	–	–	–	227	197
Transfers and other movements[5]	–	–	1,376	(1,366)	–	–	–	107	117
At 31 Dec 2019	172,335	44,615	223,538	40,976	3,504	(119)	(13,327)	(3,933)	467,589

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 *In 2019, there were US$1,100m additional tier 1 capital instruments issued. In addition, US$4,600m of additional tier 1 capital instruments were repaid and reissued in 2019 with no actual cash movement.*
4 *Including distributions paid on perpetual subordinated loans classified as equity under HKFRS.*
5 *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 Bank 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 outcome of legal proceedings and regulatory matters is 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 2020. 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. 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 will be appointed pursuant to the cease-and-desist order.

Based on the facts currently known, it is not practicable at this time for the group to predict the resolution of these matters, including the timing or any possible impact on the group, 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, following a decision on the defendants' motion to dismiss in October 2018, the claims against a number of HSBC entities were dismissed, and the Bank remained as the only HSBC defendant in this action. In October 2018, the Bank filed a motion for reconsideration of the decision based on the issue of personal jurisdiction. This motion was denied in April 2019. Also in October 2018, the plaintiffs filed a third amended complaint, naming only the Sibor panel members, including the Bank, as defendants. The court dismissed the third amended complaint in its entirety in July 2019 against all defendants. In August 2019, the plaintiffs filed an appeal to the Second Circuit Court of Appeals, which remains pending.

In the BBSW litigation, in November 2018, the court dismissed all foreign defendants, including all the 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 the HSBC entities.

Based on the facts currently known, it is not practicable at this time for the Bank to predict the resolution of these matters, including the timing or any possible impact on the Bank, which could be significant.

United States Bankruptcy Court for the Southern District of New York litigation

In June 2018, a claim was issued against the Bank in the United States Bankruptcy Court for the Southern District of New York by the Chapter 11 Trustee of CFG Peru Investments Pte. Ltd. (Singapore) (the 'Trustee Complaint'). The Trustee Complaint makes allegations under the Peruvian Civil Code, Hong Kong and U.S. common law and the Bankruptcy Code concerning the Bank's alleged conduct in commencing the winding-up proceedings and pursuing the appointment of joint provisional liquidators for affiliates of CFG Peru Investments Pte. Ltd. The Trustee is seeking damages and equitable subordination or disallowance of the Bank's Chapter 11 claims in a related bankruptcy proceeding.

The Bank is seeking to dismiss the Trustee Complaint. Based on the facts currently known, it is not practicable at this time for the Bank to predict the resolution of this matter, including the timing or any possible impact on the Bank, which could be significant.

Foreign exchange-related investigations

In January 2021, HSBC Holdings exited its three-year deferred prosecution agreement with the Criminal Division of the US Department of Justice ('DoJ') (the 'FX DPA'), regarding fraudulent conduct in connection with two particular transactions in 2010 and 2011. HSBC Holdings entered into the FX DPA in January 2018, following the conclusion of the DoJ's investigation into HSBC's historical foreign exchange activities. Under the terms of the FX DPA, the DoJ is expected to file a motion to dismiss the charges deferred by the FX DPA in due course.

Based on the facts currently known, it is not practicable at this time for the group to predict the resolution of these matters, including the timing or any possible impact on the group, which could be significant.

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, and 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.

Based on the facts currently known, it is not practicable at this time for the group to predict the resolution of these matters, including the timing or any possible impact on the group, 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

There have been no events after the balance sheet date that would require disclosure in the consolidated financial statements.

40 Approval of financial statements

The Consolidated Financial Statements were approved and authorised for issue by the Board of Directors on 23 February 2021.

Financial Review

Results for 2020

(Unaudited)

Profit before tax for 2020 reported by The Hongkong and Shanghai Banking Corporation Limited ('the Bank') and its subsidiaries (together 'the group') decreased by HK$46,237m, or 34%, to HK$90,196m.

Consolidated income statement and balance sheet data by global business[1]

(Audited)

	Wealth and Personal Banking HK$m	Commercial Banking HK$m	Global Banking and Markets HK$m	Corporate Centre[2] HK$m	Total HK$m
Year ended 31 Dec 2020					
Net interest income	**59,783**	**34,192**	**22,895**	**(5,357)**	**111,513**
Net fee income	**22,026**	**9,102**	**10,380**	**162**	**41,670**
Net income from financial instruments measured at fair value through profit or loss	**18,927**	**2,985**	**21,288**	**2,067**	**45,267**
Gains less losses from financial investments	**772**	**450**	**417**	**(15)**	**1,624**
Net insurance premium income/(expense)	**58,261**	**3,627**	**–**	**(325)**	**61,563**
Other operating income	**5,056**	**66**	**862**	**(372)**	**5,612**
Total operating income	**164,825**	**50,422**	**55,842**	**(3,840)**	**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	**90,431**	**46,722**	**55,842**	**(3,657)**	**189,338**
– of which: – external	***77,521***	***50,075***	***66,453***	***(4,711)***	***189,338***
– inter-segment	***12,910***	***(3,353)***	***(10,611)***	***1,054***	***–***
Change in expected credit losses and other credit impairment charges	**(4,441)**	**(12,145)**	**(1,128)**	**(5)**	**(17,719)**
Net operating income	**85,990**	**34,577**	**54,714**	**(3,662)**	**171,619**
Operating expenses	**(47,292)**	**(19,391)**	**(24,013)**	**(5,132)**	**(95,828)**
Operating profit	**38,698**	**15,186**	**30,701**	**(8,794)**	**75,791**
Share of profit in associates and joint ventures	**6**	**–**	**–**	**14,399**	**14,405**
Profit before tax	**38,704**	**15,186**	**30,701**	**5,605**	**90,196**
Balance sheet data at 31 Dec 2020					
Loans and advances to customers (net)	**1,463,558**	**1,206,857**	**994,864**	**3,402**	**3,668,681**
Customer accounts	**3,333,360**	**1,472,646**	**1,104,941**	**449**	**5,911,396**
Year ended 31 Dec 2019					
Net interest income	73,776	44,604	27,067	(14,544)	130,903
Net fee income	21,473	9,950	9,965	117	41,505
Net income from financial instruments measured at fair value through profit or loss	17,983	2,959	17,862	11,654	50,458
Gains less losses from financial investments	186	187	264	1	638
Net insurance premium income/(expense)	56,222	4,380	–	(327)	60,275
Other operating income	13,906	431	821	600	15,758
Total operating income	183,546	62,511	55,979	(2,499)	299,537
Net insurance claims and benefits paid and movement in liabilities to policyholders	(75,627)	(4,529)	–	–	(80,156)
Net operating income before change in expected credit losses and other credit impairment charges	107,919	57,982	55,979	(2,499)	219,381
– of which: – external	*80,935*	*61,593*	*83,087*	*(6,234)*	*219,381*
– inter-segment	*26,984*	*(3,611)*	*(27,108)*	*3,735*	*–*
Change in expected credit losses and other credit impairment charges	(2,084)	(3,034)	(554)	–	(5,672)
Net operating income	105,835	54,948	55,425	(2,499)	213,709
Operating expenses	(46,077)	(19,442)	(23,654)	(4,321)	(93,494)
Operating profit	59,758	35,506	31,771	(6,820)	120,215
Share of profit in associates and joint ventures	346	–	–	15,872	16,218
Profit before tax	60,104	35,506	31,771	9,052	136,433
Balance sheet data at 31 Dec 2019					
Loans and advances to customers (net)	1,409,169	1,244,027	1,066,254	1,425	3,720,875
Customer accounts	3,101,820	1,345,176	985,018	410	5,432,424

1 *Effective from 2020, the reportable segments have been changed to reflect the merging of Retail Banking and Wealth Management and Global Private Banking to form Wealth and Personal Banking ('WPB'), and the re-allocation of Balance Sheet Management from Corporate Centre to the global businesses. 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' on the Consolidated Financial Statements.*

2 *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 2020 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 2020. The extracts set out in this Exhibit B are not complete and reference should be made to the Annual Report and Accounts 2020 which is available for inspection at the Issuer's office at HSBC Main Building, 1 Queen's Road Central, Hong Kong.

Risk

Our approach to risk

(Unaudited)

Our risk appetite

We recognise the importance of a strong risk culture, which refers to our shared attitudes, values and norms 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 will continue to incorporate this 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 a conservative risk appetite and strong risk management capability.
- We aim to deliver sustainable earnings and consistent returns for shareholders.

Business practice

- We have zero tolerance for any of our people to knowingly engage 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 a member of staff or by any group business.

Enterprise-wide application

Our risk appetite encapsulates 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 defined as the risk to achieving our strategy or objectives as a result of inadequate or 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 ensure they remain aligned with the group's. 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 business, customers, colleagues, shareholders and the communities that we serve, while ensuring we are able to support our strategy and provide sustainable growth.

We are focused upon the implementation of our business strategy, as part of which we are carrying out a major change programme. It is critical that we ensure that as we implement changes, we use active risk management to manage the execution risks.

We will also perform periodic risk assessments, including against strategies to ensure retention of key personnel for our continued safe operation.

We use a comprehensive risk management framework across the organisation and across all risk types, underpinned by the group's culture and values. This outlines 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 sound operational and strategic decision making. It also ensures a consistent approach to identifying, assessing, managing and reporting the risks we accept and incur in our activities.

Our risk management framework

The following diagram and descriptions summarise key aspects of the risk management framework, including governance and structure, our risk management tools and our risk culture, which together help align employee behaviour with our 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** **Enterprise-wide risk management tools** **Active risk management: identification/assessment, monitoring, management and reporting**	The group has several processes to identify/assess, monitor, manage and report risks to ensure we remain within our risk appetite.
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.

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 Chief Executive group Chief Financial Officer group heads of global business and global functions	• 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	• 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.

Our responsibilities

All our people are responsible for identifying and managing risk within the scope of their role as part of the three lines of defence model.

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 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 forward-looking risk identification and management. The group's Risk function is made up of sub-functions covering all risks to our business and forms part of the second line of defence. It 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.

Non-financial risk is the risk to achieving our strategy or objectives as a result of failed internal processes, people and systems, or from external events. Sound non-financial risk management is central to achieving good outcomes for our customers.

During 2020 we 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 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 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, should 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 performs 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 in 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 an integral framework in the safeguarding of the group's financial stability. Together with stress testing, it helps us understand the outcomes of adverse business or economic conditions and the identification of mitigating actions.

Key developments in 2020

In 2020, it was announced that Edward Jenkins was stepping down from his role of the group's Chief Risk Officer. Mark McKeown, who is the Global Chief Corporate Credit Officer and Head of Wholesale Credit and Market Risk, has been appointed as the group's Chief Risk Officer on an interim basis with effect from 1 July 2020.

During the year, we have actively managed the risks resulting from the Covid-19 outbreak and its impacts on our customers and operations, as well as other key risks described in this section.

In addition, we enhanced our risk management in the following areas:

- In January 2020, we simplified our approach and articulation of risk management through the combination of our enterprise risk management framework and our operational risk management framework.
- The global model risk policy and associated standards were revised to improve how we manage model risk and meet enhanced external expectations.
- We continued to focus on simplifying our approach to non-financial risk management. We are driving more effective oversight and better end-to-end identification and management of non-financial risks.
- In line with the increasing threat landscape that the industry faces within non-financial risk, we formed a new Operational and Resilience Risk combined sub-function in May 2020. The sub-function provides robust first line of defence oversight and risk steward oversight, supported by clear plans and evidenced by effective and timely independent challenge. The sub-function helps to ensure that the first line of defence are focused firmly on priority tasks. By bringing the two teams together, we expect to benefit from improved stewardship, better risk management capabilities and better outcomes for our customers.
- In November 2020, the second line of defence for the Treasury function within Global Risk was re-named Treasury Risk Management ('TRM'). TRM will oversee Treasury activities across the group including capital risk, liquidity and funding risk and Interest Risk Risk in the Banking Book ('IRRBB'). Through these changes we expect to improve effective management of capital, liquidity, funding and balance sheet utilisation across all parts of the group.
- We continue to support the business and our customers throughout the global pandemic, while continuing to manage financial crime risk. We continued to invest in both advanced analytics and artificial intelligence, which remain key components of our next generation of tools to fight financial crime. From 2021, we will integrate our RMM and Financial Crime Risk Management Meetings to ensure a holistic view of all risks.

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 regions and global businesses, for any risks that may require global escalation, updating our top and emerging risks as necessary.

We define a 'top risk' as a thematic issue that may form and crystallise within one year, and which has the potential to materially affect the group's financial results, reputation or business model. It may arise across any combination of risk types, countries or global businesses. The impact may be well understood by senior management and some mitigating actions may already be in place.

An 'emerging risk' is a thematic issue with large unknown components that may form and crystallise beyond a one year time horizon. If it were to materialise, it could have a material effect on the group's long-term strategy, profitability and/or reputation. Existing mitigation action plans are likely to be minimal, reflecting the uncertain nature of these risks at this stage. Some high-level analysis and/or stress testing may have been carried out to assess the potential impact.

Our current top and emerging risks are as follows:

Externally driven

Geopolitical and macroeconomic risks

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 can manifest themselves in divergent regulatory, standards and compliance regimes, presenting long-term strategic challenges for multinational businesses.

The Covid-19 outbreak dominated the political and economic landscape through much of 2020. The twin shocks of a public health emergency and the resultant economic fallout have been felt around the world, and hit both advanced and emerging markets. The closure of borders threatened medical and food supplies for many markets, leading to countries and territories focusing efforts on building resilient supply chains closer to home. Covid-19 and the corresponding vaccine rollout will likely dominate the political and economic agenda for most of 2021.

Tensions could be raised as countries compete for access for the array of vaccines under development, approved or pending approval, while the potential differences of protection offered, the speed and scale with which they can be manufactured, and the take-up rates of vaccines will impact the speed of economic recovery.

The Covid-19 outbreak also heightened existing US-China tensions. Tensions span a wide range of issues, including trade, finance, military, technology and human rights. The Covid-19 outbreak has accelerated US and Chinese efforts to reduce mutual dependence in strategic industries such as sensitive technology, pharmaceuticals and precursor chemicals.

A range of tensions in US-China relations could have potential ramifications for the group and its customers. These tensions could include divisions over Hong Kong, US funding of and trading with strategic Chinese industries, claims of human rights violations, and others. Some of these tensions have manifested themselves through actions taken by the governments of the United States and China in 2020 and early 2021. These tensions may affect the group as a result of the impact of sanctions (including sanctions that impact the group's clients/customers), as well as regulatory, reputational and market risks.

The United States has imposed a range of sanctions and trade restrictions on Chinese persons and companies, focusing on entities the United States believes are involved in human rights violations, information technology and communications equipment and services, and military activities, among others. In response, China has announced a number of sanctions and trade restrictions that target or provide authority to target foreign officials and companies, including those in the US. Certain measures are of particular relevance.

The US Hong Kong Autonomy Act provides 'secondary sanctions' authority that allows for the imposition of US sanctions against non-US financial institutions found to be engaged in significant transactions with certain Chinese individuals and entities subject to US sanctions as a result of a US determination that these individuals or entities engaged in activities undermining Hong Kong's autonomy. The United States has also imposed restrictions on US persons' ability to engage in transactions in, or relating to, publicly traded securities of a number of prominent Chinese companies. China has subsequently adopted regulations providing a framework for specific prohibitions against compliance with, and private rights of action for damages resulting from, measures that the government determines have an unjustified extraterritorial application that impairs Chinese sovereignty.

No penalties have yet been imposed against financial institutions under any of these measures, and their scope and application remain uncertain. These and any future measures that may be taken by the US and China may affect the group, its customers, and the markets in which we operate.

While the inauguration of US President Biden may lead to a more orderly conduct of relations between the US and China in the future, long-term differences between the two nations remain, which could affect sentiment and restrict global economic activities. It remains unclear the extent to which the new administration will impact geopolitical tensions.

While UK-China relations have historically been shaped by strong trade and investment, there are also emerging challenges. Following the implementation of the Hong Kong National Security Law, the UK offered residency rights and a path to citizenship to eligible British National (Overseas) passport holders in Hong Kong. In addition, both the UK and Hong Kong governments have suspended their extradition treaties with each other.

As geopolitical tensions rise, 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 reputational and political risks for the Group. We continue to seek to monitor, assess and meet the legal requirements introduced by all jurisdictions that we operate in, and maintain an open dialogue with our regulators on the impact of legal and regulatory obligations on our business and customers.

China's expanding data privacy and cybersecurity laws could pose potential challenges to intra-group data sharing, especially within the Greater Bay Area ('GBA'). China's draft Personal Information Protection Law and Data Security Law, if passed in their current forms, could increase financial institutions' compliance burdens in respect of cross-border transfers of personal information. In Hong Kong, there is also an increasing focus by regulators on the use of big data and artificial intelligence. Use of personal data through digital platforms for GBA initiatives may need to take into account these evolving data privacy and cybersecurity obligations.

Emerging and frontier markets have suffered particularly heavily from the Covid-19 outbreak, in light of healthcare shortcomings, widespread labour informality, exposure to commodities production and often weak policy frameworks and buffers. Multilateral institutions have mobilised support for the weaker frontier markets, with the World Bank and G-20 marshalling efforts to implement a standstill on debt to public sector institutions. The International Monetary Fund has also, to date, made circa US$106bn in emergency funds available to over 80 countries. However, negotiations on debt to the private sector will likely prove more difficult, and may result in sovereign debt restructuring and defaults for several countries. Most developed markets are expected to recover from the crisis, as macroeconomic policies remain highly accommodative. However, permanent business closures and job losses in some sectors will likely prevent several developed markets from achieving pre-crisis growth rates or activity levels in the near term.

These countries and territories should be able to shoulder the higher public deficits and debts necessary to offset private sector weaknesses, given the continuing low cost of servicing public debt. However, a group of weaker developed markets, including some members of the EU, have entered the Covid-19 crisis on weak economic and fiscal footing and suffered high healthcare and economic costs. Although substantial joint EU monetary and fiscal measures should help support recoveries and keep debt servicing costs down at least through 2021, there are concerns that permanently higher debt burdens will eventually lead to investors questioning their sustainability. Renewed government restrictions in response to new waves of infections will put further pressure on these economies.

The contraction in the global economy during 2020 has had varying effects on our customers, with many of them experiencing financial difficulties. This has resulted in an increase in expected credit losses ('ECL') and risk-weighted assets ('RWAs'). For further details on customer relief programmes, see page 44. For further details on RWAs, see page 50.

Central banks have reduced interest rates in most financial markets due to the adverse impact on the timelines and the path for economic recovery from the Covid-19 outbreak, which has in turn increased the likelihood of negative interest rates. This raises a number of risks and concerns, such as the readiness of our systems and processes to accommodate zero or negative rates, the resulting impacts on customers, regulatory constraints and the financial implications given the significant impact that prolonged low interest rates have had, and may continue to have, on our net interest income. For some products, we have floored deposit rates at zero or made decisions not to charge negative rates. This, alongside loans repriced at lower rates, will result in our commercial margins being compressed, which is expected to be reflected in our profitability. The pricing of this risk will need to be carefully considered. These factors may challenge the long-term profitability of the banking sector, including HSBC, and will be considered as part of the group's transformation programme.

Mitigating actions

- We closely monitor economic developments in key markets and sectors and undertake scenario analysis. This helps enable 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 being taken to rebalance exposures and manage risk appetite where necessary.
- We undertake regular reviews of 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 continually monitor the geopolitical outlook, in particular in countries where we have material exposures and/or a significant physical presence. We have also established dedicated forums to monitor geopolitical developments.
- We have taken steps to enhance physical security in those geographical areas deemed to be at high risk from terrorism and military conflicts.

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 borrowers 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.

Climate risks have also increased over 2020 as a result of the pace and volume of policy and regulatory changes. This impacts the Bank, both directly and indirectly, through impacts on our customers.

Mitigating actions

- We are in the process of establishing a governance framework to help ensure that risks associated with climate change are escalated to and discussed at the Board, as appropriate, in a timely manner. The Board will be presented with a risk profile report, which includes key issues and common themes identified across the enterprise risk reports, as required. The group Chief Risk Officer will provide verbal or written updates on climate risk to the Board and group Risk Committee where appropriate.
- We are in the process of incorporating climate-related risk, both physical and transition, into how we manage and oversee risks. We have a Board-approved RAS that contains a qualitative statement on our approach to climate risk, which we intend to further enhance in 2021.
- We continue to enhance our approach to climate-related risks, and develop and embed how we measure, monitor and manage it. An internal climate risk working group provides oversight by seeking to develop policy and limit frameworks to achieve desired portfolios over time, and protect the Group from climate-related risks. We will establish a transition risk framework to gain a better understanding of our exposure to the highest transition risk sectors.
- We implement sustainability risk policies and focus the policies on sensitive sectors that may have a high adverse impact on people or on the environment and in which we have a significant number of customers. These include sectors with potentially high-carbon impacts.
- We are developing a framework for climate stress test to inform the development of our approach to climate risk management, including the continuous enhancement of our RAS.
- We continue to engage with our customers, investors and regulators proactively when compiling and disclosing the information needed to manage climate risks. We also engage with initiatives actively, including the Climate Financial Risk Forum, Equator Principles, Taskforce for Climate-related Financial Disclosures, and Carbon Disclosure Project to drive best practice for climate risk management.

IBOR transition

Interbank offered rates ('Ibors') are used to set interest rates on hundreds of trillions of US dollars of different types of financial transactions and are used extensively for valuation purposes, risk measurement and performance benchmarking.

The UK's Financial Conduct Authority ('FCA') announced in July 2017 that it will no longer persuade or require banks to submit rates for the London interbank offered rate ('Libor') after 2021. In addition, the 2016 EU Benchmark Regulation, which defines the minimum reliability standards for interest rate benchmarks, has resulted in other regulatory bodies' reassessment of benchmarks. As a result, national working groups are actively discussing the mechanisms for an orderly transition of the five Libors currencies, four Asia-Pacific benchmarks that reference US dollar Libor, the Euro Overnight Index Average ('Eonia'), and the Singapore interbank offered rate ('Sibor') to their chosen replacement rates.

As our Ibor transition programme progresses into the execution phase, resilience and operational risks, are heightened due to an expected increase in the number of new near risk-free rate ('RFR') products being rolled out, compressed timelines for transition of legacy Ibor contracts and the extensive systems and process changes required to facilitate both new products and transition. This is being exacerbated by the current interest rate environment where low Libor rates, in comparison with replacement RFR, could affect decisions to transition contracts early, further compressing transition timelines. Regulatory compliance, legal and conduct risks may also increase as a result of both the continued sale of products referencing Ibors, as well as the sale of new products referencing RFRs due to the lack of established market conventions.

Financial risks resulting from the discontinuation of Ibors and the development of RFR market liquidity will also affect the group throughout transition. The differences in Ibor and RFR interest rates will create a basis risk that we need to actively manage through appropriate financial hedging. As contracts are transitioned from Ibors to RFRs, there is a risk that the associated financial hedges will not be aligned.

The continued orderly transition from Ibors continues to be the programme's key objective throughout 2021 and can be broadly grouped into two streams of work: development of alternative rate product capabilities, and the transition of legacy contracts.

Development of alternative rate product capabilities

All global businesses have actively developed and implemented system and operational capabilities for alternative rates products during 2020 in key sites, with several key transactions for RFR products undertaken within Wholesale and Wealth and Private Banking business areas. The offering of RFR products is expected to be expanded, with further product releases for Sterling Overnight Index Average ('Sonia') and Secured Overnight Financing Rate ('Sofr') in the first half of 2021, in addition to other Libor currencies through 2021.

These developments have enabled the group to cease selling certain Ibor-related products. Notably, Libor-linked loan products have been demised for Business Banking and Mid-Market enterprise segments in Malaysia and Indonesia, while low usage Libor-linked products have also been demised across these segments in Hong Kong, mainland China and Singapore where there are suitable alternatives.

While Ibor sales do continue for a number of product lines, Ibor exposures that have post-2021 maturities are reducing, aided by market compression of Ibor trades and transacting new activities in alternative RFR products as market liquidity builds.

Transition legacy contracts

In addition to offering new alternative rate based products, the development of new product capabilities will also help facilitates the transition of legacy Ibor products. HSBC has begun to engage clients to determine their ability to transition in line with the readiness of the alternative rate product availability. The Covid-19 outbreak and the interest rate environment may have affected the ability of clients to transition early and has resulted in compressed timelines for Ibor transition. However, this may be mitigated in part by the recent announcement by InterContinental Exchange Benchmark Administration ('IBA'), the Libor Benchmark Administrator, to consult on extending the publication of most US dollar Libor setting (excluding one week and two month tenors) to enable the legacy US dollar book transition by 30 June 2023. Despite the proposed extension, regulatory and industry guidance has been clear that market participants should cease writing new US dollar Libor contracts as soon as is practicable, and in any event, by the end of 2021. While the extended deadline will result in additional US dollar Libor transactions maturing before cessation, not all of them will, hence it is possible that other proposed solutions, including legislative relief, will still be needed.

For the derivatives exposures, the adoption of the ISDA protocol, which comes into effect in the first quarter of 2021, and the successful changes made by clearing house to discount derivatives using in Sofr and euro short-term rate ('€str') reduce the risk of a disorderly transition of the derivative market.

With respect to the transition of HSBC's Libor bond issuance, an assessment of the debt issued and the ability to transition based on solicitation rights has been undertaken with plans to implement, as appropriate, through 2021. Additionally, Ibor issuance has been reduced by new debt issuance in Sonia and Sofr through 2020.

For the group's holdings of Libor bonds, and of those bonds where HSBC is the payment agent, there remains a dependence on engagement of third-party market participants in the transition process of their issued debt.

For the group's loan book, our global businesses have developed commercial strategies that include active client engagement and communication, providing detailed information on RFR products to assist our clients to transition to a suitable alternative rate or replacement RFR product before Ibor cessation.

Mitigating actions

- We have put in place a global Ibor transition programme to facilitate an orderly transition to replacement rates for our business and our clients, which is overseen globally by the Group Chief Risk Officer, and regionally by the group's Chief Risk Officer.
- We have widened the scope of the global Ibor transition programme to include additional interest rate benchmarks, where plans are in place to demise those benchmarks in the near future.
- We have and continue to carry out extensive training, communication and client engagement to facilitate appropriate selection of products, with dedicated teams in place to support the development of, and transition to, alternative rate and replacement RFR products.
- We are implementing IT and operational change to enable a longer transition window.
- We have met 2020 regulatory expectations for implementing relevant contractual language changes for loan products and transitioning to RFR discounting by clearing houses for derivatives.
- We have actively compressed derivative contracts and are targeting regulatory set and industry agreed milestones for the cessation of new standard Libor trades (sterling Libor in the first quarter of 2021, other Libors in the second quarter of 2021) leading to a reduction in the Group's Ibor portfolio through 2020.
- We have assessed, monitored and are dynamically managing risks, and implemented specific mitigating controls as required.
- We continue to engage with regulatory and industry bodies actively to mitigate risks relating to hedge accounting changes, multiple loan/bond conventions, and those contracts that have no appropriate replacements or no likelihood of renegotiation to transition ('tough legacy').

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 financial instruments 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, but instead 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.

These amendments apply from 1 January 2021 with early adoption permitted. The group has adopted the amendments from 1 January 2020.

(Audited)	Financial instruments yet to transition to alternative benchmarks, by main benchmark			
	USD Libor	JPY Libor	SIBOR[1]	Others[2]
At 31 Dec 2020	HK$m	HK$m	HK$m	HK$m
Non-derivative financial assets[3]	253,239	2,688	63,100	49,521
Non-derivative financial liabilities[3]	119,269	12,192	–	4,125
Derivative notional contract amount	6,252,168	3,281,539	299	1,466,484

1 *In December 2020, the Monetary Authority of Singapore announced the discontinuation of the SIBOR in phases, with eventual transition to SORA.*
2 *Comprises financial instruments referencing other significant benchmark rates yet to transition to alternative benchmarks (GBP Libor, EUR Libor, CHF Libor, EONIA, SOR and THBFIX).*
3 *Gross carrying amount excluding allowances for expected credit losses.*

The amounts in the above table relate to the group's main operating entities[1] 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 after 31 December 2021, the date by which Libor 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.*

The administrator of Libor, IBA, has announced a proposal to extend the publication date of most US dollar Libor tenors until 30 June 2023. Publication of one-week and two-month tenors will cease after 31 December 2021. This proposal, if endorsed, would reduce the amounts presented in the above table as some financial instruments included will reach their contractual maturity date prior to 30 June 2023.

Financial crime risk environment

(Unaudited)

Financial institutions remain under considerable regulatory scrutiny regarding their ability to prevent and detect financial crime. Financial crime threats continue to evolve, often in tandem with increased geopolitical developments, posing challenges for financial institutions to keep abreast of developments and manage conflicting laws. The global economic slowdown as a result of the Covid-19 outbreak and the resulting rapid deployment of government relief measures to support individuals and businesses, have increased the risk of fraud. Developments around virtual currencies, stablecoins and central bank digital currencies have continued, with the industry's financial crime risk assessment and management frameworks in the early stages of development. The evolving regulatory environment continues to present an execution challenge. We continue to see increasing challenges presented by national data privacy requirements in a global organisation, which may affect our ability to manage financial crime risks effectively. There has also been an increase in media and public scrutiny on how financial crime is managed within financial institutions.

In December 2012, among other agreements, HSBC Holdings plc ('HSBC Holdings') agreed to an undertaking with the UK's FCA, which was replaced by a Direction issued by the FCA in 2013, and consented to 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. HSBC also agreed to retain an independent compliance monitor (who is, 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 (the 'Skilled Person/Independent Consultant'). Reflective of HSBC's significant progress in strengthening financial crime risk management capabilities, our engagement with the Skilled Person was terminated in the first quarter of 2020 and in the second quarter of 2020, and a new Skilled Person with a narrower mandate was appointed to assess the remaining areas that require further work in order for us to transition fully to business-as-usual financial crime risk management. Thereafter, in 2020, the FCA issued a new, more tailored Direction that replaces the previous Direction issued in 2013. The Independent Consultant will continue to carry out an annual Office of Foreign Assets Control ('OFAC') compliance review at the FRB's discretion. The role of the Skilled Person/Independent Consultant is discussed on page 58.

Mitigating actions

- We continue to enhance our financial crime risk management capabilities. We are investing in next generation capabilities to fight financial crime through the application of advanced analytics and artificial intelligence.
- We continue to monitor geopolitical developments closely and the impacts on our financial crime controls.
- We are strengthening and investing in our fraud controls, to introduce next generation anti-fraud capabilities to protect both customers and the Bank.
- We have developed procedures and controls to manage the risks associated with direct and indirect exposure to virtual currencies, and we continue to monitor external developments.
- We continue to educate our staff on emerging digital landscapes and associated risks.
- We continue to monitor external developments on stablecoins and central bank digital currencies, engaging with central banks and regulators on financial crime risk management.
- We continue to 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 continue to take steps designed to ensure that the reforms we have put in place are both effective and sustainable over the long term.
- We continue to 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.

Regulatory developments including conduct, with adverse impact on business model and profitability

(Unaudited)

Financial service providers continue to face stringent regulatory and supervisory requirements, particularly in the areas of capital and liquidity management, conduct of business, financial crime, internal control frameworks, the use of models and the integrity of financial services delivery. The competitive landscape in which the group operates may be significantly altered by future regulatory changes and government intervention. Regulatory changes, including those driven by geopolitical issues such as US-China tensions may affect the activities of the group as a whole, or of some or all of its principal subsidiaries. For further details, see pages 17-18.

Mitigating actions

- We are engaged, wherever possible, with governments and regulators in the countries and territories in which we operate, to help ensure that new requirements are considered properly and can be implemented effectively. In particular, we have engaged proactively with regulators and governments globally regarding the policy changes issued in response to Covid-19 to help our customers and contribute to an economic recovery.
- We have had regular meetings with all relevant authorities to discuss strategic contingency plans, including those arising from geopolitical issues.

Cyber threat and unauthorised access to systems

(Unaudited)

The group and other organisations 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 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, infiltration of payment systems and denial of service attacks.
- We continued 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 people remain aware of cybersecurity issues and know how to report incidents.
- We report and review cyber risk and control effectiveness quarterly at executive and non-executive Board level. We also report it across the global businesses, functions and regions to help ensure appropriate visibility and governance of the risk and mitigating actions.
- We participate 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.

Internally driven

(Unaudited)

Data management

We use a large number of systems and applications to support key business processes and operations. As a result, we often need to reconcile multiple data sources, including customer data sources, to reduce the risk of error. Along with other organisations, we also need to meet external/regulatory obligations such as the General Data Protection Regulation ('GDPR') and Basel III.

Mitigating actions

- We are improving data quality across a large number of systems. Our data management, aggregation and oversight continues to strengthen and enhance the effectiveness of internal systems and processes. We are implementing data controls for end-to-end critical processes to improve our data capture at the point of entry and throughout the data lifecycle.
- Through the Global Data Management Framework, we are expanding and enhancing our data governance processes to help monitor the quality of critical customer, product, reference and transaction data proactively and resolve associated data issues in a timely manner.
- We continue to modernise our data and analytics infrastructure through investments in advanced capabilities in Cloud, visualisation, machine learning and artificial intelligence platforms.
- We help protect customer data via our global data privacy framework programme which establishes data privacy practices, design principles and guidelines that enable us to demonstrate compliance with data privacy laws and regulations in the jurisdictions in which we operate.
- To help our employees keep abreast of data privacy laws and regulations we hold data privacy awareness training highlighting our commitment to protect personal data for our customers, employees and stakeholders.

IT systems infrastructure and resilience

We are committed to investing in the reliability and resilience of our IT systems and critical services. We do so to protect our customers and ensure they are not impacted by disruption to services, which could result in reputational and regulatory damage.

Mitigating actions

- We are continuing to invest in transforming how software solutions are developed, delivered and maintained, with a particular focus on providing high-quality, stable and secure services. We concentrate on improving system resilience and service continuity testing. We have enhanced the security features of our software development life cycle and improved our testing processes and tools.
- We upgraded many of our IT systems, simplifying our service provision and replacing older IT infrastructure and applications. These enhancements led to continued global improvements in service availability during 2020 for both our customers and employees.

Risks arising from the receipt of services from third parties

We use third parties for the provision of a range of services, in common with other financial service providers. Risks arising from the use of third-party service providers may be less transparent and therefore more challenging to manage or influence. It is critical that we ensure that we have appropriate risk management policies, processes and practices. These should include adequate control over the selection, governance and oversight of third parties, particularly for key processes and controls that could affect operational resilience. Any deficiency in our management of risks arising from the use of third parties could affect our ability to meet strategic, regulatory or client expectations.

Mitigating actions

- We continued to embed our delivery model in the first line of defence through a dedicated team. We have deployed processes, controls and technology to assess third-party service providers against key criteria and associated control monitoring, testing and assurance.
- A dedicated oversight forum in the second line of defence monitors the embedding of policy requirements and performance against risk appetite.

Risks associated with workforce capability, capacity and environmental factors with potential impact on growth

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. The ability to continue to attract, develop and retain competent individuals in an employment market impacted by the Covid-19 outbreak proves challenging. Changed working arrangements, local Covid-19 restrictions and health concerns during the pandemic also impact 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 outbreak. While the 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 though 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 launched the Future Skills curriculum through HSBC University to help provide the 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.
- We have robust plans in place, driven by senior management, to mitigate the effect of external factors that may impact our employment practices. Political and regulatory challenges are closely monitored to minimise the impact on the attraction and retention of talent and key performers.

Change execution risk

In February 2020, HSBC announced the plans to restructure the Group's business, reallocate freed-up capital into higher-growth and higher-return businesses and markets, and to simplify our organisation and reduce costs. Our success in delivering our strategic priorities and continuing to address regulatory change and other top and emerging risks is dependent on the effective and safe delivery of change across the Group.

Mitigating actions

- We have established a Global Transformation Programme to deliver the commitments made in February 2020. The Programme is overseen globally by members of the Group Executive Committee, and regionally by the members of the group's Executive Committee. Related execution risks across the initiatives, including their sequencing and prioritisation, are being monitored and managed. Many of the initiatives impact our staff and require continued investment in technology.
- We continue to work to strengthen our change management practices to deliver sustainable change. This includes increased adoption across the Group of Agile ways of working to deliver change.

Areas of special interest

(Unaudited)

During 2020, 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 particular focus on Covid-19.

Risks related to Covid-19

The Covid-19 outbreak and its effect on the global economy have impacted our customers and our performance, and the future effects of the outbreak remain uncertain. The outbreak 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 varying government measures in response have added challenges, given the rapid pace of change and significant operational demands. The speed at which countries and territories will be able to return to pre-Covid-19 economic levels will vary based on the levels of infection, local political decisions and access and ability to rollout vaccines. There remains a risk of subsequent waves of infection, as evidenced by the new, more transmissible variants of the virus. Renewed outbreaks emphasise the ongoing threat of Covid-19 even in countries and territories that have recorded lower than average cases so far.

Government restrictions imposed around the world to limit the spread of Covid-19 resulted in a sharp contraction in global economic activity during 2020. At the same time, governments also took steps designed to soften the extent of the damage to investment, trade and labour markets. Our Central scenario used to calculate impairment assumes that economic activity will gradually recover over the course of 2021. In this scenario, recovery will be supported by a successful rollout of vaccination programmes across our key markets which, coupled with effective non-pharmacological measures to contain the virus - such as 'track and trace' systems and restrictions to mobility - will lead to a decline in infections across over the course of the year. Governments and central banks are expected to continue to work together, across many of our key markets, to ensure that households and firms receive an appropriate level of financial support until restrictions on economic activity and mobility can be materially eased. Such support is intended to ensure that labour and housing markets do not experience abrupt, negative corrections and is also intended to limit the extent of long term structural damage to economies. 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 country 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' on page 33.

There is a material risk of a renewed drop in economic activity. The economic fallout from Covid-19 risks increasing inequality across markets that have already suffered from social unrest. This will leave the burden on governments and central banks to maintain or increase fiscal and monetary stimulus. 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 to which global economic growth suffers permanent losses, financial asset prices may suffer a further sharp fall.

Governments and central banks in major economies have deployed extensive measures to support their local populations. Measures implemented by governments have included income support to households and funding support to businesses. Central bank measures have included cuts to policy rates, support to funding markets and asset purchases. These measures are being extended in countries where further waves of the pandemic are prompting renewed government restrictions. Central banks are expected to maintain record-low interest rates for a considerable period of time and the debt burden of governments is expected to rise significantly.

We initiated market-specific measures to support our personal and business customers through these challenging times. These included mortgage assistance, payment holidays, the waiving of certain fees and charges, and liquidity relief for businesses facing market uncertainty and supply chain disruption. We are also working closely with governments, and supporting national schemes that focus on the parts of the economy most impacted by Covid-19. In Hong Kong, we provided prompt liquidity relief to businesses facing market uncertainty and supply chain pressures. For further details of our customer relief programmes, see page 44.

The rapid introduction and varying nature of the government support schemes, as well as customer expectations, has led to risks as the group implements large-scale changes in a short period of time. This 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. Central bank and government actions and support measures, and our responses to those, have also led to increased litigation risk, including lawsuits that have been and may continue to be brought in connection with our cancellation of the fourth interim dividend for 2019.

At 31 December 2020, our CET1 ratio was 17.2%, compared with 17.2% at 31 December 2019, and our average liquidity coverage ratio ('LCR') for the quarter ended 31 December 2020 was 172.1%. Our capital, funding and liquidity position is expected to help us to continue supporting our customers throughout the Covid-19 outbreak.

In many of our markets, the Covid-19 outbreak has led to a weakening in GDP, a key input used for calculating ECL, and there remains the risk of more adverse economic scenarios given its ongoing impact. Furthermore, ECL will also increase from other parts of our business impacted by the disruption to supply chains. The impact will vary by sectors of the economy.The impact of the outbreak on the long-term prospects of businesses in these sectors is uncertain and may lead to significant ECL charges on specific exposures, which may not be fully captured in ECL estimates. In addition, in times of crisis, fraudulent activity is often more prevalent, leading to potentially significant ECL charges or operational losses.

The significant changes in economic and market drivers, customer behaviours and government actions caused by Covid-19 have also impacted the performance of financial models. HKFRS 9 model performance has been dramatically impacted over the course of 2020 which has increased reliance on management judgement in determining the appropriate level of ECL estimates. These models are driven by forecasts of economic factors such as GDP and unemployment. Many of these models were not able to deliver reliable outputs given the significant volatility in these measures, as a consequence of the current global economic crisis. The reliability of ECL models has also been impacted by the unprecedented response from governments to provide a variety of economic stimulus packages to support livelihoods and the highest hit businesses. This has significantly affected the ability of these models to accurately anticipate the effects of these measures on ECL outputs.

In order to address some model limitations and performance issues, there has been redevelopment of some key models used to calculate ECL estimates. These models have been independently validated by the Model Risk Management team and have been assessed as having the ability to deliver reliable credit loss estimates. While this has reduced the reliance on management judgement for determining ECL estimates, the current uncertain economic outlook, coupled with the expected end to government support schemes, has led to post model management adjustments still being required.

The Model Risk Management team is reviewing HKFRS9 model performance at the country and group level on a quarterly basis to assess whether or not the models in place can deliver reliable outputs. The assessments of the team on the performance of the models provide the credit teams with a view of model reliability. HKFRS 9 model redevelopment will continue as the economic consequences of the Covid crisis become clearer over time as economic conditions normalise and actual credit losses occur.

As a result of Covid-19, business continuity responses have been successfully implemented and the majority of service level agreements have been maintained. We have not experienced any major impacts to the supply chain from our third-party service providers due to Covid-19. The risk of damage or theft to our physical assets or criminal injury to our employees remains unchanged and no significant incidents have impacted our buildings or staff.

There remain significant uncertainties in assessing the duration of the Covid-19 outbreak and its impact. The actions taken by the various governments and central banks, in particular in the UK, mainland China, Hong Kong and the US, provide an indication of the potential severity of the downturn and post-recovery environment, which from a commercial, regulatory and risk perspective could be significantly different to past crises and persist for a prolonged period. A continued prolonged period of significantly reduced economic activity as a result of the impact of the outbreak would have a materially adverse effect on our financial condition, results of operations, prospects, liquidity, capital position and credit ratings. We continue to monitor the situation closely, and given the novel or prolonged nature of the outbreak, additional mitigating actions may be required.

Our material banking risks

The material risk types associated with our banking and insurance manufacturing operations are described in the following tables:

Description of risks – banking operations

(Audited)

Risks	Arising from	Measurement, monitoring and management of risk
Credit risk		
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 certain other products such as guarantees and derivatives.	Credit risk is: • 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.
Treasury risk		
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, and including the financial risks arising from historic and current provision of pensions and other post-employment benefits to staff and their dependants.	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.	Treasury risk is: • 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.
Market risk		
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 and non-trading. Market risk exposures arising from our insurance operations are discussed on the following page.	Market risk is: • 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 VaR, stress testing and other measures; and • managed using risk limits approved by the Board for the group and the various global businesses.
Resilience risk		
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 is: • 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.
Regulatory compliance risk		
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, inappropriate market conduct and breaching other regulatory requirements.	Regulatory compliance risk is: • 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.

Description of risks – banking operations (continued)

(Audited)

Risks	Arising from	Measurement, monitoring and management of risk
Financial crime risk Financial crime risk is the risk of knowingly or unknowingly help 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.	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.	Financial crime risk is: • 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.
Model risk Model risk is the potential for adverse consequences from business decisions informed by models, which can be exacerbated by errors in methodology, design or the way they are used.	Model risk arises in both financial and non-financial contexts whenever business decision making includes reliance on models.	Model risk is: • 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

(Audited)

Risks	Arising from	Measurement, monitoring and management of risk
Financial risk 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.	Exposure to financial risks arises from: • 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.	Financial risk is: • 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.
Insurance risk 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.	• The cost of claims and benefits can be influenced by many factors, including mortality and morbidity experience, as well as lapse and surrender rates.	Insurance risk is: • 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

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 2020

(Unaudited)

There were no material changes to the policies and practices for the management of credit risk in 2020. We continued to apply the requirements of HKFRS 9 within Credit Risk.

Due to the unique market conditions in the COVID-19 outbreak, we expanded operational practices to provide short-term support to customers under the current policy framework. For further details of market-specific measures to support our personal and business customers, see page 44.

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 Chief Executive 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 the group 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 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 loss ('ECL') 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)

Regional management review forums are established in key sites and regions in order to review and approve the impairment results. Regional management review forums have representatives from Credit Risk and Finance. The key site and regional approvals are 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 and Market Risk and Wealth and Personal Banking Risk, as well as the global business Chief Financial Officers and the Group Chief Accounting Officer.

Concentration of exposure

(Audited)

Concentrations of credit risk arise when there are single material counterparty exposures or when there are 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 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.

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.

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 ('PIT') 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.

Loans that have been identified as renegotiated retain this designation until maturity or derecognition.

For details of our policy on derecognised renegotiated loans, see Note 1.2(i) on the Consolidated 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.

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 are deemed to remain credit impaired until repayment, write-off or derecognition.

Renegotiated loans and recognition of expected credit losses

(Audited)

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. 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.

Impairment assessment

(Audited)

For details of our impairment policies on loans and advances and financial investments, see Note 1.2(i) on the Consolidated 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 Consolidated 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. Write-off periods may be extended, generally to no more than 360 days past due. However, in exceptional circumstances, 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 our 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 where local regulation or legislation constrain earlier write-off, or where the realisation of collateral for secured real estate lending takes more time. In the event of bankruptcy or analogous proceedings, write-off may occur earlier than the maximum periods stated above. 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)

	2020		2019	
	Gross carrying/ nominal amount	**Allowance for ECL[1]**	Gross carrying/ nominal amount	Allowance for ECL[1]
At 31 Dec	**HK$m**	**HK$m**	HK$m	HK$m
Loans and advances to customers at amortised cost	**3,697,568**	**(28,887)**	3,738,269	(17,394)
Loans and advances to banks	**403,908**	**(24)**	328,934	(29)
Other financial assets measured at amortised cost	**1,869,268**	**(713)**	1,540,963	(341)
– cash and balances at central banks	**347,999**	**—**	202,747	(1)
– items in the course of collection from other banks	**21,943**	**—**	21,140	—
– Hong Kong Government certificates of indebtedness	**313,404**	**—**	298,944	—
– reverse repurchase agreements – non-trading	**520,344**	**—**	422,333	—
– financial investments	**475,553**	**(527)**	434,523	(223)
– prepayments, accrued income and other assets	**190,025**	**(186)**	161,276	(117)
Amounts due from Group companies	**82,849**	**—**	85,385	—
Total gross carrying amount on-balance sheet	**6,053,593**	**(29,624)**	5,693,551	(17,764)
Loans and other credit related commitments	**1,725,963**	**(825)**	1,630,005	(560)
Financial guarantee	**32,358**	**(124)**	41,163	(62)
Total nominal amount off-balance sheet	**1,758,321**	**(949)**	1,671,168	(622)
	7,811,914	**(30,573)**	7,364,719	(18,386)

	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')[2]	**1,689,820**	**(167)**	1,457,362	(64)

1 *For retail overdrafts and credit cards the total ECL is recognised against the financial asset unless the total ECL exceeds the gross carrying amount of the financial asset, in which case the ECL is recognised against the loan commitment.*
2 *Debt instruments measured at FVOCI continue to be measured at fair value with the allowance for ECL as a memorandum item. Changes in ECL are recognised in 'Change in expected credit losses and other credit impairment charges' in the consolidated income instatement.*

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.

Summary of credit risk (excluding debt instruments measured at FVOCI) by stage distribution and ECL coverage by industry sector

(Audited)

	Gross carrying/nominal amount					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[1]	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[2]	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[1]	388,833	34,095	104	–	423,032	(492)	(266)	(30)	–	(788)	0.1	0.8	28.8	–	0.2
– financial institutions[2]	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[1]	20,737	6,241	44	–	27,022	(51)	(56)	(16)	–	(123)	0.2	0.9	36.4	–	0.5
– financial institutions[2]	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 Includes corporate and commercial.
2 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 %			
		of which:	*of which:*	*of which:*		*of which:*	*of which:*	*of which:*		*of which:*	*of which:*	*of which:*
	Stage 2	*Up-to-date*	*1 to 29 DPD*	*30 and > DPD*	Stage 2	*Up-to-date*	*1 to 29 DPD*	*30 and > DPD*	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*	*–*	*–*

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					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	3,423,956	296,522	16,639	1,152	3,738,269	(3,480)	(4,615)	(8,999)	(300)	(17,394)	0.1	1.6	54.1	26.0	0.5
– personal	1,351,575	45,606	5,575	—	1,402,756	(1,732)	(2,646)	(1,325)	—	(5,703)	0.1	5.8	23.8	—	0.4
– corporate[1]	1,850,316	222,819	10,914	1,149	2,085,198	(1,622)	(1,844)	(7,525)	(297)	(11,288)	0.1	0.8	68.9	25.8	0.5
– financial institutions[2]	222,065	28,097	150	3	250,315	(126)	(125)	(149)	(3)	(403)	0.1	0.4	99.3	100.0	0.2
Loans and advances to banks	328,355	579	—	—	328,934	(26)	(3)	—	—	(29)	0.0	0.5	—	—	0.0
Other financial assets	1,530,910	9,884	167	2	1,540,963	(214)	(77)	(50)	—	(341)	0.0	0.8	29.9	—	0.0
Loan and other credit-related commitments	1,601,934	27,967	104	—	1,630,005	(303)	(236)	(21)	—	(560)	0.0	0.8	20.2	—	0.0
– personal	1,158,805	5,311	69	—	1,164,185	—	(1)	—	—	(1)	—	0.0	—	—	0.0
– corporate[1]	378,362	18,495	35	—	396,892	(293)	(230)	(21)	—	(544)	0.1	1.2	60.0	—	0.1
– financial institutions[2]	64,767	4,161	—	—	68,928	(10)	(5)	—	—	(15)	0.0	0.1	—	—	0.0
Financial guarantee	34,496	6,634	33	—	41,163	(29)	(20)	(13)	—	(62)	0.1	0.3	39.4	—	0.2
– personal	4,377	—	3	—	4,380	—	—	(3)	—	(3)	—	—	100.0	—	0.1
– corporate[1]	28,530	6,410	30	—	34,970	(29)	(20)	(10)	—	(59)	0.1	0.3	33.3	—	0.2
– financial institutions[2]	1,589	224	—	—	1,813	—	—	—	—	—	—	—	—	—	—
At 31 Dec 2019	6,919,651	341,586	16,943	1,154	7,279,334	(4,052)	(4,951)	(9,083)	(300)	(18,386)	0.1	1.4	53.6	26.0	0.3

The above table does not include balances due from Group companies.
1 Includes corporate and commercial.
2 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 %			
		of which:	*of which:*	*of which:*		*of which:*	*of which:*	*of which:*		*of which:*	*of which:*	*of which:*
	Stage 2	*Up-to-date*	*1 to 29 DPD*	*30 and > DPD*	Stage 2	*Up-to-date*	*1 to 29 DPD*	*30 and > DPD*	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 2019												
Loans and advances to customers at amortised cost	296,522	*284,357*	*8,254*	*3,911*	(4,615)	*(3,926)*	*(255)*	*(434)*	1.6	*1.4*	*3.1*	*11.1*
– personal	45,606	*35,607*	*6,505*	*3,494*	(2,646)	*(2,033)*	*(217)*	*(396)*	5.8	*5.7*	*3.3*	*11.3*
– corporate and commercial	222,819	*220,715*	*1,687*	*417*	(1,844)	*(1,768)*	*(38)*	*(38)*	0.8	*0.8*	*2.3*	*9.1*
– non-bank financial institutions	28,097	*28,035*	*62*	*—*	(125)	*(125)*	*—*	*—*	0.4	*0.4*	*—*	*—*

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 45-48.

Maximum exposure to credit risk before collateral held or other credit enhancements

(Audited)

	2020 HK$m	2019 HK$m
Cash and balances at central banks	**347,999**	202,746
Items in the course of collection from other banks	**21,943**	21,140
Hong Kong Government certificates of indebtedness	**313,404**	298,944
Trading assets	**434,029**	445,298
Derivatives	**422,945**	280,642
Financial assets designated at fair value	**35,145**	33,464
Reverse repurchase agreements – non-trading	**520,344**	422,333
Loans and advances to banks	**403,884**	328,905
Loans and advances to customers	**3,668,681**	3,720,875
Financial investments	**2,164,846**	1,891,661
Amounts due from Group companies	**83,203**	87,632
Other assets	**197,362**	165,497
Total on-balance sheet exposure to credit risk	**8,613,785**	7,899,137
Total off-balance sheet	**3,326,935**	3,346,414
Financial guarantees and other similar contracts	**325,631**	315,257
Loan and other credit-related commitments	**3,001,304**	3,031,157
At 31 Dec	**11,940,720**	11,245,551

Total exposure to credit risk remained broadly unchanged in 2020 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)

The recognition and measurement of expected credit losses ('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, and expert credit judgements.

Methodology

Four economic scenarios have been used to capture the exceptional nature of the current economic environment and to articulate management's view of the range of potential outcomes. Scenarios produced to calculate ECL are aligned to HSBC's Top and Emerging Risks. Three of these scenarios are drawn from consensus forecasts and distributional estimates. These include a central scenario, representing a most likely outcome, a downside and an upside scenario that represent meaningfully different outcomes from the central. The central scenario is created using the average of a panel of external forecasters ('the consensus') while consensus upside and downside scenarios are created with reference to distributions for select markets that capture forecasters' views of the entire range of outcomes. We have chosen to use a fourth scenario to represent severe downside risks that are not captured in the consensus scenarios. The use of additional scenarios is in line with HSBC's Forward Economic Guidance ('FEG') methodology and has been regularly used over the course of 2020. Unlike the consensus scenarios, additional scenarios are driven by narrative assumptions and may result in shocks that drive economic activities permanently away from trend.

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 world economy experienced a deep economic shock in 2020. As Covid-19 spread globally, governments in many of our markets sought to limit the human impact by imposing significant restrictions on mobility, in turn driving the deep falls in activity that were observed in the first half of the year. Restrictions were eased as cases declined in response to the initial measures which in turn supported an initial rebound in economic activity by the third quarter of 2020. This increase in mobility unfortunately led to renewed transmission of the virus in several countries, placing health-care systems under significant burden, leading governments to re-impose restrictions on mobility and causing global economic activity to decline once more.

Economic forecasts are subject to a high degree of uncertainty in the current environment. Limitations of forecasts and economic models require a greater reliance on management judgement in addressing both the imperfections inherent in economic forecasts and in assessing associated ECL outcomes. The scenarios used to calculate ECL are described below.

The consensus Central scenario

HSBC's Central scenario features an improvement in economic growth in 2021 as activity and employment gradually returns to the levels experienced prior to the outbreak of Covid-19.

Despite the sharp contraction in activity, government fiscal support in advanced economies played a crucial role averting significant financial distress. At the same time, central banks in our key markets implemented a variety of measures, which included lowering their main policy interest rates, implementing emergency support measures for funding markets, and either restarting or increasing quantitative easing programs in order to support economies and the financial system. Across our key markets, governments and central banks are expected to continue to work together to ensure that households and firms receive an appropriate level of financial support until restrictions on economic activity and mobility can be materially eased. Such support will ensure that labour and housing markets do not experience abrupt, negative corrections and will also limit the extent of long term structural damage to economies.

Differences across markets in the speed and scale of economic recovery in the Central scenario reflect timing differences in the progression of the Covid-19 outbreak, differences in restrictions imposed, the coverage achieved by vaccination programmes and the scale of support measures.

The key features of our Central scenario are:

- Growth in economic activity in 2021, supported by a successful rollout of vaccination programmes across our key markets. We expect vaccination programmes, coupled with effective non-pharmacological measures to contain the virus ('track and trace' systems and restrictions to mobility) to lead to a significant decline in infections across our key markets by the end of the third quarter of 2021.
- Where fiscal support schemes are available, they will limit the increase in the unemployment rate in 2021. We expect a gradual reversion of the unemployment rate to pre-crisis levels over the course of the projection period as a result of economic recovery and due to the orderly withdrawal of fiscal support.
- Inflation will converge towards central bank targets in our key markets.
- In advanced economies, fiscal support in 2020 led to large deficits and a significant increase in public debt. Fiscal support is expected to continue as needed and deficits are expected to reduce gradually over the projection period. Sovereign debt levels will remain high and our central scenario does not assume fiscal austerity.
- Policy interest rates in key markets will remain at current levels for an extended period and will increase very modestly towards the end of our projection period. Central banks will continue to provide assistance through their asset purchase programmes as needed.
- The West Texas Intermediate oil price is forecast to average US$43 per barrel over the projection period.

The following table describes key macroeconomic variables and the probabilities assigned in the consensus Central scenario.

Central scenario (2021–2025)

	Hong Kong	Mainland China
	%	%
GDP growth rate (annual average)		
2020	**(6.4)**	**2.0**
2021	**4.3**	**7.8**
2022	**2.9**	**5.3**
2023	**2.6**	**5.2**
5 Year Average	**2.9**	**5.6**
Unemployment rate (annual average)		
2020	**5.8**	**3.9**
2021	**5.0**	**4.1**
2022	**3.9**	**4.2**
2023	**3.8**	**4.1**
5 Year Average	**4.0**	**4.0**
House Price growth (annual average)		
2020	**(0.8)**	**2.3**
2021	**(2.2)**	**4.7**
2022	**2.4**	**5.7**
2023	**5.2**	**5.0**
5 Year Average	**2.3**	**4.7**
Short term interest rate (annual		
2020:	**1.2**	**3.2**
2021:	**1.0**	**2.9**
2022	**1.1**	**3.0**
2023	**1.2**	**3.1**
5 Year Average	**1.3**	**3.1**
Probability	**70.0**	**80.0**

The consensus Upside scenario

Compared to the consensus Central scenario, the consensus Upside scenario features a faster recovery in economic activity during the first two years, before converging to long-run trends.

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 prompt deployment of a vaccine;
- De-escalation of tensions between the US and China;
- De-escalation of political tensions in Hong Kong; and
- Continued support from fiscal and monetary policy.

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	**13.8 (4Q21)**	**20.5 (1Q21)**
Unemployment rate	**3.0 (3Q22)**	**3.9 (4Q21)**
House price growth	**4.9 (1Q22)**	**12.2 (1Q22)**
Short-term interest rate	**1.1 (1Q21)**	**3.0 (1Q21)**
Probability	**5.0**	**10.0**

Note: Extreme point in the consensus Upside is 'best outcome' in the scenario, i.e. highest GDP growth, lowest unemployment rate etc, in first two years of the scenario.

Downside Scenarios

2021 is expected to be a year of economic recovery, but the progression and management of the pandemic presents a key risk to global growth.

- A new and more contagious strain of the virus increases the transmission rate in the UK and resulted in stringent restrictions to mobility towards the year end.
- This viral strain observed in the UK, together with aggressive strains observed in other countries including South Africa and Brazil, introduce the risk that transmission may increase significantly within the national borders of a number of countries in 2021 and also raise concerns around the efficacy of vaccines as the virus mutates.
- Some countries may keep significant restrictions to mobility in place for an extended period of time and at least until critical segments of the population can be inoculated. Further risks to international travel also arise for international hubs such as Hong Kong.

A number of vaccines have been developed and approved for use at a rapid pace and plans to inoculate significant proportions of national populations in 2021 across many of our key markets are a clear positive for economic recovery. While we expect vaccination programmes to be successful, governments and healthcare authorities face specific challenges that could affect the speed and spread of vaccinations. These challenges include:

- The logistics of inoculating a significant proportion of populations within a limited time-frame and the public acceptance of vaccines.
- On a global level, supply challenges could affect the pace of roll out and the efficacy of vaccines is yet to be determined.

Government support programmes in advanced economies in 2020 were supported by accommodative actions taken by central banks.

- These measures by governments and central banks 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:

- The potential for increased tensions between the US and mainland China: the outcome of the 2020 Presidential election in the US signals a more orderly conduct of relations between the US and mainland China in the future but long term differences between the two nations remain, which could affect sentiment and restrict global economic activity.
- Social and political unrest in Hong Kong: mobility restrictions to combat the spread of Covid-19 and the passage of the National Security Law in 2020 significantly reduced the scale of protests. As Covid-19 diminishes as a threat, such unrest has the potential to return.

The consensus Downside scenario

In the consensus Downside scenario, economic recovery is considerably weaker compared to the Central scenario:

- GDP growth remains weak;
- Unemployment rates stay elevated; and
- Asset and commodity prices fall before gradually recovering towards their long-run trends.

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. 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	**-2.1 (3Q21)**	**-1.3 (4Q21)**
Unemployment rate	**6.4 (1Q21)**	**4.3 (3Q22)**
House price growth	**-6.8 (3Q21)**	**0.3 (4Q21)**
Short-term interest rate	**1.1 (4Q22)**	**2.8 (1Q21)**
Probability	**20.0**	**8.0**

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 (2021Q1-2022Q4).

The Additional Downside scenario

An additional Downside scenario which features a global recession, has been created to reflect management's view of severe risks:

- Infections rise in 2021 and setbacks to vaccine programmes imply that successful roll out of vaccines only occurs towards the end of 2021 and it takes until the end of 2022 for the pandemic to come to an end.
- Governments and central banks are unable to significantly increase fiscal and monetary programmes which results in abrupt corrections in labour and asset markets.

The following table describes key macroeconomic variables and the probabilities assigned in the additional Downside scenario.

Additional Downside scenario worst outcome

	Hong Kong	Mainland China
	%	%
GDP growth rate	**-8.3 (4Q21)**	**-9.5 (4Q21)**
Unemployment rate	**6.7 (3Q21)**	**6.1 (3Q22)**
House price growth	**-21.0 (4Q21)**	**-19.4 (4Q21)**
Short-term interest rate	**1.3 (1Q21)**	**4.0 (2Q21)**
Probability	**5.0**	**2.0**

Note: Extreme point in the additional Downside is 'worst outcome' in the scenario, i.e. lowest GDP growth, highest unemployment rate etc, in first two years of the scenario (2021Q1-2022Q4).

In considering economic uncertainty and assigning probabilities to scenarios, management has considered both global and local specific factors. This has led management to assigning scenario probabilities that are tailored to our view of uncertainty in individual markets.

To inform our view, management have considered trends in the progression and response to the virus in individual markets, the expected reach and efficacy of vaccine roll-outs over the course of 2021, the size and effectiveness of future government support schemes and the connectivity with other countries. Management has also been guided by the actual response to the Covid-19 outbreak and by the economic experience across countries in 2020. China's visible success at containing the virus and its repeated rapid response to localised outbreaks, coupled with government support programmes and clear signs of economic recovery, have led management to conclude that the economic outlook for mainland China is the least volatile out of all our key markets.

The weights assigned for mainland China reflect this outlook with a probability of 80% for the Central scenario and a total of 10% across the two downside scenarios. The weights assigned to Asian markets excluding Hong Kong and mainland China remain unchanged at 70% for the Central scenario and a total of 20% across the two downside scenarios. The weights assigned to Hong Kong are 70% for the Central scenario and a total of 25% across the two downside scenarios.

Uncertainty related to the continued impact of the pandemic and the ability of governments to control its spread via restrictions and vaccinations over the course of 2021 also play a prominent role in assigning scenario weights to other markets.

Critical accounting estimates and judgements

The calculation of ECL under HKFRS 9 involves significant judgements, assumptions and estimates. The level of estimation uncertainty and judgement has increased during 2020 as a result of the economic effects of the Covid-19 outbreak, 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 very 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 outbreak. 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, or have extended those deferrals, given limitations in the available credit information on these customers. The use of segmentation techniques for indicators of significant increases in credit risk involves significant estimation uncertainty.

How economic scenarios are reflected in the wholesale calculation of ECL

The Group has developed a globally consistent methodology for the application of forward economic guidance into the calculation of ECL by incorporating forward economic guidance into 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.

These models are based largely on historical observations and correlations with default rates. Management judgemental adjustments are described below.

How economic scenarios are reflected in the retail calculation of ECL

The Group has developed and implemented a globally consistent methodology for incorporating forward economic guidance into ECL estimates. The impact of economic scenarios on PD is modelled at a portfolio level. Historic 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 underlying 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 historic 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 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. In the *Annual Report and Accounts 2019*, these were described as 'Post model adjustments'.

The most severe projections at 31 December 2020 of macroeconomic variables are outside the historical observations on which HKFRS 9 models have been built and calibrated to operate. Moreover, the complexities of governmental support programmes, the impacts on customer behaviours and the unpredictable nature of the pandemic have never been modelled. Consequently, the group's HKFRS 9 models, in some cases, generate outputs that appear implausible when compared with other economic and credit metrics. Governmental support programmes and customer payment reliefs have dislocated the correlation between economic conditions and defaults on which models are based. Management judgemental adjustments are required to ensure that an appropriate amount of ECL impairment is recognised.

Internal governance is in place to regularly monitor management judgemental adjustments and, where possible, to reduce the reliance on these through model recalibration or redevelopment, as appropriate. During 2020, the composition of modelled ECL and management judgemental adjustments changed significantly, reflecting the path of the pandemic containment efforts and government support measures, and this is expected to continue to be the case until economic conditions improve. Wider-ranging model changes will take time to develop and need more real data on which models can be developed. Models will be revisited over time once the full impacts of Covid-19 are observed.

Management judgemental adjustments made in estimating the reported ECL at 31 December 2020 are set out in the following table. The table includes adjustments in relation to data and model limitations resulting from the pandemic, and as a result of the regular process of model development and implementation. It shows the adjustments applicable to the scenario-weighted ECL numbers. Adjustments in relation to Downside scenarios are more significant, as results are subject to greater uncertainty.

Management judgemental adjustments to ECL[1]

	Retail HK$bn	Wholesale HK$bn	Total HK$bn
Low-risk counterparties (banks, sovereigns and government entities)[2]	**0.21**	**0.03**	**0.24**
Corporate lending adjustments		**2.99**	**2.99**
Retail lending adjustments	**1.15**		**1.15**
Retail model default suppression adjustment	**1.31**		**1.31**
Total	**2.67**	**3.02**	**5.69**

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.*

During 2020, management judgemental adjustments reflected the volatile economic conditions associated with the Covid-19 pandemic. The composition of modelled ECL and management judgemental adjustments changed significantly over 2020 as certain economic measures, such as GDP growth rate, passed the expected low point in a number of key markets and returned towards those reflected in modelled relationships, subject to continued uncertainty in the recovery paths of different economies.

ECL Wholesale adjustments were undertaken in the fourth quarter of 2020 totalling an increase of HK$3bn, versus a decrease in second quarter of 2020 of HK$10bn. This change came mainly through the improvement in FEG and implementation of model enhancements in Hong Kong, mainland China and Australia to address previous model limitations relating to PD projections under extreme scenarios. The effect of these model changes was a significant reduction in ECL in the alternative Downside scenario.

Adjustments to corporate exposures principally reflect the outcome of management judgements for high-risk and vulnerable sectors, supported by credit experts input, quantitative analyses and benchmarks. Considerations include potential default suppression in some sectors due to government intervention and late-breaking (idiosyncratic) developments.

At 31 December 2020, retail management judgemental adjustments led to an ECL increase of HK$2.7bn, primarily from additional ECL of HK$1.3bn to reflect adjustments to the timing of default which has been delayed by government support and customer relief measures on potential defaults. Retail lending adjustments of HK$1.2bn address areas such as customer relief, vulnerable segments and data limitations.

Adjustments under low-risk counterparties are from modelled numbers on the insurance portfolio as a result of the overall credit expert best estimates ('CEBE') process.

The retail model default suppression adjustment was applied as defaults remain temporarily suppressed due to government support and customer relief programmes which have supported stabilised portfolio performance. Retail models are reliant on the assumption that as macroeconomic conditions deteriorate, defaults will crystallise. This adjustment aligns the increase in default due to change in economic conditions to the period of time when defaults are expected to be observed. The retail model default suppression adjustment will be monitored and updated prospectively to ensure appropriate alignment with expected performance taking into consideration the levels and timing of government support and customer relief programmes.

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 actual ECL outcomes. The impact of defaults that might occur in future under different economic scenarios is captured by recalculating ECL for loans in stages 1 and 2 at the balance sheet date. The population of stage 3 loans (in default) at the balance sheet date is unchanged in these sensitivity calculations. Stage 3 ECL would only be sensitive to changes in forecasts of future economic conditions if the LGD of a particular portfolio was sensitive to these changes.

There is a particularly high degree of estimation uncertainty in numbers representing tail 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. 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 insurance business and small portfolios. In both the wholesale and retail analysis, the comparative period results for 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 conditions[1]

	Hong Kong	Mainland China
ECL coverage of financial instruments subject to significant measurement uncertainty at 31 December 2020[2]	**HK$m**	**HK$m**
Reported ECL	**3,675**	**897**
Consensus scenarios		
Central scenario	**3,009**	**718**
Upside scenario	**1,638**	**217**
Downside scenario	**5,208**	**1,954**
Alternative scenario	**10,568**	**8,979**

HKFRS 9 ECL sensitivity to future economic conditions[1]

	Hong Kong	Mainland China
ECL coverage of financial instruments subject to significant measurement uncertainty at 31 December 2019[2]	HK$m	HK$m
Reported ECL	2,555	966
Consensus scenarios		
Central scenario	1,895	919
Upside scenario	1,877	740
Downside scenario	1,901	826
Alternative scenarios		
Asia-Pacific alternative Downside scenario 1	4,284	1,168
Asia-Pacific alternative Downside scenario 2	5,452	N/A

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 2020, the most significant level of ECL sensitivity was observed in Hong Kong. This higher sensitivity was largely driven by significant exposure and more severe impacts of the Downside Scenarios relative to the Central scenario.

Retail analysis

HKFRS 9 ECL sensitivity to future economic conditions[1]

	Reported ECL	Central Scenario	Upside Scenario	Downside Scenario	Alternative Scenarios
ECL coverage of loans and advances to customers	**HK$m**	**HK$m**	**HK$m**	**HK$m**	**HK$m**
At 31 December 2020[2]					
Hong Kong	**2,959**	**2,822**	**2,711**	**3,043**	**4,153**
At 31 December 2019[2]					
Hong Kong	2,718	2,306	2,197	2,383	4,128

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.*

ECL sensitivities demonstrate an increase from 31 December 2019, driven by a significant increase in reported expected credit losses due to the global Covid-19 pandemic.

Reconciliation of changes in gross carrying/nominal amount and allowances for placings with and advances to banks and loans and advances to 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 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	ECL charge
	HK$m	HK$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)

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 2019	5,190,396	(3,339)	213,434	(3,849)	19,836	(9,772)	721	(279)	5,424,387	(17,239)
Transfers of financial instruments:	(199,043)	(1,999)	192,106	2,829	6,937	(830)	–	–	–	–
– transfers from stage 1 to stage 2	(424,655)	904	424,655	(904)	–	–	–	–	–	–
– transfers from stage 2 to stage 1	227,072	(2,849)	(227,072)	2,849	–	–	–	–	–	–
– transfers to stage 3	(1,987)	48	(6,513)	1,056	8,500	(1,104)	–	–	–	–
– transfers from stage 3	527	(102)	1,036	(172)	(1,563)	274	–	–	–	–
Net remeasurement of ECL arising from transfer of stage	–	1,657	–	(1,887)	–	(215)	–	–	–	(445)
New financial assets originated and purchased	1,655,668	(1,347)	–	–	–	–	555	–	1,656,223	(1,347)
Assets derecognised (including final repayments)	(1,132,107)	274	(77,234)	590	(4,991)	1,078	(18)	–	(1,214,350)	1,942
Changes to risk parameters – further lending/repayment	(104,136)	757	3,871	289	850	363	(152)	7	(99,567)	1,416
Changes in risk parameters – credit quality	–	207	–	(2,880)	–	(4,989)	–	(64)	–	(7,726)
Changes to model used for ECL calculation	–	(50)	–	39	–	113	–	–	–	102
Assets written off	–	–	–	–	(4,842)	4,842	(41)	41	(4,883)	4,883
Credit-related modifications that resulted in derecognition	–	–	–	–	(980)	394	–	–	(980)	394
Foreign exchange	(7,733)	16	(479)	(2)	63	(37)	(2)	(1)	(8,151)	(24)
Others	(19,395)	(15)	3	(3)	(98)	21	89	(4)	(19,401)	(1)
At 31 Dec 2019	5,383,650	(3,839)	331,701	(4,874)	16,775	(9,032)	1,152	(300)	5,733,278	(18,045)
ECL income statement charge for the year										(6,058)
Recoveries										863
Others										(197)
Total ECL income statement charge for the year										(5,392)

	At 31 Dec 2019		Year ended 31 Dec 2019
	Gross carrying/nominal amount	Allowance for ECL	ECL charge
	HK$m	HK$m	HK$m
As above	5,733,278	(18,045)	(5,392)
Other financial assets measured at amortised cost	1,540,963	(341)	(134)
Non-trading reverse repurchase agreement commitments	5,093	–	–
Performance and other guarantees not considered for HKFRS 9	N/A	N/A	(123)
Amounts due from Group companies	85,385	–	–
Summary of financial instruments to which the impairment requirements in HKFRS 9 are applied/Summary consolidated income statement	7,364,719	(18,386)	(5,649)
Debt instruments measured at FVOCI	1,457,362	(64)	(23)
Total allowance for ECL/total income statement ECL charge for the year	N/A	(18,450)	(5,672)

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 below.

Distribution of financial instruments by credit quality at 31 December 2020

(Audited)

	Gross carrying/notional amount							
	Strong	Good	Satisfactory	Sub-standard	Credit impaired	Total	Allowance for ECL	Net
	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.*

Distribution of financial instruments by credit quality at 31 December 2019 (continued)

(Audited)

	Gross carrying/notional amount							
	Strong	Good	Satisfactory	Sub-standard	Credit impaired	Total	Allowance for ECL	Net
	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	1,997,523	946,831	755,183	21,067	17,665	3,738,269	(17,394)	3,720,875
– personal	1,173,323	138,094	81,345	4,419	5,575	1,402,756	(5,703)	1,397,053
– corporate and commercial	707,662	731,917	617,079	16,602	11,938	2,085,198	(11,288)	2,073,910
– non-bank financial institutions	116,538	76,820	56,759	46	152	250,315	(403)	249,912
Loans and advances to banks	308,236	19,338	1,357	3	—	328,934	(29)	328,905
Cash and balances at central banks	197,770	3,946	1,031	—	—	202,747	(1)	202,746
Items in the course of collection from other banks	21,140	—	—	—	—	21,140	—	21,140
Hong Kong Government certificates of indebtedness	298,944	—	—	—	—	298,944	—	298,944
Reverse repurchase agreements – non-trading	286,338	99,555	36,440	—	—	422,333	—	422,333
Financial investments held at amortised cost	382,384	46,887	5,252	—	—	434,523	(223)	434,300
Prepayments, accrued income and other assets	82,725	38,627	38,922	833	169	161,276	(117)	161,159
Debt instruments measured at fair value through other comprehensive income[1]	1,382,729	60,202	9,301	—	—	1,452,232	(64)	1,452,168
Out-of-scope for HKFRS 9 impairment								
Trading assets	378,656	39,057	26,683	905	—	445,301	–	445,301
Other financial assets designated and otherwise mandatorily measured at fair value through profit or loss	22,850	3,702	3,174	—	—	29,726	—	29,726
Derivatives	168,448	44,520	3,336	41	—	216,345	—	216,345
Total gross carrying amount on-balance sheet	5,527,743	1,302,665	880,679	22,849	17,834	7,751,770	(17,828)	7,733,942
Percentage of total credit quality	71%	17%	12%	0%	0%	100%		
Loan and other credit related commitments	1,639,786	678,914	415,286	13,650	303	2,747,939	(561)	2,747,378
Financial guarantee and similar contracts	113,138	108,045	71,562	3,222	324	296,291	(213)	296,078
Total nominal off-balance sheet amount	1,752,924	786,959	486,848	16,872	627	3,044,230	(774)	3,043,456

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

(Audited)

	Gross carrying/notional amount							
	Strong	Good	Satisfactory	Sub-standard	Credit impaired	Total	Allowance for ECL	Net
	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.*

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							
	Strong	Good	Satisfactory	Sub standard	Credit impaired	Total	Allowance for ECL	Net
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
Loans and advances to banks	308,236	19,338	1,357	3	—	328,934	(29)	328,905
– stage 1	307,968	19,313	1,071	3	—	328,355	(26)	328,329
– stage 2	268	25	286	—	—	579	(3)	576
– stage 3	—	—	—	—	—	—	—	—
– POCI	—	—	—	—	—	—	—	—
Loans and advances to customers at amortised cost	1,997,523	946,831	755,183	21,067	17,665	3,738,269	(17,394)	3,720,875
– stage 1	1,990,700	859,196	569,372	4,688	—	3,423,956	(3,480)	3,420,476
– stage 2	6,823	87,635	185,811	16,253	—	296,522	(4,615)	291,907
– stage 3	—	—	—	—	16,639	16,639	(8,999)	7,640
– POCI	—	—	—	126	1,026	1,152	(300)	852
Other financial assets measured at amortised cost	1,269,301	189,015	81,645	833	169	1,540,963	(341)	1,540,622
– stage 1	1,266,894	185,925	77,914	177	—	1,530,910	(214)	1,530,696
– stage 2	2,407	3,090	3,731	656	—	9,884	(77)	9,807
– stage 3	—	—	—	—	167	167	(50)	117
– POCI	—	—	—	—	2	2	—	2
Loan and other credit-related commitments	1,246,440	285,938	94,436	3,087	104	1,630,005	(560)	1,629,445
– stage 1	1,244,851	273,593	81,601	1,889	—	1,601,934	(303)	1,601,631
– stage 2	1,589	12,345	12,835	1,198	—	27,967	(236)	27,731
– stage 3	—	—	—	—	104	104	(21)	83
– POCI	—	—	—	—	—	—	—	—
Financial guarantees	10,520	16,774	12,860	976	33	41,163	(62)	41,101
– stage 1	10,224	15,108	9,069	95	—	34,496	(29)	34,467
– stage 2	296	1,666	3,791	881	—	6,634	(20)	6,614
– stage 3	—	—	—	—	33	33	(13)	20
– POCI	—	—	—	—	—	—	—	—
At 31 Dec 2019	4,832,020	1,457,896	945,481	25,966	17,971	7,279,334	(18,386)	7,260,948
Debt instruments at FVOCI[1]								
– stage 1	1,382,708	60,180	9,301	—	—	1,452,189	(64)	1,452,125
– stage 2	21	22	—	—	—	43	—	43
– stage 3	—	—	—	—	—	—	—	—
– POCI	—	—	—	—	—	—	—	—
At 31 Dec 2019	1,382,729	60,202	9,301	—	—	1,452,232	(64)	1,452,168

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.*

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 unlikeliness 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 2020. 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 2020, the gross carrying value of loans to personal customers under relief was HK$19.9bn (the first half of 2020: HK$55.8bn). This comprised HK$16.4bn in relation to mortgages (the first half of 2020: HK$39.0bn) and HK$3.6bn in relation to other personal lending (the first half of 2020: HK$16.7bn). The decrease in personal customer relief during the second half of the year was driven by customers exiting relief measures. The gross carrying value of loans to wholesale customers under relief was HK$91.8bn (the first half of 2020: HK$212.9bn). 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 2020.

Personal lending

Extant at 31 December 2020		Hong Kong	Other markets[1]	Total
Market-wide schemes				
Number of accounts in mortgage customer relief	000s	–	6	6
Drawn loan value of accounts in mortgage customer relief	HK$m	–	7,518	7,518
Number of accounts in other personal lending customer relief	000s	–	37	37
Drawn loan value of accounts in other personal lending customer relief	HK$m	–	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$m	8,713	128	8,841
Number of accounts in other personal lending customer relief	000s	1	5	6
Drawn loan value of accounts in other personal lending customer relief	HK$m	582	196	778
Total personal lending under market-wide schemes and HSBC-specific measures				
Number of accounts in mortgage customer relief	000s	3	6	9
Drawn loan value of accounts in mortgage customer relief	HK$m	8,713	7,646	16,359
Number of accounts in other personal lending customer relief	000s	1	42	43
Drawn loan value of accounts in other personal lending customer relief	HK$m	582	3,014	3,596
Market-wide schemes and HSBC-specific measures - mortgage relief as a proportion of total mortgages	%	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	%	0.2	2.7	1.0

Wholesale lending

Extant at 31 December 2020		Hong Kong	Other markets	Total
Market-wide schemes				
Number of customers under market-wide measures	000s	3	–	3
Drawn loan value of customers under market-wide schemes	HK$m	82,356	5,178	87,534
HSBC-specific measures				
Number of customers under HSBC-specific measures	000s	–	–	–
Drawn loan value of customers under HSBC-specific measures	HK$m	1	4,295	4,296
Total wholesale lending under market-wide schemes and HSBC-specific measures				
Number of customers	000s	3	–	3
Drawn loan values	HK$m	82,357	9,473	91,830
Market-wide schemes and HSBC-specific measures as a proportion of total wholesale lending loans and advances	%	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 Singapore, Malaysia and Australia.*

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.

Wholesale

Pre-approved Principal Payment Holiday Scheme for Corporate Customers enables eligible customers to apply for a payment holiday of six months (or 90 days for trade finance) with no change to the existing interest rate charge. On 2 September 2020, the Hong Kong Monetary Authority announced that this scheme had been extended for a further six months to April 2021.

Retail

Customer relief granted on Hong Kong mortgages consists of deferred principal repayment of up to 12 months. This relief programme is available to existing HSBC mortgage loan customers who have a good repayment record in the past six months.

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

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.

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)

	2020		2019	
	Gross carrying/ nominal amount	**ECL coverage**	Gross carrying/ nominal amount	ECL coverage
	HK$m	**%**	HK$m	%
Stage 1				
Fully collateralised	**1,124,513**	**0.0**	1,044,885	0.0
LTV ratio:				
– less than 70%	**940,033**	**0.0**	914,665	0.0
– 71% to 90%	**148,242**	**0.0**	108,813	0.0
– 91% to 100%	**36,238**	**0.0**	21,407	0.0
Partially collateralised (A):	**2,852**	**0.0**	2,525	0.0
– *collateral value on A*	***2,762***		*2,445*	
Total	**1,127,365**	**0.0**	1,047,410	0.0
Stage 2				
Fully collateralised	**26,554**	**0.6**	26,748	0.3
LTV ratio:				
– less than 70%	**22,045**	**0.4**	19,430	0.1
– 71% to 90%	**4,059**	**1.4**	6,743	0.7
– 91% to 100%	**450**	**2.0**	575	2.3
Partially collateralised (B):	**116**	**3.4**	151	6.6
– *collateral value on B*	***111***		*139*	
Total	**26,670**	**0.6**	26,899	0.4
Stage 3				
Fully collateralised	**4,556**	**6.4**	1,997	6.9
LTV ratio:				
– less than 70%	**3,185**	**4.7**	1,433	3.4
– 71% to 90%	**1,245**	**8.8**	422	13.5
– 91% to 100%	**126**	**25.4**	142	22.5
Partially collateralised (C):	**119**	**52.1**	97	59.8
– *collateral value on C*	***103***		*85*	
Total	**4,675**	**7.5**	2,094	9.4
At 31 Dec	**1,158,710**	**0.1**	1,076,403	0.0

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 CRR 1–7, local valuation policies determine the frequency of review on the basis of local market conditions because of the complexity of valuing collateral for commercial real estate. For CRR 8–10, almost all collateral would have been revalued within the last three years. 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)

	2020		2019	
	Gross carrying nominal amount	**ECL coverage**	Gross carrying/ nominal amount	ECL coverage
	HK$m	**%**	HK$m	%
Stage 1				
Not collateralised	**303,890**	**0.0**	344,010	0.0
Fully collateralised	**321,650**	**0.1**	387,796	0.1
Partially collateralised (A):	**20,941**	**0.3**	27,155	0.1
– *collateral value on A*	***12,163***		*15,724*	
Total	**646,481**	**0.1**	758,961	0.1
Stage 2				
Not collateralised	**23,644**	**0.1**	5,326	0.9
Fully collateralised	**73,991**	**0.6**	17,781	1.0
Partially collateralised (B):	**3,092**	**1.3**	589	0.3
– *collateral value on B*	***1,315***		*423*	
Total	**100,727**	**0.5**	23,696	1.0
Stage 3				
Not collateralised	**–**	**–**	–	–
Fully collateralised	**298**	**6.4**	165	9.1
Partially collateralised (C):	**–**	**–**	–	–
– *collateral value on C*	**–**		–	
Total	**298**	**6.4**	165	9.1
POCI				
Not collateralised	**–**	**–**	–	–
Fully collateralised	**–**	**–**	–	–
Partially collateralised (D):	**–**	**–**	–	–
– *collateral value on D*	**–**		–	
Total	**–**	**–**	–	–
At 31 Dec	**747,506**	**0.1**	782,822	0.1

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)

	2020		2019	
	Gross carrying/ nominal amount	ECL coverage	Gross carrying/ nominal amount	ECL coverage
	HK$m	%	HK$m	%
Stage 1				
Not collateralised	**1,918,586**	**0.1**	2,164,436	0.1
Fully collateralised	**398,232**	**0.1**	345,386	0.1
Partially collateralised (A):	**242,375**	**0.1**	242,433	0.1
– *collateral value on A*	***103,582***		*103,251*	
Total	**2,559,193**	**0.1**	2,752,255	0.1
Stage 2				
Not collateralised	**294,547**	**0.4**	191,455	0.6
Fully collateralised	**129,799**	**0.9**	108,229	0.6
Partially collateralised (B):	**40,104**	**1.1**	37,016	0.3
– *collateral value on B*	***19,214***		*16,629*	
Total	**464,450**	**0.6**	336,700	0.6
Stage 3				
Not collateralised	**16,948**	**75.1**	6,815	78.4
Fully collateralised	**3,555**	**18.4**	2,005	46.0
Partially collateralised (C):	**7,753**	**31.8**	2,353	60.5
– *collateral value on C*	***4,171***		*1,046*	
Total	**28,256**	**56.1**	11,173	68.8
POCI				
Not collateralised	**506**	**36.4**	706	11.5
Fully collateralised	**348**	**51.4**	200	0.5
Partially collateralised (D):	**–**	**–**	246	88.6
– *collateral value on D*	**–**		*233*	
Total	**854**	**42.5**	1,152	26.0
At 31 Dec	**3,052,753**	**0.7**	3,101,280	0.4

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

Capital

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 development of our business 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, 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:

- economic capital is the internally calculated capital requirement to support risks to which we are exposed and forms a core part of the internal capital adequacy assessment process; and
- regulatory capital is the capital which we are required to hold in accordance with the rules established 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.

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.

Externally imposed capital requirements

(Unaudited)

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 current exposure method and an internal models approach to calculate its default risk exposures.

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 externally imposed 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 2020, 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 16 March 2020, the HKMA reduced the CCyB for Hong Kong to 1% from 2%. On 30 December 2020, the HKMA maintained the D-SIB designation as well as HLA requirement at 2.5% for the group.

In December 2018, the Financial Institutions (Resolution) (Loss-absorbing Capacity Requirements – Banking Sector) Rules ('LAC') in Hong Kong were passed into legislation, with transition periods provided for their implementation. The group is classified as a material subsidiary under the LAC 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 2020	31 Dec 2019
	%	%
Leverage ratio	**6.4**	6.7
Capital and leverage ratio exposure measure	**HK$m**	HK$m
Tier 1 capital	**555,553**	537,460
Total exposure measure	**8,705,672**	8,078,204

The decrease in the leverage ratio from 31 December 2019 to 31 December 2020 was mainly due to the rise in the exposure measure, partly offset by an increase in Tier 1 capital.

Further details regarding the group's leverage position can be viewed in the Banking Disclosure Statement 2020, which will be available in the Regulatory Disclosure Section of our website: www.hsbc.com.hk.

Capital adequacy at 31 December 2020

(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 2020. 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 2020, the effect of this requirement is to reduce the amount of reserves which can be distributed to shareholders by HK$18,063m (31 December 2019: HK$23,979m).

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, over which there remains a significant degree of uncertainty due to the number of national discretions within Basel's reforms. It remains premature to provide details of an impact although we currently anticipate the potential for an increase in RWAs, driven by the output floor.

Capital ratios

(Unaudited)

	At	
	31 Dec 2020	31 Dec 2019
	%	%
Common equity tier 1 ('CET1') capital ratio	**17.2**	17.2
Tier 1 capital ratio	**18.8**	18.8
Total capital ratio	**20.8**	21.0

Risk-weighted assets by risk type

(Unaudited)

	At	
	31 Dec 2020	31 Dec 2019
	HK$m	HK$m
Credit risk	**2,378,821**	2,318,266
Counterparty credit risk	**113,650**	79,758
Market risk	**107,661**	97,908
Operational risk	**356,861**	355,448
Total	**2,956,993**	2,851,380

Risk-weighted assets by global business

(Unaudited)

	At	
	31 Dec 2020	31 Dec 2019
	HK$m	HK$m
Wealth and Personal Banking	**583,078**	567,320
Commercial Banking	**1,072,171**	1,043,521
Global Banking and Markets	**944,943**	912,550
Corporate Centre	**356,801**	327,989
Total	**2,956,993**	2,851,380

Capital base

(Unaudited)

The following table sets out the composition of the group's capital base under Basel III at 31 December 2020.

Capital base

(Unaudited)

	At	
	31 Dec 2020	31 Dec 2019
	HK$m	HK$m
Common equity tier 1 ('CET1') capital		
Shareholders' equity	**712,119**	690,104
– shareholders' equity per balance sheet	**845,353**	814,678
– revaluation reserve capitalisation issue	**(1,454)**	(1,454)
– other equity instruments	**(44,615)**	(44,615)
– unconsolidated subsidiaries	**(87,165)**	(78,505)
Non-controlling interests	**27,907**	27,459
– non-controlling interests per balance sheet	**66,178**	64,603
– non-controlling interests in unconsolidated subsidiaries	**(10,801)**	(10,316)
– surplus non-controlling interests disallowed in CET1	**(27,470)**	(26,828)
Regulatory deductions to CET1 capital	**(230,574)**	(225,922)
– valuation adjustments	**(1,648)**	(1,554)
– goodwill and intangible assets	**(23,276)**	(20,132)
– deferred tax assets net of deferred tax liabilities	**(3,273)**	(2,214)
– cash flow hedging reserve	**(33)**	41
– changes in own credit risk on fair valued liabilities	**1,814**	2,013
– defined benefit pension fund assets	**(12)**	(45)
– significant Loss-absorbing capacity ('LAC') investments in unconsolidated financial sector entities	**(119,868)**	(105,426)
– property revaluation reserves[1]	**(66,215)**	(74,626)
– regulatory reserve	**(18,063)**	(23,979)
Total CET1 capital	**509,452**	491,641
Additional tier 1 ('AT1') capital		
Total AT1 capital before regulatory deductions	**46,101**	45,819
– perpetual subordinated loans	**44,615**	44,615
– allowable non-controlling interests in AT1 capital	**1,486**	1,204
Total AT1 capital	**46,101**	45,819
Total tier 1 capital	**555,553**	537,460
Tier 2 capital		
Total tier 2 capital before regulatory deductions	**66,717**	68,340
– perpetual subordinated debt[2]	**3,101**	3,114
– term subordinated debt	**15,698**	14,839
– property revaluation reserves[1]	**30,451**	34,236
– impairment allowances and regulatory reserve eligible for inclusion in tier 2 capital	**16,451**	16,151
– allowable non-controlling interests in tier 2 capital	**1,016**	—
Regulatory deductions to tier 2 capital	**(7,725)**	(6,866)
– significant LAC investments in unconsolidated financial sector entities	**(7,725)**	(6,866)
Total tier 2 capital	**58,992**	61,474
Total capital	**614,545**	598,934

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 2020.

Structural foreign exchange exposures

(Unaudited)

Structural foreign exchange exposures represent net investments in subsidiaries, branches and associates, the functional currencies of which are currencies other than the HK 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'.

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 exposures only in limited circumstances.

The group had the following structural foreign currency exposures that were not less than 10% of the total net structural foreign currency positions:

	LCYm	HK$m equivalent
At 31 Dec 2020		
Renminbi	**210,707**	**250,116**
At 31 Dec 2019		
Renminbi	201,509	225,392

Liquidity and funding risk

(Audited)

Overview

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 maintains a comprehensive liquidity and funding risk management framework ('LFRF'), which aims to allow us to withstand severe but plausible liquidity stresses. It is based on global policies that are designed to be adaptable to different business models, markets and regulations. The LFRF comprises policies, metrics and controls designed to ensure that group and entity management has oversight of our liquidity and funding risks in order to manage them appropriately.

The Group manages liquidity and funding risk at an operating entity (as defined in LFRF) level to ensure 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.

Structure and organisation

Asset, Liability and Capital Management ('ALCM') teams are responsible for the application of the LFRF at a local operating entity level. The elements of the LFRF are underpinned by a robust governance framework, the two major elements of which are:

- Asset and Liability Management Committees ('ALCOs') at the group and entity level; and
- annual individual liquidity adequacy assessment ('ILAA') used to validate risk tolerance and set risk appetite.

All operating entities are required to prepare an ILAA document at appropriate frequency. The final objective of the ILAA, approved by the relevant ALCOs, is to verify that the entity and subsidiaries maintain liquidity resources which are adequate in both amount and quality at all times, there is no significant risk that its liabilities cannot be met as they fall due, and a prudent funding profile is maintained.

The Board is ultimately responsible for determining the types and magnitude of liquidity risk that the group is able to take and ensuring that there is an appropriate organisation structure for managing this risk. Under authorities delegated by the Board, the group ALCO is responsible for managing all ALCM issues including liquidity and funding risk management. The group ALCO delegates to the group Tactical Asset and Liability Management Committee ('TALCO') the task of reviewing and monitoring operating entities' liquidity and funding positions.

Compliance with liquidity and funding requirements is monitored by local ALCO who report to the RMM and Executive Committee on a regular basis. This process includes:

- 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.

Governance

ALCM teams apply the LFRF at both an individual entity and group level, and are responsible for the implementation of Group-wide and local regulatory policy at a legal entity level. Markets Treasury has responsibility for cash and liquidity management.

Treasury Risk Management carry out independent review, challenge and assurance of the appropriateness of the risk management activities undertaken by ALCM and Markets Treasury. Their work includes setting control standards and advice on policy implementation.

Internal Audit provide independent assurance that risk is managed effectively.

Management of liquidity and funding risk

Funding and liquidity plans form part of the annual operating plan that is approved by the Board. The critical Board risk appetite measures are the liquidity coverage ratio ('LCR') and net stable funding ratio ('NSFR'). 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;
- a legal entity depositor concentration limit;
- three-month and 12-month cumulative rolling term contractual maturity limits covering deposits from banks, deposits from non-bank financial institutions and securities issued;
- a minimum LCR requirement by currency;
- intra-day liquidity;
- the application of liquidity funds transfer pricing; and
- forward-looking funding assessments.
- The LCR and NSFR metrics are to be supplemented by an internal liquidity metric in 2021.

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)

The LFRF 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 2020

(Unaudited)

The management of liquidity risk was enhanced during 2020 in response to the Covid-19 outbreak to ensure the Bank anticipated, monitored and responded to the impacts both at group and entity level.

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 2020	31 Dec 2019
	%	%
Average LCR	**172.1**	163.5

The liquidity position of the group remained strong in 2020. The average LCR increased by 8.6 percentage points from 163.5% for the quarter ended 31 December 2019 to 172.1% for the quarter ended 31 December 2020, mainly as a result of the increase in customer deposits.

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. From 1 January 2020, listed ordinary shares and triple-B rated marketable debt securities that meet HKMA requirements are also included in HQLA as Level 2B assets.

The total weighted amount of HQLA of the group for the period are as follows:

	Weighted amount (average value) at quarter ended	
	31 Dec 2020	31 Dec 2019
	HK$m	HK$m
Level 1 assets	**1,870,016**	1,528,908
Level 2A assets	**78,515**	80,174
Level 2B assets	**34,468**	10,788
Total	**1,982,999**	1,619,870

The NSFR of the group for the period are as follows:

	Quarter ended	
	31 Dec 2020	31 Dec 2019
	%	%
Net stable funding ratio	**159.3**	145.8

The funding position of the group remained robust in 2020, highlighting a surplus of stable funding relative to the required stable funding requirement. The NSFR increased by 13.5 percentage points from 145.8% for the quarter ended 31 December 2019 to 159.3% for the quarter ended 31 December 2020, mainly as a result of the increase in customer deposits.

Interdependent assets and liabilities included in the group's NSFR are certificates of indebtedness held and legal tender notes issued.

Further details of the group's liquidity information disclosures can be viewed in the Banking Disclosure Statement 2020.

Interest Rate Risk in the Banking Book

(Unaudited)

Interest Rate Risk in the Banking Book ('IRRBB') is the risk of an adverse impact to earnings or capital due to changes in interest rates that affect the Bank's banking book positions. The risk arises either from timing mismatches in the repricing of non-traded assets and liabilities, an imperfect correlation between changes in the rates earned and paid on different instruments with otherwise similar repricing characteristics; as well as from option derivative positions or from optional elements embedded in the Bank's assets, liabilities and/or off-balance sheet items, where the Bank or its customer can alter the level and timing of their cash flows. In its management of the risk, the group aims to mitigate the impact of future interest rate movements which could reduce future net interest income or its net worth, while balancing the cost of hedging activities to the current revenue stream. Monitoring the sensitivity of the projected net interest income and of the present value of expected net cash flows under varying interest rate scenarios is a key part of this.

In order to manage structural interest rate risk, non-traded assets and liabilities are transferred to Markets Treasury based on their repricing and maturity characteristics. For assets and liabilities with no defined maturity or repricing characteristics, behaviouralisation is used to assess the interest rate risk profile. Markets Treasury manage the banking book interest rate positions transferred to it within approved limits. Local ALCOs are responsible for monitoring and reviewing their overall structural interest rate risk position. Interest rate behaviouralisation policies have to be formulated in line with the group's behaviouralisation policies and approved at least annually by local ALCOs.

Sensitivity of net interest income

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 (simulation modelling), where all other economic variables are held constant. This monitoring is undertaken at an entity level by local ALCOs, where entities forecast both one-year and five-year NII sensitivities across a range of interest rate scenarios. NII sensitivity reflects the group's sensitivity of earnings due to changes in market interest rates. Projected NII sensitivity figures represent the effect of pro forma movements in projected yield curves based on a constant balance sheet size and structure. The exception to this is where the size of the balances changes materially 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 originate the risk to mitigate the effect of interest rate movements.

Sensitivity of economic value of equity

Economic value of equity ('EVE') represents the present value of the future banking book cash flows that could be distributed to equity providers 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 movements in interest rates, where all other economic variables are held constant. Operating entities are required to monitor EVE sensitivity as a percentage of Tier 1 capital resources.

Non-traded VaR

Non-traded VaR uses the same models as those used in the trading book and includes only the elements of risk that are transferred to Markets Treasury.

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 2020

(Unaudited)

There were no material changes to our policies and practices for the management of market risk in 2020.

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	• Foreign exchange and commodities • Interest rates • Credit spreads • Equities	• Structural foreign exchange • Interest rates[1] • Credit spreads
Global business	GBM incl MT[2]	GBM, MT[2], 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.*
2 *Markets Treasury ('MT'), for external reporting purposes, forms part of the Corporate Centre while daily operations and risk are managed within GBM.*

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 through business lines and to the Group's legal entities. The majority of HSBC's total value at risk ('VaR') and almost all trading VaR reside in GBM. 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 GBM 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 new product approval procedures. 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

(Audited)

Monitoring and limiting market risk exposures

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 primarily for trading desks with consideration of market liquidity, customer demand and capital constraints, among other factors.

Value at risk

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 which are calculated with reference to data from the past two years; and
- these are calculated 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

Although a valuable guide to risk, VaR should always be viewed in the context 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 aims to capture and capitalise 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, stressed VaR also captures 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

(Audited)

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

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

We routinely validate the accuracy of our VaR models by back-testing them with both actual and hypothetical profit and loss against the corresponding VaR numbers. Hypothetical profit and loss excludes non-modelled items such as fees, commissions and revenue of intra-day transactions.

The actual number of profits or losses in excess of VaR over this period can be used to gauge how well the models are performing. A VaR model is deemed satisfactory if it experiences less than five profit or loss exceptions in a 250-day period.

We back-test our VaR at various levels of our group entity hierarchy.

Market risk in 2020

(Unaudited)

Global financial conditions worsened rapidly with the onset of the Covid-19 outbreak from mid-February 2020. Market volatility reached extreme levels across most asset classes and equity prices fell sharply. In credit markets, spreads and yields reached multi-year highs. The gold market experienced Covid-19 related disruption in refining and transportation, affecting the relative pricing of gold futures contracts. Oil prices collapsed due to rising oversupply as demand reduced materially from the economic slowdown. Financial markets stabilised from April onwards, as governments announced economic recovery programs and key central banks intervened to provide liquidity and support asset prices. Global equity markets substantially recovered from their losses in February-March and credit spreads reverted towards pre-Covid-19 levels. Markets remained susceptible to further bouts of volatility triggered by increases in Covid-19 cases and deaths, and various geopolitical risks.

We managed market risk prudently during 2020. Sensitivity exposures remained within appetite as the business pursued its core market-making activity in support of our customers during the outbreak. We also undertook hedging activities to protect the business from potential future deterioration in credit conditions. Market risk continued to be managed using a complementary set of exposure measures and limits, including stress and scenario analysis.

Trading portfolios

(Audited)

Value at risk of the trading portfolios

Trading value at risk ('VaR') was predominantly generated by Global Markets. The Fixed Income business continued to be the key driver of trading VaR. Interest rate risks from market-making activities were the main drivers of trading VaR. Total trading VaR was higher as at 31 December 2020 compared to 31 December 2019 mainly due to higher levels of market volatility reached in March and April 2020 as a result of the economic impact of the Covid-19 outbreak.

The trading VaR for the year is shown in the table below.

Trading value at risk, 99% 1 day[1]

(Audited)

	Foreign exchange and commodity	Interest rate[4]	Equity[4]	Credit spread	Portfolio diversification[2]	Total[3]
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
At 31 Dec 2020						
Year end	**50**	**130**	**62**	**45**	**(143)**	**144**
Average	**48**	**140**	**62**	**49**		**172**
Maximum	**96**	**250**	**118**	**106**		**251**
At 31 Dec 2019						
Year end	48	90	50	24	(110)	140
Average	38	102	38	34		157
Maximum	58	145	63	81		210

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 includes HK$28m Risk not in VaR ('RNIV') for year end 2020.*
4 *The asset class RNIV was excluded for year 2019.*

Resilience risk

(Unaudited)

Overview

Resilience risk is the risk that we are unable to provide critical services to our customers, affiliates and counterparties, during 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 2020

In-line with the increasing expectations from customers, regulators and our Board, and in response to a continually evolving threat landscape that the wider industry faces, we combined Operational Risk and Resilience Risk to form a new Operational and Resilience Risk sub-function. This sub-function provides robust non-financial risk steward oversight of the Bank's business, functions, legal entities and critical business services management of risk, supported by effective and timely independent challenge. We carried out several initiatives during the year:

- We developed regional hubs accountable for core Operational & Resilience Risk delivery.
- We implemented business and function aligned teams focused on emerging risks as well as material products and services.
- We deployed risk management oversight of the most material transformation programmes across the Group.
- We implemented central services including governance, reporting and transformation.
- We created a standalone assurance capability that provides independent review and evaluation of end-to-end processes, risks and key controls.

We prioritise these efforts on material risks and areas undergoing strategic growth, aligning our location strategy to this need.

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-chain; information, technology and cyber security; business interruption and contingency risk; buildings unavailability; and workplace safety.

A principal senior management meeting for Operational and Resilience Risk governance is the Non-Financial Risk Management Board ('NFRMB'), chaired by the Group Chief Risk Officer, with an escalation path to the Group Risk Management Meeting ('GRMM'). At the group, the RMM is the senior management meeting for Operational and Resilience Risk governance.

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 their economic stability. Resilience is determined by assessing whether we are able to continue providing our most important services, within an agreed level. We accept that we will not be able to prevent all disruption, but we prioritise investment to continually improve our response and recovery capability for our most important business services.

Business operations continuity

As a result of Covid-19, we successfully implemented business continuity responses and continued to maintain the majority of service level agreements. We did not experience any major impacts to the supply chain from our third-party service providers due to Covid-19. The risk of damage or theft to our physical assets or criminal injury to our colleagues remains unchanged and no significant incidents impacted our buildings or people.

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 2020

In 2020, we made changes to our wider approach to the governance and structure of the Compliance function and continued to raise standards related to the conduct of our business, as set out below.

Governance and structure

In July, we introduced a new operating model to transform the Compliance function. We created a new group capability called Regulatory Conduct, which was formed from the regulatory compliance and regulatory affairs capabilities, and the monitor liaison office team. The group Head of Regulatory Conduct continues to report to the group Chief Compliance Officer. The group Regulatory Conduct capability works with the newly appointed local 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 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. The Group's regulatory compliance risk policies are regularly reviewed. Global policies and procedures require the prompt identification and escalation of any actual or potential regulatory breach. Relevant reportable events are escalated to the RMM and the Risk Committee, as appropriate.

Conduct of business

In 2020, we continued to promote and encourage good conduct through our people's behaviour and decision making to deliver fair outcomes for our customers, and to maintain financial market integrity. During 2020:

- We continued to champion a strong conduct and customer-focused culture. We implemented a number of measures throughout the Covid-19 pandemic to support our customers in financial difficulties. We also maintained service and supported colleagues in unprecedented conditions.
- We continued our focus on culture and behaviours, adapting our controls and risk management processes to reflect significant levels of remote working throughout the year.
- We continued to invest significant resources to improve our compliance systems and controls relating to our activities in global markets and to ensure market integrity. These included enhancements to pricing and disclosure, order management and trade execution; trade, voice and audio surveillance; front office supervision; and improvements to our enforcement and discipline framework for employee misconduct.
- We continued to emphasise, and worked to create, an environment in which employees are encouraged and feel safe to speak up. We placed a particular focus on the importance of well-being during the pandemic through regular top-down communications, virtual town halls, videos and podcasts.
- We continue to embed conduct within our business line processes. We also consider and seek to mitigate the conduct impacts of the group's strategic transformation programme and other key business change programmes, including those relating to the IBOR transition.
- We delivered our sixth annual global mandatory training course on conduct to reinforce the importance of conduct for all colleagues.
- We are refreshing our approach to conduct arrangements across the group with a view to ensuring that the arrangements remain appropriate for the nature of our business.
- 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 illegal activity through HSBC, including money laundering, fraud, bribery and corruption, tax evasion, sanctions breaches, and terrorist and proliferation financing. Financial crime risk arises from day-to-day banking operations.

Financial crime risk management

Key developments in 2020

In 2020, we continued to strengthen our fight against financial crime and to enhance our financial crime risk management capability. Amid the challenges posed by Covid-19 pandemic, we introduced a number of financial crime risk management measures during this period to support the business and our customers. These included:

- We supported the most vulnerable customers and those in financial difficulty, including by increasing the awareness of fraud during this period.
- The Compliance function proactively engaged with other parts of the organisation to ensure financial crime risks were considered as part of Covid-19-related decisions.
- Compliance colleagues were seconded to other parts of the organisation to assist with supporting the establishment of government relief measures.
- We supported customers and the organisation through policy exceptions, including by allowing email instructions instead of face-to-face meetings, and introducing virtual onboarding.

We consistently review the effectiveness of our financial crime risk management framework, which includes consideration of geopolitical and wider economic factors. The sanctions regulatory environment remained changeable and uncertain during the course of 2020 due to the ongoing geopolitical tensions between the US and China, and the increasing divergence in sanctions policies between the US and the EU on Iran and Russia. We comply with all applicable sanctions regulations in the jurisdictions in which we operate, and continue to monitor the geopolitical landscape for ongoing developments. We also continued to progress several key financial crime risk management initiatives, including:

- We continued to strengthen our anti-fraud capabilities, focusing on threats posed by new and existing technologies, and have delivered a comprehensive fraud training programme across the Bank.
- We continued to invest in the use of artificial intelligence ('AI') and advanced analytics techniques to manage financial crime risk, and we published our principles for the ethical use of Big Data and AI.
- We continued to work on strengthening our ability to combat money laundering and terrorist financing. In particular, we focused on the use of technology to enhance our risk management processes while minimising the impact to the customer. We also continued to develop our approach of intelligence led financial crime risk management, in part, through enhancements to our automated transaction monitoring systems.

Governance and structure

Since establishing a global framework of financial crime risk management committees in 2018, we have continued to strengthen and review the effectiveness of our governance framework to manage financial crime risk. Formal governance committees are held across all countries, territories and global business, and are chaired by the respective chief executive officers. They help to enable compliance 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. At a group level, the Financial Crime Risk Management Meeting has served as the pinnacle of this governance structure, ultimately responsible for the management of financial crime risk. As a reflection of the growing maturity and effectiveness of our financial crime risk management, this meeting was integrated with the group Risk Management Meeting in March 2021. During the course of 2021, we will review the management of financial crime risk across the Bank to identify other areas that could be simplified.

During 2020, we redesigned and delivered an integrated operating model for our Compliance function, with the accompanying restructure providing greater accountability to our local Compliance teams. These teams, led by local chief compliance officers, will support the group's Chief Compliance Officer in aligning the way in which we manage all compliance risks, including financial crime risk, to the needs and aims of the wider business. They will also support making our compliance risk management processes and procedures more efficient and effective.

Key risk management processes

We continued to deliver a programme to further enhance the policies and controls around identifying and managing the risks of bribery and corruption across our business. Recognising that the fight against financial crime is a constant challenge, we maintained our investment in operational controls and new technology to deter and detect criminal activity in the banking system. We continued to simplify our governance and policy frameworks, and our management information reporting process which demonstrates the effectiveness of our financial crime controls. We remain committed to enhancing our risk assessment capabilities and to delivering more proactive risk management, including our ongoing investment in the next generation of capabilities to fight financial crime by applying advanced analytics and AI.

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 helping to protect the communities we serve. We are a strong advocate of public-private partnerships and participate in a number of information-sharing initiatives around the world. We are a constructive partner to national governments and international standard setters, and support reforms being undertaken in key markets such as Singapore where we work closely with peer banks and with the Monetary Authority of Singapore.

We have been an advocate for a more effective international framework for managing financial crime risk, whether through engaging directly with intergovernmental bodies such as the Financial Action Task Force, the global money laundering and terrorist financing watchdog, or via our key role in industry groups such as the Wolfsberg Group and the Institute of International Finance.

Skilled Person/Independent Consultant

Following expiration in December 2017 of the anti-money laundering deferred prosecution agreement entered into with the DoJ, the then-Monitor has continued to work in his capacity as a Skilled Person under Section 166 of the Financial Services and Markets Act under the Direction issued by the FCA in 2013. He has also continued to work in his capacity as an Independent Consultant under a cease-and-desist order issued by the FRB.

The Skilled Person has assessed our progress towards being able to effectively manage our financial crime risk on a business-as-usual basis. In 2020, the Skilled Person issued his final report, concluding that we have continued to make material progress towards our financial crime risk target end state in terms of key systems, processes and people, albeit noting areas of potential improvements. At the request of the FCA, our engagement with the Skilled Person concluded in the first quarter of 2020. In the second quarter of 2020, we appointed a new Skilled Person who is operating with a narrower mandate and in July 2020, the FCA issued a new, tailored Direction, replacing the previous Direction, issued in 2013. The new Skilled Person issued one report in 2020, concluding that we were on par with peers in certain areas of the specific elements of our financial crime management framework he has reviewed. However, the Skilled Person also identified opportunities for further improvements. In 2021, the new Skilled Person will assess certain operational elements that were not assessed in 2020.

In 2020, the Independent Consultant completed his seventh annual OFAC assessment, which was primarily focused on our sanctions programme. For the first time, the Independent Consultant concluded that we were now substantially compliant with all paragraphs of the cease-and-desist consent order issued by the FRB within scope of the annual assessment. However, the Independent Consultant has determined that certain areas within our sanctions compliance programme require further strengthening. An eighth annual assessment will take place in the first half of 2021. It is likely that a new Independent Consultant will be appointed to carry out an annual OFAC compliance review, at the FRB's discretion.

The new FCA Direction noted above requires that the Group Risk Committee retains oversight of matters relating to anti-money laundering, sanctions, terrorist financing and proliferation financing. Throughout 2020, 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 potential for adverse consequences from business decisions informed by models, which can be exacerbated by errors in methodology, design or the way they are used. Model risk arises in both financial and non-financial contexts whenever business decision making includes reliance on models.

Key developments in 2020

In 2020, we carried out a number of initiatives to further develop and embed the new Model Risk Management sub-function, including:

- We refined the model risk policy to enable a more risk-based approach to model risk management.
- We conducted a full review of model governance arrangements overseeing model risk, resulting in a range of enhancements to the underlying structure to improve effectiveness and increase business engagement.
- We worked with the businesses and functions and developed new model risk controls in the Risk Control Library. These controls formed the basis for Model Risk Control Assessments that have been implemented for businesses and functions.
- We updated the target operating model for Model Risk Management, referring to internal and industry best practice.
- The Independent Model Validation team has begun a transformation program that will utilise advanced analytics and new workflow tools with the objective of providing a more risk based, efficient and effective management of model validation processes.
- The consequences of Covid-19 on HKFRS 9 model performance and reliability has resulted in enhanced monitoring of those models and related model adjustments. Dramatic changes to model inputs such as GDP and unemployment rates have made the model results less reliable. As a result, greater reliance has been placed on management underlays/overlays based on business judgement to derive expected credit losses.

Governance and structure

We have placed greater focus on our model risk activities during 2020. To reflect this, Group has created the role of Chief Model Risk Officer, which is undertaken by the Head of Model Risk Management at the group. We elevated Model Risk Management to a function in its own right within the Global Risk Structure, where it had previously been structured as a sub-function within Global Risk Strategy. The team now reports directly to the group's Chief Risk Officer. We have also set up a Model Risk Committee at the group to demonstrate effective oversight of models used. The Model Risk Committee is supported by other forums such as the Wholesale Model Oversight Forum ('WMOF') and Retail Model Oversight Forum ('RMOF').

Key risk management processes

We use a variety of modelling approaches, including regression, simulation, sampling, machine learning and judgemental scorecards for a range of business applications, in activities such as customer selection, product pricing, financial crime transaction monitoring, creditworthiness evaluation and financial reporting.

We regularly review our model risk management policies and procedures, and require 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 reports on model risk to senior management through use of the risk map and regular key updates. We also review the effectiveness of these processes, including the regional model oversight governance structure, to ensure appropriate understanding and ownership of model risk is embedded in the businesses and functions.

Insurance manufacturing operations risk

(Unaudited)

Overview

The majority of the risk in our insurance business derives from manufacturing activities and can be categorised as financial risk or insurance risk. Financial risks include market risk, credit risk and liquidity risk. Insurance risk is the risk, other than financial risk, of loss transferred from the holder of the insurance contract to HSBC, the issuer.

HSBC's bancassurance model

(Unaudited)

We operate an integrated bancassurance model which 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 banking 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 and investment products.

By focusing largely on personal and small and medium-sized enterprise businesses, we are able to optimise volumes and diversify individual insurance risks. 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 handful 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 2020

(Unaudited)

There were no material changes to the insurance risk management framework in 2020. Policies and practices for the management of risks associated with the selling of insurance contracts outside of bancassurance channels were enhanced in response to this being an increasing area of importance for the insurance business. Also, enhancements were made to the Capital Risk Framework for insurance operations to better align to the Group's Capital Risk Framework.

Governance

(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 group's Insurance Risk Management Meeting oversees the control framework globally and is accountable to the WPB Risk Management Meeting on risk matters relating to insurance business.

The monitoring of the risks within the insurance operations is carried out by the Insurance Risk teams. Specific risk functions, including wholesale credit and market risk, operational risk, information security risk and Compliance, support 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. Where in scope we participate in local and Group-wide regulatory stress tests, including the Bank of England stress test of the banking system, the Hong Kong Monetary Authority stress test, and individual country insurance regulatory stress tests. These have highlighted that a key risk scenario for the insurance business is a prolonged low interest rate environment. In order to mitigate the impact of this scenario, the insurance operations have a range of strategies that could be employed, repricing current products to reflect lower interest rates, moving towards less capital intensive products, and developing investment strategies to optimise the expected returns against the cost of economic capital.

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. It is not always possible to match asset and liability durations, due to several factors such as uncertainty over the receipt of all future premiums, the timing of claims and because the forecast payment dates of liabilities may exceed the duration of the longest dated investments available. 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 to better support liability cash flows.
- For new products with investment guarantees, we consider the cost when determining the level of premiums or the price structure.
- We periodically review products identified as higher risk, such as those that contain investment guarantees and embedded optionality features linked to savings and investment products, for active management.
- 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.
- We reprice premiums charged to policyholders.

Credit risk

(Audited)

Our insurance manufacturing subsidiaries are responsible for the credit risk, quality and performance of their investment portfolios. Our assessment of the creditworthiness of issuers and counterparties is based primarily upon internationally recognised credit ratings, internal credit ratings, and other publicly available information.

Investment credit exposures are monitored against limits by our insurance manufacturing subsidiaries and are aggregated and reported to the Group Insurance Credit Risk and Group Credit Risk functions. 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.

Liquidity risk

(Audited)

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 risk

(Unaudited)

The group primarily uses the following techniques to manage and mitigate insurance risk:

- a formalised product approval process covering product design, pricing and overall proposition management (for example, management of lapses by introducing surrender charges);
- underwriting policy;
- claims management processes; and
- reinsurance which cedes risks above our acceptable thresholds to an external reinsurer thereby limiting our exposure.

Insurance manufacturing operations risk in 2020

Measurement

(Unaudited)

The risk profile of our insurance manufacturing businesses is measured using an economic capital approach. Assets and liabilities are measured on a market value basis and a capital requirement is defined to ensure that there is a less than one-in-200 chance of insolvency over a one-year time horizon, given the risks that the businesses are exposed to. The methodology for the economic capital calculation is largely aligned to the pan-European Solvency II insurance capital regulation. The economic capital coverage ratio (economic net asset value divided by the economic capital requirement) is a key risk appetite measure.

Insurance entities in Asia manage their economic capital cover ratios against their appetite and tolerance as approved by their respective Boards. The tables below show the composition of assets and liabilities by contract type. 92% (2019: 92%) of both assets and liabilities are derived from Hong Kong.

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 2020				
Financial assets	**577,666**	**42,621**	**40,776**	**661,063**
– financial assets designated and otherwise mandatorily measured at fair value	**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**
At 31 Dec 2019				
Financial assets	501,625	41,893	34,940	578,458
– financial assets designated at fair value	103,902	40,563	124	144,589
– derivatives	957	4	4	965
– financial investments – held-to-maturity	374,630	342	31,508	406,480
– financial investments – available-for-sale	4,126	—	395	4,521
– other financial assets[1]	18,010	984	2,909	21,903
Reinsurance assets	28,031	44	—	28,075
PVIF[2]	—	—	61,075	61,075
Other assets and investment properties	13,015	2	3,898	16,915
Total assets	542,671	41,939	99,913	684,523
Liabilities under investment contracts designated at fair value	30,231	6,793	—	37,024
Liabilities under insurance contracts	494,181	34,579	—	528,760
Deferred tax[3]	20	118	9,780	9,918
Other liabilities	—	—	17,116	17,116
Total liabilities	524,432	41,490	26,896	592,818
Total equity	—	—	91,705	91,705
Total equity and liabilities	524,432	41,490	118,601	684,523

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

The key risks for our insurance operations are market risks (in particular interest rate and equity) and credit risks, followed by insurance underwriting risks and operational risks. Liquidity risk, while significant for the bank, is minor for our insurance operations.

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') issued in Hong Kong. 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 bonds, 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, calculated by stochastic modelling.

Where local rules require, these reserves are held as part of liabilities under insurance contracts. Any remainder is accounted for as a deduction from the present value of in-force ('PVIF') long-term insurance business on the relevant product. The following table shows the total reserve held for the cost of guarantees, the range of investment returns on assets supporting these products and the implied investment return that would enable the business to meet the guarantees.

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.

Sensitivity of the group's insurance manufacturing subsidiaries to market risk factors

(Audited)

	31 Dec 2020		31 Dec 2019	
	Effect on profit after tax	**Effect on total equity**	Effect on profit after tax	Effect on total equity
	HK$m	**HK$m**	HK$m	HK$m
+100 basis points parallel shift in yield curves	**(1,673)**	**(2,283)**	(538)	(929)
-100 basis points parallel shift in yield curves	**1,613**	**2,223**	38	429
10% increase in equity prices	**2,167**	**2,167**	1,814	1,814
10% decrease in equity prices	**(2,183)**	**(2,183)**	(1,840)	(1,840)
10% increase in USD exchange rate compared to all currencies	**673**	**673**	327	327
10% decrease in USD exchange rate compared to all currencies	**(673)**	**(673)**	(327)	(327)

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 61.

The credit quality of the reinsurers' share of liabilities under insurance contracts is assessed as 'strong' or 'good' (as defined on page 28), with 100% of the exposure being neither past due nor impaired (2019: 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 40. 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.

Capital and 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 2020. 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 2020 remained comparable with 2019.

The remaining contractual maturity of investment contract liabilities is included in the table on page 108.

Expected maturity of insurance contract liabilities

(Audited)

	Expected cash flows (undiscounted)				
	Within 1 year	**1-5 years**	**5-15 years**	**Over 15 years**	**Total**
	HK$m	**HK$m**	**HK$m**	**HK$m**	**HK$m**
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**
At 31 Dec 2019					
Non-linked insurance contracts	46,115	152,561	319,151	482,671	1,000,498
Unit-linked	8,110	19,913	14,154	8,940	51,117
	54,225	172,474	333,305	491,611	1,051,615

Insurance risk

Description and exposure

(Unaudited)

Insurance 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 unit costs.

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 61 analyses our life insurance risk exposures by type of contract.

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.

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. In general, for life insurance contracts a policy lapse has two offsetting effects on profits, which are the loss of future income on the lapsed policy and the existence of surrender charge recouped at policy lapse. The net impact depends on the relative size of these two effects which varies with the type of contracts.

Expense rates risk is the exposure to a change in the 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.

Sensitivity analysis

(Audited)

	2020	2019
	HK$m	HK$m
Effect on profit after tax and total equity at 31 Dec		
10% increase in mortality and/or morbidity rates	**(613)**	(509)
10% decrease in mortality and/or morbidity rates	**629**	507
10% increase in lapse rates	**(575)**	(496)
10% decrease in lapse rates	**676**	564
10% increase in expense rates	**(352)**	(314)
10% decrease in expense rates	**360**	310

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 date 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 date 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, subject to the lowest level of credit 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 judged to be upper-medium grade and are subject to low credit risk.

Baa

Obligations rated Baa are judged to be medium-grade and subject to moderate credit risk and as such may possess certain 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://www.moodys.com/Pages/amr002002.aspx* (in English language version only) 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 adverse 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/understanding-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.

Issuer

The Hongkong and Shanghai Banking Corporation Limited
HSBC Main Building
1 Queen's Road Central
Hong Kong

Independent Auditor

PricewaterhouseCoopers
22nd Floor, Prince's Building
Central
Hong Kong

Legal Adviser

Deacons
5th Floor
Alexandra House
18 Chater Road
Central
Hong Kong

Printed by EQUITY FINANCIAL PRESS LIMITED
21020493