

The following is an extract of a report prepared for the purpose of incorporation in this prospectus, which Deloitte Actuarial and Insurance Solutions (HK) Ltd., an independent actuarial consultant, agreed to be incorporated into this prospectus. The report was completed by Deloitte Actuarial and Insurance Solutions (HK) Ltd. The extract of the report does not contain the Appendices to the full report which contain the detailed calculations supporting the actuarial consultant's analysis. Please refer to the full report for these detailed Appendices. As described in the section headed "Documents Delivered to the Registrar of Companies and Available for Inspection" in Appendix VIII of this prospectus, a copy of the full actuarial consultants' report is available for inspection.

11 December 2006

The Directors
The Ming An (Holdings) Company Limited
19/F Ming An Plaza
8 Sunning Road Causeway Bay Hong Kong

ACTUARIAL CONSULTANT'S REPORT ON INSURANCE LIABILITIES AS AT 30 JUNE 2006

We have undertaken an independent assessment of claim and premium liabilities of The Ming An Insurance Company (Hong Kong) Limited, including its China subsidiary and Haikou branch (collectively referred to as "Ming An"), as at 30 June 2006.

The following is an extract of our full report, which we agree to be incorporated into the prospectus of The Ming An (Holdings) Company Limited. The attached extract excludes Appendices showing the detailed technical calculations underlying our analyses, which are voluminous. Our full report, including these Appendices, is available for inspection at the offices of Allen & Overy at 9th Floor, Three Exchange Square, Central, Hong Kong, during normal business hours up to and including the date which is 14 days from the date of the prospectus.

For and on behalf of Deloitte Actuarial and Insurance Solutions (HK) Ltd.

Duncan Spooner
Fellow of Institute of Actuaries (FIA)
Principal

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1. INTRODUCTION

1.1. Terms of Engagement

In accordance with the instructions of The Ming An Insurance Company (Hong Kong) Limited, as set out in the engagement letter dated 11 May 2006 and the addendum to the engagement letter dated 3 July 2006, Deloitte Actuarial and Insurance Solutions (HK) Ltd. ("Deloitte Actuarial", "DAIS" or "we") has undertaken an independent assessment of the claim and premium liabilities of Ming An as at 30 June 2006.

1.2. Deloitte Contacts

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Deloitte Actuarial and Insurance Solutions (HK) Ltd. is the actuarial entity of the China practice of Deloitte Touche Tohmatsu. Deloitte Actuarial and Insurance Solutions (HK) Ltd. has a wealth of experience in advising some of the largest life and non-life insurers in the Asia-Pacific Region on various actuarial issues. The officers in charge of the engagement are Mr. Duncan Spooner (Principal) and Mr. Ryan Ho (Manager). Mr. Spooner is a Fellow of the Institute of Actuaries (FIA) and has 13 years of actuarial experience and has been involved in a variety of projects including numerous reserve reviews, actuarial due diligence, and appraisal valuations. Mr. Ho is a Fellow of the Casualty Actuary Society (FCAS) and has 5 years of actuarial consulting experience in the non-life insurance field. He has prior experience in reserve reviews and pricing studies.

1.3. Background

The Ming An Insurance Company (Hong Kong) Limited is headquartered in Hong Kong and transacts all lines of general insurance business. It is currently operated under three business entities which are:

- Ming An (HK) — headquarter located in Hong Kong
- Ming An (China) — a 100% wholly owned subsidiary of Ming An (HK) located in Shenzhen
- Ming An (Haikou Branch) — a branch of Ming An (HK) located in Haikou

Hereafter these entities will be referred to collectively as "Ming An".

Ming An (HK) is comprised of three former insurance companies. A merger of businesses occurred on 30 September 2000 to consolidate the businesses from the following companies:

- China Insurance Co. Ltd. — Hong Kong Branch ("CIC")
- The Tai Ping Insurance Co. Ltd. — Hong Kong Branch ("TPI")
- The Ming An Insurance Co. (H.K.) Ltd. ("MAI")

Ming An (China) was incorporated on 10 January 2005 in PRC and is wholly owned by Ming An (HK). All insurance business of the former Shenzhen branch of Ming An (HK) was transferred to Ming An (China).

The Ming An (Holdings) Company Limited is proposing to list its equity on the HK stock exchange at the end of 2006 and has sought this independent actuarial valuation of Ming An's premium and claim liabilities as at 30 June 2006 in association with this process.

Deloitte Actuarial has never previously been retained by Ming An to review its liabilities. In previous years, for internal and regulatory purposes, it has sought actuarial advice from another actuary. Upto and including financial year 2003 Deloitte was the auditor of Ming An and its parent company.

1.4. Purpose and Scope of the Analysis

We have conducted an independent assessment of the claim and premium liabilities of Ming An as at 30 June 2006 on both gross of reinsurance and net of reinsurance bases. The purpose of our review has been to provide comfort that Ming An's provisions in respect of its insurance liabilities as at 30 June 2006 were reasonable in preparation for the planned listing of The Ming An (Holdings) Company Limited on the HK Stock Exchange.

Business from the following entities have been included in this review:

- Ming An (HK) which includes its headquarter in Hong Kong (including the runoff of the old China Insurance Co. Ltd. and The Tai Ping Insurance Co. Ltd. — Hong Kong Branch)
- Ming An (China) which consists of an office in Shenzhen
- A branch of Ming An (HK) located in Haikou

1.5. Purpose of Report

The purpose of our report is to explain the work carried out by Deloitte Actuarial in conducting the above analysis and to present the findings of our review.

This document is an extract of the full report and its Appendices. The full report is detailed and therefore bulky. As a result, this extract has been prepared for the purpose of inclusion in the prospectus of The Ming An (Holdings) Company Limited. This extract of the report does not contain the detailed technical calculations supporting the analyses of Deloitte Actuarial. Please refer to the full report for these detailed Appendices.

In order to fully understand Deloitte Actuarial's work, the report must be read in its entirety, including the technical Appendices contained in the full report. All recipients of the full report and this extract of it should understand that Deloitte Actuarial's work product is complex and technical, and that Deloitte Actuarial recommends that all recipients be aided by their own actuary or other qualified professionals when reviewing the results.

Deloitte does not intend to benefit any third party recipient of its work product and such third party recipients shall rely on the report or this extract at their own risk. As such, any third parties should recognise that provision of the full report or this extract of it is not a substitute for their own due diligence and should place no reliance on the full report or this extract of it such as would create a duty of responsibility or liability (including without limitation, those arising from negligence or otherwise) on Deloitte Actuarial to the third party even if Deloitte Actuarial consents to the release of its work product to such third parties. If circulated, the full report or this extract of it must be circulated in its entirety, including this disclaimer.

Our report, this extract and the results and findings are subject to important reliances and limitations and the attention of readers is drawn to Section 3 of this document.

1.6. Remainder of Document

A summary of our results is contained in Section 2. More detailed results are contained in Section 6. Section 4 outlines the data made available for our review and in Section 5 we discuss the methodology used for the analysis.

2. SUMMARY OF RESULTS

2.1. Approach

Ming An is a conservative company and, recognising the considerable risk associated with the run off of its liabilities from litigious, long-tail lines of business such as Motor and EC, it has instructed us to err on the side of caution in our projections. For the other classes, our conservatism has tended to be prudent rather than cautious.

This conservatism for Motor and EC manifests itself in a number of areas:

- Incurred Development Factors — with particular regard to Motor and EC, there was evidence of some savings emerging in historical development statistics, ie. claims settling for less than their equivalent case reserves. For EC, we have tended not to project these savings to recur in future. For Motor, the evidence for those savings is quite strong so rather than completely ignore this feature, we have projected that it may continue albeit to a lesser extent in future.
- Selected Ultimate Claims — we apply a number of different projection methods to the historical data and these produce a range of outcomes. We then select one method, or a combination of methods, as our preferred result. In making this selection we have erred on the side of caution and generally selected the methods that gave the higher projected ultimate results.

We have also incorporated a provision for adverse deviation (PAD). This is a regulatory requirement for Motor and EC under the Insurance Authority's Guidance Note 9. We have extended its application to cover all classes of business.

It is not unusual for insurance companies to want to err on the side of caution when projecting future claims experience for purposes of reserving. However, it is important for compliance with relevant accounting standards that any such conservatism does not become excessive such that the reported figures lose their realism. We are comfortable that the level of liabilities estimated lies within a range of reasonable estimates and is not excessive.

2.2. Claim Liabilities

Table 2.1 — Estimated net outstanding claim liabilities (HK\$m) as at 30 June 2006

Line of Business	Net Estimate of Claims Liabilities	Provision for Adverse Deviations (PAD) of Claim Liabilities	Total Estimated Net Claim Liabilities	Ming An's Net Claim Provisions (Before Deduction of Commutation Fund)	Commutation Fund	Ming An's Net Claim Provisions (After Deduction of Commutation Fund)	Margin over Estimated Liabilities (Before Deduction of Commutation Fund)
Hong Kong Entity							
Employees' Compensation	589	95	684	730	55	675	46
Motor	399	34	433	433	0	433	0
Other	239	22	261	261	0	261	0
Total Hong Kong Entity	1,227	151	1,378	1,424	55	1,369	46
China Entities (Shenzhen and Haikou)							
Motor	26	3	29	29	0	29	0
Other	13	1	14	14	0	14	0
Total China Entities	39	4	43	43	0	43	0
Grand Total	1,266	155	1,421	1,467	55	1,412	46

Our estimate of the net claim liabilities (estimated on the basis described in Section 5) is HK\$1.4bn, including a HK\$155m provision for adverse deviation (PAD) and HK\$104m provision for indirect claims handling expenses (CHE). This indicates that the net provision of Ming An (before deduction of commutation fund) is higher than our estimate of the net claim liabilities by HK\$46m, which represents approximately 3.1% of Ming An's claim provision on a net of reinsurance basis. In light of the uncertainty involved this difference is small.

Ming An's held provision is the sum of the case reserves and the IBNR carried in its management accounts as at 30 June 2006.

Table 2.2 — Estimated gross outstanding claim liabilities (HK\$m) as at 30 June 2006

Line of Business	Gross Estimate Claims Liabilities	Provision for Adverse Deviations (PAD) of Claim Liabilities	Total Estimated Gross Claim Liabilities	Ming An's Gross Claim Provisions	Margin over Estimated Liabilities
Hong Kong Entity					
Employees' Compensation	914	151	1,065	1,143	78
Motor	529	40	569	569	0
Other	661	79	740	740	0
Total Hong Kong Entity	2,104	270	2,374	2,452	78
China Entities (Shenzhen and Haikou)					
Motor	32	3	35	35	0
Other	55	4	59	59	0
Total China Entities	87	7	94	94	0
Grand Total	2,191	277	2,468	2,546	78

Our estimate of the gross claims liabilities is HK\$2.5bn, including a HK\$277m provision for adverse deviation (PAD) and HK\$104m provision for indirect claims handling expenses (CHE). This indicates that the held provision of Ming An exceeds our estimate of the gross claim liabilities by HK\$78m, which is approximately 3% of Ming An's gross claim provision. Again, in the context of the uncertainty of estimation, the difference is small.

Ming An's held provision is the sum of the case reserves and the IBNR carried in its management accounts as at 30 June 2006.

2.3. Premium Liabilities

Table 2.3 — Estimated net premium liabilities (HK\$m) as at 30 June 2006

Line of Business	Net Estimate Unexpired Risk Reserves	Provision for Adverse Deviations (PAD) of Premium Liabilities	Total Estimate of Unexpired Risk Reserves with PAD	Total Estimated Net Premium Liabilities	Ming An's Premium Liabilities Provision	Margin over Estimated Liabilities
Hong Kong Entity						
Employees' Compensation	53	8	61	61	61	0
Motor	57	6	63	101	101	0
Other	70	8	78	109	109	0
Total Hong Kong Entity	180	22	202	271	271	0
China Entities (Shenzhen and Haikou)						
Motor	17	2	19	33	33	0
Other	45	5	50	65	65	0
Total China Entities	62	7	69	98	98	0
Grand Total	242	29	271	369	369	0

Our estimate of the net premium liabilities is HK\$369m. Ming An's net premium liability provision is also HK\$369m.

Table 2.4 — Estimated gross premium liabilities (HK\$m) as at 30 June 2006

Line of Business	Gross Estimate Unexpired Risk Reserves	Provision for Adverse Deviations (PAD) of Premium Liabilities	Total Estimate of Unexpired Risk Reserves with PAD	Total Estimated Gross Premium Liabilities	Ming An's Premium Liabilities Provision	Margin over Estimated Liabilities
Hong Kong Entity						
Employees' Compensation	47	7	54	57	57	0
Motor	57	6	63	103	103	0
Other	112	14	126	211	211	0
Total Hong Kong Entity	216	27	243	371	371	0
China Entities (Shenzhen and Haikou)						
Motor	20	2	22	34	34	0
Other	74	8	82	115	115	0
Total China Entities	94	10	104	149	149	0
Grand Total	310	37	347	520	520	0

Our estimate of the gross premium liabilities is HK\$520m. Ming An's gross premium liability provision is also HK\$520m.

2.4. Total Insurance Liabilities

Table 2.5 — Estimated net insurance liabilities (HK\$m) as at 30 June 2006

Line of Business	Net Claims Liabilities	Net Premium Liabilities	Net Estimated Insurance Liabilities	Ming An's Net Provision (Before Deduction of Commutation Fund)	Commutation Fund	Ming An's Net Provision (After Deduction of Commutation Fund)	Margin over Estimated Liabilities (Before Deduction of Commutation Fund)
Hong Kong Entity							
Employees' Compensation	684	61	745	791	55	736	46
Motor	433	101	534	534	0	534	0
Other	261	109	370	370	0	370	0
Total Hong Kong Entity ..	1,378	271	1,649	1,695	55	1,640	46
China Entities (Shenzhen and Haikou)							
Motor	29	33	62	62	0	62	0
Other	14	65	79	79	0	79	0
Total China Entities	43	98	141	141	0	141	0
Grand Total	1,421	369	1,790	1,836	55	1,781	46

Our estimate of the total insurance liabilities of Ming An net of reinsurance is therefore HK\$1.8bn including PAD and CHE. Ming An's provision (before deduction of commutation fund) as at 30 June 2006 was also HK\$1.8bn.

Table 2.6 — Estimated gross insurance liabilities (HK\$m) as at 30 June 2006

Line of Business	Gross Claims Liabilities	Gross Premium Liabilities	Gross Estimated Insurance Liabilities	Ming An's Gross Provision	Margin over Estimated Liabilities
Hong Kong Entity					
Employees' Compensation	1,065	57	1,122	1,200	78
Motor	569	103	672	672	0
Other	740	211	951	951	0
Total Hong Kong Entity	2,374	371	2,745	2,823	78
China Entities (Shenzhen and Haikou)					
Motor	35	34	69	69	0
Other	59	115	174	174	0
Total China Entities	94	149	243	243	0
Grand Total	2,468	520	2,988	3,066	78

Our estimate of the total insurance liabilities of Ming An gross of reinsurance is therefore HK\$3.0bn including PAD and CHE. Ming An's held provision as at 30 June 2006 was HK\$3.1bn. The held provision of Ming An exceeds our estimate of the insurance liabilities by HK\$78m, which represents approximately 2.5% of Ming An's gross provision.

2.5. Summary

Adopting this conservative approach to assessing the claims liabilities results in an estimate of the liability close to Ming An's held provision. We can conclude that Ming An's provisions are reasonable and adequate.

3. RELIANCES & LIMITATIONS

3.1. Reliances

We have relied on the accuracy and completeness of all data and other information (qualitative, quantitative, written and verbal) provided to us by or on behalf of Ming An for the purpose of this review. We have not independently verified or audited the data but we have reviewed it for general reasonableness and consistency. It should be noted that if any data or other information is inaccurate or incomplete, our advice may need to be revised. The user of our report, and this extract of it, is relying on Ming An, not Deloitte Actuarial, for data quality.

3.2. Limitations

This document is an extract of the full report and its Appendices. The full report is detailed and therefore bulky. As a result, this extract has been prepared for the purpose of inclusion in this prospectus. This extract of the report does not contain the detailed technical calculations supporting the analyses of Deloitte Actuarial. Please refer to the full report for these detailed Appendices.

The purpose of our full report and this extract of it is outlined above. They are not intended, nor necessarily appropriate, for any other purpose.

In order to fully understand Deloitte Actuarial's work, the report must be read in its entirety, including the technical Appendices contained in the full report. All recipients of the full report and this extract of it should understand that Deloitte Actuarial's work product is complex and technical, and that Deloitte Actuarial recommends that all recipients be aided by their own actuary or other qualified professionals when reviewing the results.

Deloitte does not intend to benefit any third party recipient of its work product and such third party recipients shall rely on the report or this extract at their own risk. As such, any third parties should recognise that provision of the full report or this extract of it is not a substitute for their own due diligence and should place no reliance on the full report or this extract of it such as would create a duty of responsibility or liability (including without limitation, those arising from negligence or otherwise) on Deloitte Actuarial to the third party even if Deloitte Actuarial consents to the release of its work product to such third parties. If circulated, the full report or this extract of it must be circulated in its entirety, including this disclaimer.

3.3. Uncertainty

It is not possible to put a value on outstanding claim and premium liabilities with certainty. As well as difficulties caused by limitations on the historical information, outcomes remain dependent on future events, including legislative, social and economic forces. Although we have prepared estimates in conformity with what we believe to be a conservative view of the potential future experience, actual experience could vary considerably from our estimates. Deviations are normal and are to be expected. Some of the years of account covered by our analysis are relatively immature and include some unearned exposures. This also increases the uncertainty in our estimates.

In particular, Ming An has exposure to claims originating from the Severe Acute Respiratory Syndrome ("SARS") disease in its EC and Public Liability portfolios. The ultimate settlement amounts of these claims will depend greatly on court rulings and interpretation of the applicable reinsurance contracts and therefore increase the uncertainty in our estimation of the ultimate cost for these claims. This aspect is discussed further in Section 6.1.

The conservatism of the approach Ming An has instructed us to adopt reflects the uncertainty associated with the future claims experience.

3.4. Exclusions

No allowance has been made for factors not reflected in the data, other than any which were specifically advised to us, and for which an estimate of the impact has been agreed.

No allowance has been made for the extraordinary future emergence of new classes of loss or of types of losses not sufficiently represented in Ming An's historical claims data.

3.5. Reinsurance Recoveries

In estimating the level of reinsurance recoveries associated with the outstanding claims provision, we have assumed that all such amounts will be fully recoverable unless there exists, to our knowledge, a material risk of failure to receive payment.

We have been provided by the management of Ming An an exhibit illustrating the Standard and Poor's rating and AM Best rating of reinsurers from which Ming An has purchased reinsurance. The majority of the reinsurers have ratings of A- (strong) or higher.

We have made no allowance in the estimates contained in our report for the possibility of uncollectability of reinsurance recoveries due to insurance or reinsurance insolvencies. Readers of the full report, and this extract of it, should make their own assessment of the extent to which insolvencies could affect the net position of Ming An as additional information emerges.

4. DATA

4.1. Quantitative Information

The following information was provided to us by Ming An for the purpose of the review:

1. Actuarial development triangles (development months of 12, 24, 36 etc.) gross and net of reinsurance by class of business and by accident year for paid claims, case reserves, reported claim count upto 31 December 2005 for the Direct and Facultative business
2. Actuarial development triangles (development months of 6, 18, 30 etc.) gross and net of reinsurance by class of business and by accident year for paid claims, case reserves, reported claim count upto 30 June 2006 for the Direct and Facultative business
3. Forms 1 and 2 filed with the Office of the Commissioner of Insurance (OCI) for the year ended 1997, 1998, 1999, 2000, 2001 for the following three entities
 - a. The Ming An Insurance Co. (H.K.) Ltd.
 - b. China Insurance Company Ltd. — Hong Kong Branch
 - c. The Tai Ping Insurance Co. Ltd. — Hong Kong Branch
4. Management accounts for 2003, 2004, 2005 full year and first 6 months of 2006
5. Audited accounts for the 2003, 2004, 2005 calendar year
6. Actuarial reports prepared by Ming An's Appointed Actuary, Mr Sheng Yu, as at 31 December 2003, 2004, 2005 for the EC and Motor classes of business
7. Mr Sheng Yu's peer review reports as at 31 December 2003, 2004, 2005 for several other classes not formally reviewed for statutory purposes
8. Cover notes of outwards reinsurance programmes for years 2003, 2004, 2005, 2006
9. Claim status (open/closed), gross and net paid claims and case reserves as at 30 June 2006 of historical large losses (gross incurred loss > HK\$1m) for the various classes of business
10. Detailed SARS claim listing as at 30 June 2006
11. Paid and case reserves balances related to the EC Inwards Treaty, EC Excess of Loss ("XOL") Pool, and EC Commuted Quota Share Treaty as at 30 June 2006
12. Split of gross and net earned premiums, gross and net unearned premium reserves by EC Construction and EC Non-Construction business for the first six months of 2006

We understand the claims data we have received includes direct claims handling expenses such as legal and loss adjusters' fees, and as a result our projection methods have made implicit allowance for this component of the future claims cost.

4.2. Data Source and Verification

The data and other information were provided to us directly by Ming An. We conducted various checks on the data to satisfy ourselves that it was reasonable for the purpose of carrying out the investigation. This included, for example, ensuring consistency of triangulated data for gross and net claim payments, case reserves, and earned premiums with figures presented in management accounts as at 31 December 2003, 2004, 2005 and as at 30 June 2006.

In our reconciliation between the actuarial data and the management accounts, we have selected a tolerance level for the difference between the sources to be less than 10% or less than HK\$1m on a class by class basis. On a total all classes basis, we satisfied ourselves with a tolerance level of differences less than 2%.

It is important to note that whilst we have conducted reasonableness checks regarding the accuracy of the information, we have not independently verified or audited the data. Readers of the full report, and this extract, are reliant solely on Ming An for the accuracy and completeness of the data underlying our analysis.

4.3. Meetings with Ming An

The above data was supplemented by qualitative information gathered in discussions with Ming An's underwriting, claims management, reinsurance, and finance representatives. These interviews provided us with valuable insight of the portfolios under review.

Furthermore, we have reviewed approximately 12 individual claim files on-site. The claim file review provided us with an understanding of Ming An's case reserving philosophy.

4.4. Grouping of Risks

For the purposes of actuarial analysis it has been necessary to group some of the classes of business together such that there is a credible volume of data to analyse. In combining the classes, we have considered statistical credibility issues and also the homogeneity of the claims development data. We have also considered the materiality of such compromises given that the outstanding claims from these small, short tail classes is minute compared to that for larger, longer tail classes such as Motor and EC.

The following tables show the classes on which we have performed our analysis and how they map to classes used by Ming An's management.

Table 4.1 – Grouping of Risks of Hong Kong Entity

Hong Kong Entity

Deloitte Class of Business

Employees' Compensation — Construction

Employees' Compensation
— Non-Construction

Motor

Fire

CAR

Other Property

Hull

Cargo

Logistics

Public Liability

Professional Indemnity

Personal Accident

Medical

Ming An Business Segment

Employees' Compensation — Construction

Employees' Compensation — Non-Construction
Employers Liability

Motor

Fire

CAR

Cash
Burglary
Property All Risks
Bond
Machinery

Hull
Aviation

Cargo

Logistics

Public Liability

Professional Indemnity

Personal Accident

Medical
Medical Card

Table 4.2 — Grouping of Risks of China Entities (Shenzhen Entity and Haikou Branch)**China Entities (Shenzhen and Haikou)**

<i>Deloitte Class of Business</i>	<i>Ming An Business Segment</i>
Employers Liability	Employers Liability
Public Liability	Public Liability
Motor	Motor
Hull	Hull
Cargo	Cargo
Logistics	Logistics
Fire	Fire
CAR	CAR
Other Property	Cash Burglary Property All Risks Bond Machinery
Personal Accident	Personal Accident

Due to their special nature, we have analysed claims arising from SARS separately from the EC Non-Construction portfolio.

The above classes only include direct and inwards facultative reinsurance business written by Ming An. We have separately analysed the inwards treaty reinsurance business assumed by Ming An (containing EC, Fire, Hull, and Cargo exposures).

Note that the EC class of business has been segregated into difference pieces, namely:

- EC Construction
- EC Non-Construction
- EC SARS Claims
- EC XOL Pool
- EC Commuted Quota Share Treaty

The data contained in each piece do not overlap with data of another piece. That is, the EC Construction and EC Non-construction classes are net of all applicable reinsurance (whether commuted or not). Since the EC XOL Pool and the EC Quota Share Treaty have been commuted, the impact of this has been considered separately from the main EC Construction and EC Non-Construction portfolios. These commuted treaties represent additional net liabilities to Ming An. More information on these reinsurance treaties can be found in Section 6.

Charts 4.1 and 4.2 below illustrate the composition of Ming An's business based on gross written premium in 2005.

Chart 4.1 — 2005 GWP — HK Business

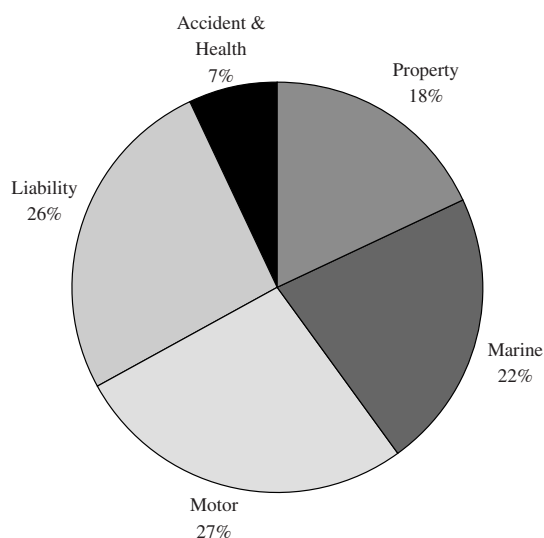
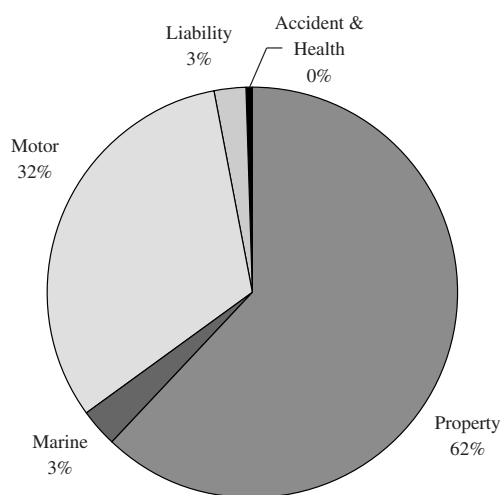


Chart 4.2 — 2005 GWP — China Business



5. METHODOLOGY

Ming An is a conservative company and, recognising the considerable risk associated with the run off of its liabilities from litigious, long-tail lines of business such as Motor and EC, it has instructed us to err on the side of caution in our projections. For the other classes, our conservatism has tended to be prudent rather than cautious.

This conservatism for Motor and EC manifests itself in a number of areas:

- Incurred Development Factors — with particular regard to Motor and EC, there was evidence of some savings emerging in historical development statistics, ie. claims settling for less than their equivalent case reserves. For EC, we have tended not to project these savings to recur in future. For Motor, the evidence for those savings is quite strong so rather than completely ignore this feature, we have projected that it may continue albeit to a lesser extent in future.
- Selected Ultimate Claims — we apply a number of different projection methods to the historical data and these produce a range of outcomes. We then select one method, or a combination of methods, as our preferred result. In making this selection we have erred on the side of caution and generally selected the methods that gave the higher projected ultimate results.

We have also incorporated a provision for adverse deviation (PAD). This is a regulatory requirement for Motor and EC under the Insurance Authority's Guidance Note 9. We have extended its application to cover all classes of business.

It is not unusual for insurance companies to want to err on the side of caution when projecting future claims experience for purposes of reserving. However, it is important for compliance with relevant accounting standards that any such conservatism does not become excessive such that the reported figures lose their realism. We are comfortable that the level of liabilities estimated lies within a range of reasonable estimates and is not excessive.

5.1. Claims liabilities

The actuarial estimates for outstanding claims:

- are estimates of the ultimate settlement value of claims. As described above, we have generally erred on the side of caution in deriving these estimates especially in respect of HK Motor and HK EC/EL;
- are undiscounted;
- include allowance for “pure IBNR” (late reported claims) and “IBNER” (development of known claims);
- are intended to allow fully for future claims inflation;
- include an explicit provision for adverse deviation (PAD) designed to raise the probability that the outstanding claims reserves will be sufficient to meet the liabilities to 75%;
- include implicit allowance for direct claims handling expenses and explicit allowance for indirect claims handling expenses;
- include an allowance for anticipated future third party and reinsurance recoveries

For good corporate governance, we have opted to follow the Insurance Authority’s (IA) guidance for Motor and EC for the inclusion of a provision for adverse deviation (PAD) and indirect claims handling expenses (CHE) in the estimate of claim and premium liabilities. However, we have added these components for all classes of business. Whilst the IA is unspecific about the size of PAD the actuary should consider, the actuarial estimate including the PAD and CHE represents the minimum funding level acceptable to the authorities. It does not necessarily represent a recommended level of provision. Indeed, it may be appropriate for companies to hold funds in excess of this level. In our opinion, how much more than this is appropriate remains a strategic management decision.

Discounting

The estimates of the future settlement value of claims have not been discounted to reflect investment returns that may be earned on claims reserves before they are paid out as claims.

Nonetheless, this investment return provides a buffer on top of the true discounted estimate. We have therefore made allowance for discounting by reducing the PAD factors selected. The allowance for discounting was determined having regard to:

- inflation on future claim costs which have been implicitly allowed for in our valuation
- the current level of interest rates available on the Hong Kong Exchange Fund
- the variability and average duration of claim payments that generally apply for the various business lines.

Valuation Methods

To determine our estimates of the claim liabilities we have analysed the experience for each class using the following methods:

- Chain ladder on paid or incurred claims;
- Bornhuetter-Ferguson (BF) method using paid or incurred claims;
- An expected loss ratio method; and
- Expected severity method based on projected ultimate claim count

A description of each method is provided in Section 8.

For the most recent accident year, we have generally relied upon the expected severity method, and the BF method. For long tail classes (such as Motor, EC, and Public Liability), where the early claim costs can be quite immature and an unreliable guide, the number of reported claims can be a good early indication of the ultimate cost. The BF methods are also appropriate for these early durations as the results they produce are less sensitive to the immature claims experience to date and the projected future claims development.

In the older accident years, where the emerging claims experience is more mature and hence reliable, we have placed greater reliance on the chain ladder methods.

We noted that large case reserves remained for claims dating back for more than 9 years. We recognise Ming An's conservative approach of not closing such claim files until they know for sure that no payment will result. Erring, we believe, on the side of caution, we have assumed that these case reserves are held by the claims managers for good reason in respect of ongoing claims and will ultimately be paid out in full.

Indirect Claims Handling Expenses (CHE)

Guidance Note 9 from the OCI was reissued in November 2003 and requires actuaries to include provision for indirect CHE for Motor and EC where (i) such indirect costs can be reasonably estimated, (ii) an appropriate allocation of these indirect cost estimates to the future settlement of claims can be made, and (iii) the resultant effect of such an allocation has a significant effect on the underwriting results from one underwriting period to the next. We have included a provision for indirect CHE in our liability estimates for all classes of business written.

Our experience suggests that the likely internal cost associated with the management of the run off of the incurred claims, not limited to the cost of the claims department itself but also allowing for the proportionate burden these claims will place on other functions such as IT, accounts and property costs, is in the order of 5% for the HK business and 4% for the China business of the amount of the gross unpaid claims. This allowance is judgemental, based upon our general knowledge of the experience of insurers in Hong Kong, rather than Ming An's own experience. We believe that this provision should be sufficient to cover future indirect CHE costs incurred.

5.2. Premium liabilities

Deloitte Actuarial has also estimated the premium liabilities of Ming An as at 30 June 2006. Premium liabilities consist of the unearned premium reserves (net of deferred acquisition expenses) plus any additional reserve required to meet any expected loss on the unearned portion of business written during its runoff. In this manner the unexpired risk reserve is intended to be adequate to meet future claims plus the portion of the insurer's expenses (all expenses, not just those of the claims department) associated with administering the run off of these claims. We have nominally assumed that half of the expenses are incurred at inception and half during the course of the policy and its claims experience. Therefore the estimate of the unexpired risk reserve (URR) is calculated based on applying the expected loss ratio and 50% of the expense ratio to the net unearned premium reserves.

We have been advised by Ming An that it does not book any deferred acquisition expense in its accounts.

In addition, a provision for adverse deviation has been incorporated to cover the risk that actual claims experience is worse than expected.

The estimates of future claims are estimates of the ultimate settlement value of claims. We have generally erred on the side of caution in estimating these ultimate values, and they allow fully for expected future claims inflation. The loss ratio applied in this calculation is the loss ratio that maybe expected to be incurred on the business that is unearned as at the review date. The majority of this unearned business will have been written in the latter half of 2005 and in 2006 and reflects the premium rates prevailing at this time.

In assessing the requirement for additional reserves for expected losses, we considered the insurance ordinance in HK to set a minimum value for each class of zero. That is, the expected profits on profitable classes are not permitted to be used to offset the expected losses from unprofitable classes.

For the unearned premium reserve, we have relied upon Ming An's internally calculated figure. We understand this has been based upon a daily earnings pattern.

5.3. Provision for Adverse Deviation (PAD)

The IA guidance note states that "where considered appropriate by the actuary, risk margins that relate to the inherent uncertainty" should be added to the best estimate of claim and premium liabilities for Motor and EC. Our estimate of the liabilities without PAD is not necessarily an appropriately prudent balance sheet provision and we have included an assessment of such a PAD for all classes of business. In a number of other jurisdictions the minimum permissible PAD or prudential margin is set at the 75th percentile confidence interval for reserve adequacy. That is, the level where the probability of reserve adequacy is 75%. However, we feel the conservatism of reserving remains a strategic management decision and values in excess of this level may be reasonable.

Market practice is somewhat varied. It is, however, possible to discern a reasonable range for various types and classes of business. The determination of appropriate prudential margins to adopt should, in our view, be made judgementslly considering among other matters:

- the nature and size of the portfolio;
- the sensitivity of the valuation results to changes in the valuation assumptions;
- the variability of the claims experience;
- the insurer's approach to setting levels of provisions

We have based our approach to setting the risk margins on an industrywide variability study carried out by Scott Collings and Graham White of Deloitte Actuarial in Australia. The analysis had regard to the level of historical variability seen in claim development statistics for each class of business. The results of that analysis were a coefficient of variation (CV), the 75th percentile and risk margins for each class.

We have based our PAD selections on the results of R&D on Hong Kong insurers in particular. We have also had regard to the Australian benchmarks referred to above with suitable allowance for use in Hong Kong. These adjustments are designed to take account of inherent differences in the markets including amongst others:

- size of insurer
- nature risk and uncertainty of development e.g. EC in Hong Kong v. Workers Comp in Australia
- incidence of catastrophes

It should be noted that there already exists an implicit margin in our estimates of the liabilities (before PAD), in addition to the deliberate conservatism in the assumed future experience, in that they are undiscounted for investment return on held reserves. To account for this "discount buffer", we have performed a discounted cash flow analysis on each class of business based on yield rates on Exchange Funds of different durations.

We have applied PAD factors which we believe are consistent with raising the probability of adequacy of an undiscounted 'best estimate' of the liability to 75%. As described above, in this instance we are, however, applying these factors to a conservative undiscounted estimate of the liability and the probability of adequacy should therefore be higher than 75%.

The PADs selected for each line of business is summarised in the following table. The same discounted PADs have been applied gross and net of reinsurance.

Table 5.1 — Provisions for Adverse Deviation

Line of Business	Discounted PAD	Discount Buffer	Undisc'd PAD for Claim Liabilities	Undisc'd PAD for Premium Liabilities
Hong Kong Entity				
Employees' Compensation				
— Construction	30%	5%	25%	27%
Employees' Compensation				
— Non-Construction	20%	7%	13%	15%
Employees' Compensation — SARS	25%	7%	18%	n/a
Motor	15%	6%	9%	11%
Fire	12%	3%	9%	13%
CAR	15%	4%	11%	13%
Other Property	15%	4%	11%	13%
Hull	14%	5%	9%	11%
Cargo	12%	2%	10%	12%
Logistics	14%	4%	10%	12%
Public Liability	20%	12%	8%	10%
Professional Indemnity	20%	11%	9%	11%
Personal Accident	10%	4%	6%	8%
Medical	10%	2%	8%	10%
China Entities				
Employers Liability	20%	3%	17%	19%
Public Liability	20%	4%	16%	18%
Motor	13%	3%	10%	12%
Hull	11%	3%	8%	10%
Cargo	10%	3%	7%	9%
Logistics	10%	4%	6%	8%
Fire	10%	4%	6%	10%
CAR	15%	7%	8%	10%
Other Property	10%	5%	5%	7%
Personal Accident	7%	5%	2%	4%

The PAD for claims liabilities is applied to outstanding claims (case reserves plus IBNR) including claim handling expenses. The PAD for premium liabilities is applied to the estimate of unexpired risk reserve. In general, the premium liability PAD is greater than the claim liability PAD for each line of business. This reflects the fact that there is greater uncertainty in estimating premium liabilities than outstanding claims. The main reason for this is that with premium liabilities, we are estimating the incidence and severity of claims that have not yet occurred. This is particularly relevant when considering large individual claims or catastrophic events.

Normally, if an insurer's portfolio is sufficiently diversified across its many classes of business, one may expect an allowance for the diversification benefit. That is, one may expect one or two classes to have a bad year but one would not expect all classes of business to have a bad year in the same year. However, due to the concentration of Ming An's business (from a reserving perspective) in the EC and Motor book, we have elected to not apply any diversification benefit for Ming An.

6. ANALYSIS AND COMMENTARY

6.1. Results by Class — Hong Kong

6.1.1. Employees' Compensation — Construction

Ming An has significantly curtailed writing this business since 2003. Currently, construction risks represent about 1% of the total EC portfolio and mostly consist of coverage for interior decorators, which is lower risk than other construction risks.

There remains a lot of case reserves (over HK\$75m) for accidents in excess of 4 years old. It is possible that these case reserves may not be needed in full but in line with our conservative approach we have not anticipated savings from these reserves.

6.1.2. Employees' Compensation — Non-Construction

Ming An has become more selective in its underwriting policy and has been declining many of the poorer risks since 2003. As a result there has been an improvement in loss ratio from 2003 onwards albeit with a commensurate shrinkage in the portfolio. Currently, the major industries covered by Ming An include the manufacturing sector, the import and export sector, and clerical workers.

Again, there are case reserves held for accidents upto 15 years ago. Whilst it is possible that these reserves may not be paid out in full, to err on the side of caution, we have not reflected such savings in our ultimate claim selection.

Due to the unusual nature of claims related to the outbreak of SARS in 2003, we have removed them from the actuarial triangles and analysed them separately (see section below).

6.1.3. Motor

This portfolio has been quite profitable with net loss ratios in recent years below 60%. The majority of the portfolio consists of personal risks. The commercial risks have declined from about 40% of the total portfolio to about 20%. High risk vehicles such as taxis and public light buses are no longer written.

There is strong evidence from the historical data which indicates savings on incurred claims from 48 months and onwards and we have partially reflected these savings in our analysis by selecting negative IBNR for old accident years.

6.1.4. Fire

The Fire class mostly covers commercial risks such as office buildings. The portfolio has been profitable with gross ultimate loss ratios of less than 25% and net ultimate loss ratios of around 20%.

We observe savings on incurred claims from 12 months onwards and as such, we have reflected these savings through negative IBNR in our selections. However, whilst this is quite a large class of business, because Fire is a short tail class of business, the level of case reserves and hence IBNR is much lower than EC and Motor.

6.1.5. *Contractors' All Risks*

The Contractors' All Risks (CAR) class is longer tailed than the Fire class. In recent years, this class mostly provides coverage for interior decoration work only. If the contract involves coverage for exterior work, it will only be accepted on a case-by-case basis.

6.1.6. *Other Property*

The Other Property class includes Cash, Burglary, Property All Risks, Bond and Machinery. This class has shown good profitability in recent years with net loss ratios around 20%.

6.1.7. *Cargo*

The Cargo class consistently shows savings on incurred claims after 12 months and we have reflected these savings through negative IBNR. This class has been very profitable with net ultimate loss ratios consistently below 20%.

6.1.8. *Hull*

The Hull class of business has also been profitable. It tends to be a bit longer tailed than the Cargo class as is evident from non-zero case reserves remaining open back to 1991.

In our analysis, the Hull class of business also includes aviation. Two types of aviation risks were written in the past by Ming An. They are satellites property damage (for damages against the satellites themselves) and third party liability coverage caused by crude oil used by airplanes. There have been no losses reported on these policies.

6.1.9. *Logistics*

The Logistics class began to be written in 2001, covering warehousemen for their liability while the goods are in their possession. The gross ultimate loss ratios have been around 50% while the net ultimate loss ratios have been around 40%.

Once more there is evidence of Ming An's conservative approach to case reserving and savings are apparent.

6.1.10. *Public Liability and Professional Indemnity*

Both classes tend to be quite long tailed. The Public Liability class covers mostly third party liability and property damage exposures for various types of corporate clients such as property management companies, restaurants, and schools. Ming An also has significant exposure with policies covering three government entities which are: Hospital Authority, Social Department, and Education Department. The policy with the Hospital Authority is still in-force but the policies with the other two departments have not been renewed.

The exposure is mainly confined to Hong Kong and contracts are written on a loss occurring basis. The portfolio has very little products liability exposure. Historical loss ratios have been volatile due to the exposure to large losses and aggregations with this business.

The Professional Indemnity portfolio represents a small portion of the total public liability portfolio and one of the main contracts provides coverage for the Hong Kong Solicitors Indemnity Fund. Policies provide coverage on a claims made basis.

6.1.11. *Personal Accident and Medical*

These are short tailed classes and have minimal IBNR and are profitable.

6.1.12. SARS

There are two classes of business with SARS exposure – EC and Public Liability. Reinsurance is handled differently for the two classes.

- EC Claims

As at 30 June 2006, 326 EC claims had been reported from 17 hospitals. Of the 326 claims, 15 have closed without payment, 178 have closed with payment and there remained 133 claims unsettled from 16 hospitals. The case reserves on these open claims (before reinsurance) totalled HK\$91m.

Pure IBNR — We have considered the potential for further claims to be reported. The last claim received was in the middle of 2005 and all other claims were reported in 2003. It therefore seems unlikely that there will be significant numbers of newly reported SARS claims in the future.

IBNER — We have used a variety of approaches to assess the potential for adverse deviation for the claims which remain open.

SARS Incurred Chain Ladder — We have looked at the SARS claims development triangle. There has been some deterioration in the first few development periods, although this deterioration now appears to be slowing down. This suggests that it is possible that there may yet be some further deterioration in future periods.

EC Incurred Chain Ladder — As discussed above, the run-off of non-SARS EC claims has consistently shown redundancies emerging from strong case reserves. Prima facie, there is no reason to believe that Ming An will have been any less conservative in setting case reserves for these SARS claims and hence there is a good chance that there could be savings from the case reserves for these SARS claims too.

Reserve Adequacy on Settlement — We have analysed the incurred amounts 180 days before the closed claims were settled. We found that a little over half of the claims had incurred amounts (paid claims and case reserves) less than the actual settled amounts 180 days before the claims were actually settled, ie. there was on average some adverse development on settlement. On further investigation we found that a lot of this deterioration pertained to a few large cases which suffered marked deterioration shortly before being settled. This analysis may point towards some potential for inadequacy in the case reserves for open claims.

Settlements Relative to Permanent Incapacity — Finally, we analysed the relationship between the assessed percentage of permanent incapacity (based on Loss of Earnings Capacity) and the multiple of the settlement to the claimant's salary. We found that the two factors were closely related (ie. the higher the degree of permanent incapacity, the higher the settlement as a multiple of the claimant's salary). We studied the multiple implied by the case reserves for claims which remain open. This suggested that a handful of cases may be under-reserved and that these had potential for adverse development. There were also a number of claims with case reserves that appeared to be very high using this same measure.

Based on the various analyses above, there is the possibility of some adverse development of outstanding claims, and seeking to err on the side of caution, we have assumed IBNER of approximately HK\$19m based on the SARS incurred chain ladder analysis.

On a net of reinsurance basis, the EC claims are first protected by a 21% quota share (QS) treaty. An excess of loss (XOL) treaty then provides protection for net of QS claims in excess of HK\$5m per event.

The interpretation of 'per event' in this context is a matter of debate between Ming An, its reinsurer and their legal advisers. Ming An is hopeful that each event will be defined as a 'hospital cluster' (hospitals in the same vicinity), rather than each hospital or each individual claimant. Ming An has received SARS claims from 7 hospital clusters (however, the New Territory East cluster was counted as 2 clusters where there were many serious cases) and two treaty years were impacted, 2003 and 2004 so regard their maximum exposure as being HK\$80m, for 16 events of upto HK\$5m each (ie. 8 hospital clusters for 2 treaty years).

To date, HK\$40m has been paid (net of QS) and Ming An is holding a provision for a further HK\$40m. In practice, applying the above definition of 'event' to the claims reported to date would imply that their net of QS incurred is only HK\$51m. This amount is fairly insensitive to the potential for adverse development of the outstanding claims. For instance, making quite pessimistic assumptions about future incurred claims development only increases this amount to HK\$53m, still significantly lower than the HK\$80m implied by the held reserve. As such, there is clearly scope for some release from the current provision.

On the other hand, should the interpretation of 'event' be determined to be each hospital or each claimant, the current total net incurred exposure could be as much as HK\$112m (HK\$142m gross less 21% QS), rather than the HK\$80m implied by the held reserve. This position is also much more exposed to the potential for adverse development of the open claims. So, there is clearly also some scope for adverse development.

Again, opting to err on the side of caution, we have selected the weighted average of the following scenarios as regards reinsurance interpretations:

- the worst case scenario whereby each claim is regarded as an event (25% weighting)
 - such that the only reinsurance recoveries would be the QS and hence the net incurred claims would be HK\$112m, and
- the "Ming An" assumed scenario whereby there would be a total of 16 events (8 clusters for 2 policy years (75% weighing)
 - such that a further HK\$32m was recoverable from the XOL reinsurers and the net incurred claims would therefore be HK\$80m.

As such, our assumed total exposure, net of all reinsurance recoveries, was HK\$88m.

Ming An has already paid HK\$40m (net of QS) and in its balance sheet is holding HK\$72m in case reserves (net of QS). This is HK\$24m higher than our assumed net exposure (HK\$88m), implying a release of the held case reserves (negative IBNER).

- PL Claims

For the Public Liability (PL) SARS claims, we note that there were 50 claims reported as at 30 June 2006. None of them have been settled. Most of the claims were reported in 2003 and 2004, with only 1 claim reported in 2005 but 5 claims were then reported in 2006. The 5 claims reported in 2006 suggest that it may be possible that Ming An will receive more new claims in the future. As one can see, the reporting pattern of the PL SARS claims is quite different from the EC SARS claims. Hence the two types of claims were analysed separately.

We have considered triangular development of these claims and noted significant upward development of the incurred claims to date. This could indicate that there may be further adverse development on the PL SARS claims, both from pure IBNR (newly reported claims) and from IBNER (adverse development on previously reported claims).

However, we understand that a QS treaty applies to these PL claims under which Ming An's net retention is only 2.5% (ie. 97.5% is ceded to Ming An's reinsurers). This means that, on a net of reinsurance basis, Ming An has relatively little exposure to potentially adverse future development of these claims.

Unlike the EC SARS claims which have been analysed separately from the EC class of business, the PL SARS claims have been included in the PL class of business. Nonetheless, we have considered the circumstances as regards SARS claims when making our selections for this class in the 2003 accident year and erred on the side of caution accordingly.

6.1.13. *Inwards Proportional Reinsurance Treaties*

The three main inwards reinsurance treaties cover EC business ceded by Sun Hung Kai Properties Insurance Limited, Chong Hing Insurance Company Limited, and People's Insurance Company of China (HK) Ltd. These are QS programmes which were in effect from 1994 to 2000. The programmes are currently in run-off. In particular, the Sun Hung Kai treaty was written on a losses occurring basis, whilst the other two treaties were written on a risks attaching basis. We have been advised that most of the exposures related to construction business and therefore we applied the claims development assumptions from the EC — Construction class of business.

There were other inwards reinsurance treaties assumed by Ming An for other classes of business. As at 30 June 2006, only the Fire, Hull, and Cargo classes of business have case reserves, with the majority of this from the Fire class. We used an IBNR-to-case ratio based on Ming An's direct and facultative business to determine an appropriate IBNR for these treaties.

6.1.14. *EC XOL Pool*

This reinsurance pool was managed by China International Reinsurance Company Limited (CIRe). The pool was in place from 1995 to early 2000. The pool covered EC risks written by former insurance companies MAI, CIC, and TPI. It was organised on an XOL basis (HK\$47m XS HK\$3m for 1995 to 1997, and HK\$46.5m XS HK\$3.5m for 1998 to 2000 per occurrence). MAI, CIC, and TPI each had a 15% share in the pool, totalling 45%. The other 55% was covered by CIRe and its parent company. This treaty was commuted in June 2005.

The data consists of what would have been ceded to the pool, had it remained in place, before any apportionment or allocation of the claims ceded to the pool. Loss development factors were selected based on historical experience specific to this treaty. The results seem to be longer tailed than the direct business, presumably due to its XOL nature and the fact that many claims may not pierce the retention until a later stage of development.

We generally based our ultimate claim cost selection on the incurred loss development method.

6.1.15. *EC Commuted Quota Share*

This EC QS treaty protected MAI's net account before 1998 and CIC and TPI's net accounts before 1999. The reinsurer was CIRe and the ceding percentages varied between 50% and 80% depending on the underwriting year. This treaty was commuted on 31 December 2003.

The data consists of what would have been ceded to this treaty had it been still in effect. We performed the analysis separately for Construction and Non-Construction business. Since the arrangement of the treaty was on a QS basis, we are able to apply the loss development factors derived from our analysis of the equivalent direct and facultative business.

We generally based our ultimate claim cost selection on the average of the paid and incurred loss development methods.

6.2. **Results by Class — China (Shenzhen and Haikou)**

6.2.1. *Motor*

This is the most significant class of business written in China from a reserving perspective. Nonetheless, it remains very small relative to the size of the HK business.

6.2.2. *Employers' Liability and Public Liability*

These lines of business are much shorter-tailed than their Hong Kong counterparts. The portfolios have also been profitable. Both portfolios have remained small.

6.2.3. *Hull, Cargo, Logistics*

All three portfolios have remained small and therefore the resulting loss ratios are very susceptible to large losses which occur from time to time for this type of business. For the most part, business from these portfolios has been profitable.

6.2.4. *Fire, Contractors' All Risks, Other Property*

The Fire and CAR portfolios have shown relatively stable loss ratios over the years. All three classes are quite short tailed.

Ming An (China) has a portfolio of long term policies which it has been writing since the early 1990's. These policies cover damage to mortgaged buildings. These properties are mostly residential in nature. The policy period can be 10 to 20 years depending on the terms of the mortgage. The earning of the premium is amortised over the policy period. There have been very few claims to date with the largest claim at HK\$5m (which was heavily reinsured). There remains approximately HK\$36m of unearned premium reserves as at 30 June 2006.

6.2.5. *Personal Accident*

This is a very short tailed class of business and therefore has minimal IBNR.

7. DEFINITIONS

7.1. Paid Claims

Cumulative claims and allocated loss adjustment expenses that have been booked as paid at the relevant date.

7.2. Case Estimates

Case reserves in respect of specific reported losses and allocated loss adjustment expenses that have not been booked as paid at the relevant date.

7.3. Incurred Claims

Reported claims and losses and allocated loss adjustment expenses as at the relevant date for the particular exposure period. This includes cumulative paid claims and case estimates and allocated loss adjustment expenses at the relevant date (but excludes IBNR). Note that this differs significantly from a financial year definition such as one may find in an insurer's accounts (paid claims plus change in case reserves).

7.4. IBNR Claims

Incurred but not reported claims. IBNR claims include:

- Estimate for claims that have not yet been reported, but have been incurred (i.e. "pure" IBNR claims)
- IBNER claims (i.e. incurred but not enough reported) — estimate for future movements on claims that have already been reported
- Allowance for direct loss adjustment expenses in regard of these claims

7.5. Ultimate Claims

The sum of incurred and IBNR claims.

7.6. Claims Reserves/Outstanding Claim Liabilities/Unpaid Claims

These refer to the difference between ultimate claims and paid claims, or case estimations plus IBNR claims.

7.7. Reported Claim Count

Number of claims which are reported at the relevant date.

7.8. Unreported Claim Count

Number of claims which are estimated to be unreported at the relevant date.

7.9. Ultimate Claim Count

The sum of reported and unreported claim count.

7.10. Severity

The average loss amount per claim, calculated by dividing Ultimate Claim Cost by Ultimate Claim Count.

8. METHODS FOR ESTIMATING ULTIMATE CLAIMS**The Paid Claim Development (PCD) and Incurred Claim Development (ICD) Methods**

The PCD and ICD methods model the development of the cumulative paid claim costs and cumulative incurred claim costs respectively over time for different accident cohorts (in this case, accident years).

PCD or ICD factors are calculated for each accident and development year. These factors reflect the increase in the cumulative paid (or incurred) cost (for example, a factor of 1.25 means a 25% increase in claims cost). The history of observed PCD (or ICD) factors is used as a guide in the selection of values of this parameter for the projection.

The selected development factors are then applied to the cumulative paid and incurred claims to date for each accident year to project the ultimate cumulative incurred claims cost.

The estimated IBNR represents the difference between the projected ultimate claim cost and the claims cost incurred to date.

When using these methods it is not necessary to make an explicit allowance for future claims inflation, since past inflation experience is encompassed in the development factors.

The Bornhuetter-Ferguson (BF) Method

The BF method is often used for establishing the IBNR allowance for small portfolios, reinsurance portfolios or recent accident years where there is little development.

Whilst this method will not, other than by chance, accurately predict the true emergence of IBNR, it does allow for the release of profits in a manner that reflects the expected pattern of the claims development.

The BF method was developed by two U.S. actuaries, R.L. Bornhuetter and R.E. Ferguson, in the early 1970's and is described in their paper to the Casualty Actuarial Society titled "The Actuary and IBNR".

The method basically assumes that the claims experience for an accident year will produce a particular loss ratio and then blends this assumption with the actual claims experience as it emerges.

The BF method establishes “IBNR” reserves for each accident year using the following formula:

$$\begin{array}{c} \text{Earned Premium} \times \text{Assumed initial loss ratio} \\ \times \\ \text{Expected unreported proportion of ultimate claims (the IBNR Factor)} \end{array}$$

The total provision held by an insurer therefore comprises:

- actual reserves on individual claims, and
- the IBNR amount arising from the BF calculation process.

The major decisions to be made in applying the BF method are:

1. the appropriate IBNR factors (we have used the IBNR factors derived from the PCD and ICD methods), and
2. the initial loss ratios.

The Expected Loss Ratio Method

The basis of the expected loss ratio method is to estimate an appropriate ultimate loss ratio that for each accident year and apply this loss ratio to the earned premium for the same year to derive the estimated ultimate claim costs.

The estimated outstanding claims liabilities for each accident year are then equal to the estimated ultimate claim cost less the claims paid to date.

We have used this approach to supplement the BF method in cases where the BF method result implies an unrealistic ultimate loss ratio for a particular accident year.

Our expected loss ratios (where used) have been chosen after consideration of the results of the ICD and BF methods, taking into account trends in loss ratios for previous years, judgement in relation to current industry benchmarks, and following discussion with underwriting personnel on the emerging performance of the relevant classes of business.

The Expected Severity Method

The expected severity method makes use of the claim count data in estimating the ultimate claim costs.

The ultimate claim count is first determined using a method similar to the PCD or ICD described above. The severity is then calculated for each accident year by dividing the ultimate claim cost (as derived using the PCD or ICD method) by the projected ultimate claim count.

Inflation must be considered explicitly in this method. The ultimate severity must be trended to the valuation date using a trend based on an inflation index (eg. Consumer Price Index for short tailed classes and wage index for long tailed liability classes). After all the historical ultimate severities have been trended to the valuation date, an ultimate severity is selected. The selected severity is then de-trended for the historical accident years using the inflation index.

The product of projected ultimate claim count and the de-trended severity for each accident year equals the ultimate claim cost.