



STUDY GUIDE

ASHK Examinations

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LIFE INSURANCE

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ACTUARIAL SOCIETY
of
HONG KONG
香港精算學會

3.2 Life Insurance

3.2.1 Role of life insurance actuaries in Hong Kong¹

Life insurance actuaries are involved in a wide varieties of areas within the industry. These include:

Area	Application
<i>Auditor</i>	Perform internal and external audit functions of insurance companies
<i>Banking and Financial Services</i>	Help banks and financial services companies with product portfolio, capital management and risk analysis in relation to life insurance
<i>Consulting</i>	Advise clients on actuarial and insurance related matters
<i>Entrepreneurial Actuaries</i>	A wide range of opportunities is available for actuaries who desire to set up and run their own business
<i>Predictive Analytics</i>	Use modeling and data analysis techniques on large data sets to discover predictive patterns and relationships for business use
<i>Pricing</i>	Determine product features and pricing
<i>Risk Management</i>	Perform risk management functions for an insurance company; it may cover financial and/or operational risks; or specific lines of business or a an enterprise level
<i>Regulator</i>	Oversee the financial conditions and operations of authorised insurers; facilitating both the healthy development of the industry and the protection of policyholders
<i>Reinsurance</i>	Perform traditional actuarial duties for a reinsurer that would accept risk from a direct insurance company

¹ Reference to SOA website: <https://www.soa.org/future-actuaries/career-paths/>.

Area	Application
<i>Sales and Marketing</i>	Help set policies, messages and compensation levels for those directly involved in marketing and distribution
<i>Statutory Role / Appointed Actuary</i>	<p>A role stipulated by the Insurance Ordinance (Cap. 41) (IO) which can only be fulfilled by qualified professional actuaries. The responsibilities include, but are not limited to the following:</p> <ul style="list-style-type: none"> • Set, validate and certify the adequacy of the insurance liabilities and financial / solvency position of the company; • Advise the company of the interpretation of its policyholders' reasonable expectations, and the transfer of assets between long term and shareholder funds; • Determine the appropriateness of premium rates charged; • Certify the information disclosed on Class C linked products is accurate; • Manage the potential conflict between its duty to policyholders and its duty to shareholders, particularly in relation to the declaration of non-guaranteed benefits for policyholders.
<i>Senior Management</i>	Provide broad business and management leadership for an organisation
<i>Valuation</i>	Perform experience studies, cash flow testing and other tasks to set the amount of reserve and capital held by an insurer

3.2.2 Overview of market landscape in Hong Kong

The Insurance Authority (IA) website provides a good source of reference material for an overview of the Hong Kong market. We recommend practitioners to analyse its annual reports and market & industry statistics to better understand the Hong Kong market dynamics. They cover for general and long term insurance business.

3.2.2.1 Insurance companies and competitive environment

As at 31 December 2017, there were 47 pure long term insurers and 19 composite insurers.

According to the statistics as at 31 December 2017 provided by the Insurance Agents Registration Board ("IARB"), there were 2,447 insurance agencies, 63,933 individual agents and 25,881 responsible officers/technical representatives registered with the IARB.

There were 759 authorised insurance brokers as at 31 December 2017. All of them are members of the two approved bodies of insurance brokers, namely The Hong Kong Confederation of Insurance Brokers and Professional Insurance Brokers Association. In addition, there were 9,489 persons registered as chief executives/technical representatives of these authorised brokers as at 31 December 2017.

3.2.2.2 Product types and classification

Chapter 41 Schedule 1 Classes of Insurance Business²

According to IA reporting, long term insurance business in HK is categorised into nine classes of business (Classes A to I), including individual and group life businesses. For individual life business, most of the inforce and new business today are Class A (non-linked life insurance) and Class C (unit linked) business.

For long term insurance business, the office premiums of new Individual Life business increased by 39.8% to HK\$179.1 billion in 2016 when compared with 2015. New office premiums for Individual Life (Non-Linked) business increased by 47.2% to HK\$173.4 billion, while Individual Life (Linked) business dropped by 44.6% to HK\$5.7 billion in terms of new office premiums. The total number of new policies increased by 8.5% to 1,267,560 in 2016.

For in-force business, the total office premiums increased by 23.8% from HK\$328.1 billion in 2015 to HK\$406.2 billion in 2016. The Individual Life category remained the dominant line of

² Latest statistics are available on the IA website: https://www.ia.org.hk/en/infocenter/statistics/annual_long_term_business_statistics.html; previous years' statistics can also be found on past annual reports of the Office of the Commissioner of Insurance (OCI). For example, the relevant statistics are shown on pages 45-47 of the 2016 OCI Annual Report (<https://www.ia.org.hk/en/infocenter/files/AR2016.pdf>).

business, making up HK\$384.6 billion or 94.7% of the total business. The number of policies in 2016 stood at 12 million, carrying net liabilities of HK\$1,531.8 billion.

The in-force office premiums of Group Life business increased by 2% to HK\$3.3 billion, carrying net liabilities of HK\$1.1 billion.

According to the Medical Claim statistics published by HKFI (the most recently published statistics are as of 2015, HK insurers provide sizable group and medical insurance to the market. Based on the data collected by HKFI from 18 major insurers, the total billed amount of private medical expenses that with medical insurance coverage was HK\$7.3 billion and HK\$5.3 billion for Group and Individual respectively in 2015.

3.2.2.3 Authorisation requirements and guidelines

Any company interested in carrying on insurance business in or from Hong Kong may apply to the Insurance Authority ("IA") for authorisation to do so under the Insurance Ordinance (Cap. 41) (IO).

Authorisation to carry on insurance business in or from Hong Kong will only be granted to those insurers who meet the authorisation requirements stipulated under sections 8(1) through 8(3) of the IO. These include meeting the capital and solvency requirements, fulfilling the "fit and proper" requirements of management and shareholders, as well as having adequate reinsurance arrangements.

The company must also meet certain other conditions as set out in the Authorisation Guidelines ("the Guideline") or GL1 issued by the IA, which seek to ensure that the applicant insurer is financially sound and competent to provide an adequate level of services to the insuring public. These conditions continue to apply to an insurer after its authorisation. The requirements set forth in Item 11 of the Guideline apply to all applicants, whether incorporated locally or overseas.

Other useful link for this section are listed below for additional background information:

https://www.ia.org.hk/en/infocenter/publications_publicity_materials.html

3.2.3 Regulations, professional standards, guidelines and industry standard practice

3.2.3.1 Qualification for appointment as an actuary in Hong Kong - Chapter 41A Insurance Companies (Actuaries' Qualifications) Regulation

The Insurance Ordinance (IO) prescribes the following qualifications for the appointment of an actuary by an insurer in carrying on long term business:

- Fellow of the Institute and Faculty of Actuaries of the United Kingdom
- Fellow of the Institute of Actuaries of Australia
- Fellow of the Society of Actuaries

3.2.3.2 Chapter 41H Insurance Companies (Actuaries' Standards) Regulation

Chapter 41H of the regulation stipulates that any actuary appointed under the IO Cap.41 section 15(1) must comply with "Professional Standard 1 (PS1)" approved by the Actuarial Society of Hong Kong (ASHK) (including any subsequent amendment thereto made with the approval of the Insurance Authority and the Secretary for Financial Services and the Treasury).

The roles and responsibilities of an appointed actuary are extensive, these include determining the appropriateness of the premium rates charged, validating and certifying the adequacy of the insurance liabilities and financial / solvency position of an insurance company, advising the board on the interpretation of policyholders' reasonable expectations, recommending on the transfer of assets between long term and shareholder funds, etc. Appointed actuaries must comply with PS1 when carrying out their duties.

3.2.3.3 Guidelines³ and circulars

The OCI (now taken over by Insurance Authority) has issued the following Guidelines as relevant to the long term business:

- GL1 - Authorisation Guidelines
- GL4 - Guideline on "Fit and Proper" Criteria under the Insurance Ordinance (Cap.41)
- GL5 - Guideline on Application for Authorisation to Carry on Insurance Business in or from Hong Kong
- GL7 - Guideline on the Reserve Provision for Class G of Long Term Business (revised in December 2006)
- GL8 - Guideline on the Use of Internet for Insurance Activities
- GL10 - Guideline on the Corporate Governance of Authorised Insurers

³ All Guidance Notes promulgated by the OCI have been renamed as Guidelines, and the abbreviation have been changed from "GN" to "GL".

- GL11 - Guideline on Classification of Class C - Linked Long Term Business
- GL12 - Guideline on Reinsurance with Related Companies
- GL13 - Guideline on Asset Management by Authorised Insurers
- GL14 - Guideline on Outsourcing
- GL15 - Guideline on Underwriting Class C Business
- GL16 - Guideline on Underwriting Long Term Insurance Business (other than Class C Business)
- GL17 - Guideline on Reinsurance

Insurers are expected to comply with the guidelines. Depends on the facts and circumstances, violation may subject the insurer to regulatory actions.

3.2.3.4 Professional conduct and actuarial guidance notes

To maintain a high level of professionalism among members, the ASHK regulates actuarial practice of members by issuing By-Laws, professional standards and actuarial guidance notes.

The actuarial guidance notes (AGN) currently applicable are:

- AGN 3: Additional Guidance for Appointed Actuaries (Revised on 23 October 2002)
 - Actuarial Guidance Note - Supplement to AGN 3 Additional Guidance for Appointed Actuaries (Effective 1 January 2013)
 - Actuarial Guidance Note - Second Supplement to AGN 3 - Additional Guidance for Appointed Actuaries - Additional Guidance for Determination of the Valuation Interest Rate (Effective 17 November 2014)
- AGN 5: Principles of Life Insurance Policy Illustrations (Effective from 17 June 2013)
- AGN 7: Dynamic Solvency Testing (Effective from 31 December 2016)
- AGN 9: Actuarial Guidance Note - Best Estimate Assumptions (Effective 1 April 2016)
 - Appendix A to AGN 9 - Participating and Universal Life Business Benefit Illustration Assumptions (Effective 1 April 2016)

The actuarial guidance notes are meant to be suggested standards of practices for actuaries practicing in Hong Kong. Actuaries are expected to review, understand and follow the guidance. If an actuary's practice is different from the AGNs, the actuary should document the rationale and quantify the impact of any differences.

The existing regulations, Guidance Notes and circulars have had profound impact to the industry. For example, post GL15, indemnity commission became prohibited, and the Investment Linked Assurance Schemes (ILAS) market evolved into primarily single premium products. Subsequently, the ILAS market experienced significant declines in sales volume.

3.2.3.5 Regulations of intermediaries

Distribution channels for the Hong Kong insurance market are primarily tied agents, brokers, and bancassurance.

To be qualified to sell life insurance policies in Hong Kong, an insurance agent must be appointed by an insurer, registered with the Insurance Agents Registration Board (IARB) set up by the Hong Kong Federation of Insurers (HKFI) and in compliance with the requirements specified in the Code of Practice for the Administration of Insurance Agents issued by the HKFI.

A broker can directly register with the IA. Alternatively, the broker can apply to become a member of the Hong Kong Confederation of Insurance Brokers (HKCIB) or Professional Insurance Brokers Association (PIBA). The chief executive and technical representatives of an insurance broker must be fit and proper. Additionally, they must satisfy the "Minimum Requirement" specified by IA with regard to "Qualifications and experience", "Capital and net assets", "Professional indemnity insurance", "Keeping of separate client accounts" and "Keeping proper books and accounts."

For the insurance business sold through the bancassurance channel, the bank is considered as an agent. The bank and its sales representatives must be regulated with IARB under HKFI.

All insurance intermediaries, their chief executives/responsible officers and technical representatives are required to pass the Insurance Intermediaries Qualifying Examination conducted by the Vocational Training Council as a condition for registration/authorisation unless otherwise exempted. They are also required to comply with the requirements of the Continuing Professional Development Program.

An appointed insurance agent shall not represent more than four insurers, with no more than two of the represented companies being long term business insurers.

For sales of ILAS, the insurance intermediaries are required to take the qualifying examination Paper V. There are also additional requirements set out by HKFI⁴.

For the distribution of Mandatory Provident Fund, the Mandatory Provident Fund Authority (MPFA) administers the registration of MPF intermediaries and issues the Guidelines on MPF Intermediary Registration and Notification of Changes. The Insurance Authority, as one of the frontline regulators (alongside Monetary Authority and Securities and Futures Commission), is responsible for inspection and investigation of registered MPF intermediaries whose core business is insurance.

⁴ http://www.hkfi.org.hk/pdf/en/download/e_CodePractice_2010.pdf and http://www.hkfi.org.hk/pdf/en/download/20150714_ILAS.pdf.

3.2.3.6 Market conduct

In order to synchronise with the Insurance Core Principle 19 (ICP 19) published by the International Association of Insurance Supervisors, the IA has issued GN 15 and 16 (now known as GL 15 and 16)⁵ for insurance companies writing long term life insurance contracts in Hong Kong. The main objective of the guidance notes is to incorporate the principle of “fair treatment of customers” from the initial stage of product design to the final servicing of the insurance policies. Insurance companies are required to perform functions including, but not limited to, the following:

- Incorporate the treating customer fairly principles as a part of the corporate culture;
- Improve the disclosure of the risk profiles of the insurance products, including illustration;
- Study the reasonableness of the fee structures;
- Evaluate the suitability of the products to potential customers;
- Monitor the conduct of intermediaries during the sales process;
- Continue adequate communications with customers; and
- Maintain a post sales process to identify potential market conduct issues.

These guidance notes are principles-based regulations rather than rules-based. The general practices may vary widely among insurance companies in Hong Kong due to factors such as company philosophy and limitation on resources. The market practices, however, are expected to gravitate towards a narrower range after IA reviews the industry’s compliance status.

In response to the guidance notes, HKFI has developed standard benefit illustration for ILAS, Participating Insurance Products and Universal Life (Non-Linked) Products.

Although there are vast similarities between ICP 19 and the guidance notes, there are minor discrepancies between them.

3.2.3.7 Taxation

In Hong Kong, all corporations including insurers are subject to profit tax. The profit tax is determined by applying a profit tax rate to the assessable profits. A life insurance corporation can select the deemed basis (5% of the net office premium) to calculate the assessment profits. The selection is irrevocable.

⁵ All Guidance Notes promulgated by the OCI have been renamed as Guidelines, and the abbreviation have been changed from “GN” to “GL”. The above mentioned Guidance Notes (now known as Guidelines) are:
Guideline 15 – Guideline on Underwriting Class C Business; and
Guideline 16 – Guideline on Underwriting Long Term Insurance Business (Other than Class C Business).

3.2.4 Insurance regulations for long term business (reserve requirements and solvency requirements)

This section covers the regulations on long term business from the aspect of valuation, reserving and solvency margin requirements.

3.2.4.1 Chapter 41 Insurance Company Ordinance

An effective and responsive regulatory framework which instils public confidence is essential to the healthy development of the insurance industry in Hong Kong. The Insurance Ordinance (Cap.41) prescribes the regulatory framework for insurers and insurance intermediaries. It is being continuously reviewed and updated to keep in pace with changing market conditions and international practices.

The Insurance Authority regulate and supervise the insurance industry for the promotion of the general stability of the insurance industry and for the protection of existing and potential policyholders.

3.2.4.2 Chapter 41E Insurance Companies (Determination of Long Term Liabilities) Regulation

Chapter 41E covers the determination of the amount of liabilities of an insurer in respect of its long term business. In accordance to Chapter 41E, the amount of liabilities of an insurer in respect of long term business shall be determined in accordance with generally accepted accounting concepts, bases and policies or other generally accepted methods appropriate for insurers.

In general, the amount of liabilities shall be determined separately for each contract by a prospective calculation, along with prudent assumptions that shall include appropriate margins for adverse deviations.

A retrospective calculation may be applied to determine the liabilities where a prospective method cannot be applied to a particular type of contract or benefit, or where it can be demonstrated that the resulting amount of the liabilities would be no lower than would be required by a prudent prospective calculation.

The liabilities also need to recognise all guaranteed benefits, including guaranteed surrender value, as well as vested, declared or allotted bonuses to which policyholders are already entitled.

3.2.4.3 Chapter 41F Insurance Companies (Margin of Solvency) Regulation

Hong Kong regulations require that the assets held by an insurer exceed its liabilities by a certain amount. This amount is the greater of the 'relevant amount' under the Insurance Ordinance (IO) or the required margin of solvency from the solvency regulations (Cap 41F). Both of these are dependent on the type of business sold by the insurance company.

The 'relevant amount' for life insurers under the IO is HKD 2 million. This relevant amount is not indexed for inflation, and serves effectively as a minimum amount of assets that need to be held in excess of a life insurer's liabilities.

The required margin of solvency under Cap 41F is calculated based on the mathematical reserves and capital at risk for each class of business. The key classes of business in life insurance are class A, which corresponds to traditional products, and class C, which covers linked business.

An insurer who sells both long term and general business will require an additional amount on top of the amount required for life business.

3.2.5 Reinsurance and captives

Under the IO, an insurer is required to arrange adequate reinsurance protection unless there are justifications not to do so. A sound reinsurance management framework is commonly found within an insurance company's risk management toolkit. The IA sets standards for the use of reinsurance and other forms of risk transfer, ensuring that insurers adequately control and transparently report their risk transfer programs.

3.2.5.1 GL 17: Guideline on reinsurance

With reference to the requirements stipulated in the ICP, the IA issued GN 17 (now known as GL 17) on June 1, 2016, setting out prudent practices pertinent to reinsurance management and the general guiding principles of the Insurance Authority in assessing the adequacy of the reinsurance arrangements of an insurer. For the avoidance of doubts, all insurers should also comply with Guidance Note 12 (now known as Guideline 12) "Guideline on Reinsurance with Related Companies".

While GL 12 focuses primarily on the adequacy of reinsurance arrangements, GL 17 provides guidance on reinsurance management framework, adequacy of reinsurance arrangements, alternative risk transfer arrangements such as special purpose vehicles, arrangement with insignificant risk transfer, and reinsurance reporting.

The effective date of GL 17 is 1 January 2017.

3.2.5.2 Captive insurance

Unlike any regular insurance or reinsurance company, a captive insurance company can only assume insurance risks from companies within the group which the captive belongs. As the insurance losses are ultimately absorbed by the group as a whole, the general public is not affected by the claim experience of the captive. Accordingly, captive insurance companies enjoy regulatory concessions and are subject to less restrictive regulations than typical insurance or reinsurance companies.

Currently, there are limited number of captive companies operating in Hong Kong. Following the issuance of Guideline¹⁷ that explicitly allows companies to use special purpose vehicles to transfer risk to the capital market.

3.2.6 Recent industry development

Regulations and governing bodies of the insurance industry in Hong Kong have not changed significantly during the last few decades. The insurance market and the risk profiles of companies in Hong Kong, on the other hand, evolve rapidly due to factors such as competition, rise of consumerism, and globalisation. In addressing the wide range of changes in the insurance industry driven by social, technological and global economic forces, the International Association of Insurance Supervisors (IAIS) have introduced Insurance Core Principles (ICPs) which provide a globally accepted framework for the supervision of the insurance sector. The ICPs have driven some of the regulatory changes in Hong Kong in recent years, e.g. the introduction of GL 15 and GL 16. Further changes in the regulatory environment of the insurance industry in Hong Kong are expected, including:

- Establishment of the Insurance Authority (IA)
 - IA is financially and operationally independent of the Hong Kong government.
 - IA replaced OCI in Hong Kong on June 26, 2017.
 - Thereafter, IA will also integrate with the current self-governing organisations of intermediaries such as Hong Kong Confederation of Insurance Brokers (CIB), Professional Insurance Brokers Association (PIBA) and Insurance Agents Registration Board (IARB) under Hong Kong Federation of Insurers (HKFI).
 - Besides being the regulatory body, IA's other responsibilities include promoting a healthy and sustainable insurance industry in Hong Kong.
- The solvency margin requirement may be changed from the current Solvency-I type regulation to a risk based solvency requirement
 - Current solvency requirement is a rules based regulation where the required solvency is based on the mathematical reserve and sum at risk which may not appropriately reflect the risk profile of an insurance company.
 - The IA released a consultation paper in 2014, in which it announced plans to develop a risk based capital (RBC) framework for Hong Kong insurance industry.

The paper provides high level description of the RBC framework, which is anticipated to follow a “Three-Pillar” format. The proposed three pillars are: **Pillar 1 – Quantitative aspects**. The primary purpose of imposing capital adequacy requirements is to ensure that an insurer’s obligations to policyholders will be met. The centerpiece of an RBC framework is to make capital requirement risk-sensitive such that higher risks carry more capital; **Pillar 2 – Qualitative aspects**. An integral part of an RBC framework is to encourage increased standards of corporate governance and ERM, therefore, encourage insurers to manage risk appropriately; **Pillar 3 – Disclosure**. It includes disclosure both to the supervisor and the public. Disclosure is a general feature of modern systems of financial services supervision. This document also provides proposals regarding capital supervision on a locally-incorporated insurer or a Hong Kong branch of an overseas insurer.

- Following the release of quantitative impact analysis (QIS) 1 requirement in 2017, companies have submitted the QIS 1 results which are then presented by the HK RBC Industry Focus Group for Pillar 1 – life insurance in early 2018. The QIS is scheduled to take place in second half of 2018.
- Other reference for the update on Hong Kong RBC developments can be found at ASHK Newsletter Volume 1/2017:
http://www.actuaries.org.hk/upload/File/ASHKNewsletter/Newsletter20171Q_FA2.htm.
- Policyholder protection fund (PPF) may be adopted as an additional buffer to protect insurance policyholders from losses due to insolvency of insurance companies
 - The IA has been conducting studies, dialogue with industry stakeholders, briefing of Legco and public consultation around the feasibility and design of a Policyholder Protection Fund (PPF) since 2002. Some segments of the society are supportive of a compensation fund which would help boost consumer confidence, while some members of the insurance industry were concerned about possible moral hazards. A finalised scheme was published in early 2012.

The public consultation paper on the PPF proposals can be found here:

http://www.fstb.gov.hk/fsb/ppr/consult/doc/consult_ppf_e.pdf.

Responses to the consultation and the final outcomes are documented here:

https://www.fstb.gov.hk/fsb/ppr/consult/doc/Eng_final.pdf.

- PPF is an additional layer of safety net for policyholders and comprises two schemes: life scheme and non-life scheme.
- PPF provides only limited coverage and should not be construed as a compromise of enterprise risk management or regulatory standards.
- IFRS 17 (previously IFRS 4 Phase 2)
 - Historically, Hong Kong Financial Reporting Standards (HKFRS) follow International Financial Reporting Standards (IFRS) with limited variation. IFRS 4, which provides

guidance for the accounting of insurance contracts, was released by the International Accounting Standards Board (IASB) in March 2004.

- Since then there has been extended consultation around upgrading the standard – i.e. IFRS 17.
- In November 2016, the IASB has set 1 January 2021 as the mandatory effective date of IFRS 17.