STUDY AID

Hong Kong Practical Education Module

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INVESTMENT

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- *Main types of investment assets in Hong Kong*
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- *Regulations and industry standard practice*
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ACTUARIAL SOCIETY of HONG KONG
香港精算學會

3.5 Investment

3.5.1 Role of actuaries in investment markets in Hong Kong

There is no regulated role for actuaries in the investment field. The actuarial discipline is however useful when carrying out asset-liability modelling (**ALM**) for insurance and retirement schemes, due to the concerning around projections and assumptions setting. Other asset owners in the region, e.g. charities, sovereign wealth funds, family offices endowments, may also interested in the actuarial capabilities around asset modelling and risk budgeting for investment planning purposes.

The purpose of an ALM study is to analyse potential outcomes of an asset portfolio relative to the liabilities it is backing. This module assumes some prior knowledge of ALM studies.

3.5.2 Main types of investment assets in Hong Kong

In general, Hong Kong market offers investors access to most major asset classes and multi-currency investments. The openness of its capital markets and the flexibility of the regulatory regime makes Hong Kong a key financial hub in Asia. Overseas investors, mainly institutional investors, represent about 40 per cent of all securities turnover. Overseas institutional investors are the largest contributor to the market turnover. This reflects Hong Kong as a developed, international market which has attracted investors from around the world.

3.5.2.1 Hong Kong equities

The Main Board and Growth Enterprise Market (**GEM**) comprise the Hong Kong securities markets. They provide a marketplace for capital formation through different types of company. As of 31 December 2016, there were 1,968 listed companies (Main Board: 1,711, GEM: 257). Total market capitalisation stood at HK$24.7 billion as of 15 December 2016. In the securities market, US$24.8 billion was raised through IPOs in 2016, making Hong Kong the number one fundraising centre in the world for the second straight year.

Main Board companies are generally larger and have a longer history and a profit record. Those without a profit record may satisfy alternative financial tests. GEM is positioned as a second board and a stepping stone to the Main Board.

Companies from Hong Kong, mainland China and more than 20 other countries and territories are listed on the SEHK. Mainland Chinese enterprises account for about 60 per cent of market capitalisation and about 70 per cent of equity turnover value. The securities market has a balanced mix of investors. About 50 per cent of turnover value is contributed by institutional investors (approximately equally divided between institutions in Hong Kong and mainland China and institutions based overseas). Retail investors contribute about 30 per cent (two-

thirds of which is from Hong Kong) and brokers trading for their own account contribute about 20 per cent. (Source: Cash Market Transaction Survey 2014/15)

The Securities and Futures Commission (**SFC**) has reference materials on highlights of the Hong Kong securities and derivatives markets; including number of listed companies, market capitalisation, average daily turnover, and Hang Seng Index (**HSI**) constituents.

Source: http://www.sfc.hk/web/EN/regulatory-functions/market-infrastructure-and-trading/market-infrastructure/market-statistics/

3.5.2.2 Hong Kong fixed income

Even though bonds are becoming more customised, it is still common to see a shortage of longer term fixed income instruments of 10+ years. More insurers are considering illiquid assets, such as infrastructure debt, loans and private equity.

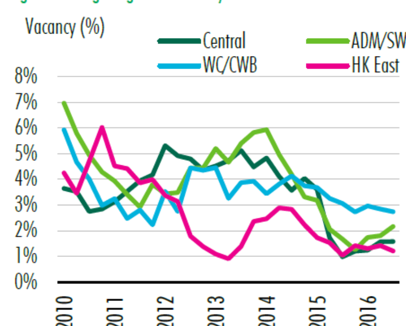
Insurers can privately place credit paper through banks, i.e. primary market. Issuers can structure issuance in various ways, e.g. adding optionality to the contract under certain conditions such as mergers and acquisitions, early redemption calls, etc.

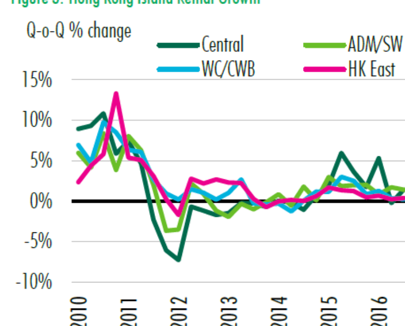
The secondary market is for standardised papers where term sheets are publicly accessible. There are a number of common bond issuers in Hong Kong that are unrated. Recently, there are also green bonds, i.e. ESG bonds, issued by recognised issuers in Hong Kong. ESG bonds are shorter term, i.e. less than 5 years. The demand for ESG bonds is becoming more recognised and prices are starting to match regular non-ESG bonds prices.

Source: https://asianbondsonline.adb.org/hongkong/structure/overview.php

3.5.2.3 Hong Kong real estate

Real estate could provide a good match to investors whose liabilities are of a long term nature and who do not require on-demand liquidity. Pension funds and life insurers often fall into this category. In Hong Kong, some insurers do invest directly in commercial real estate, while some do so via funds and Real estate investment trusts (**REITs**).





Source: http://www.cbre.com.hk

3.5.2.4 RMB-denominated bonds (Dim Sum and On-shore bonds)

Investors can invest into RMB-denominated bonds via on-shore bonds (CNY) and off-shore bonds (CNH, also often known as Dim Sum bonds).

	CNH bond / offshore RMB bond	CNY bond / onshore RMB bond
Definition	Offshore RMB denominated bonds issued outside China	Onshore RMB denominated bonds issued in China
How to access?	Any investor can exchange their foreign currency into offshore RMB currency at a Hong Kong bank to purchase these CNH bonds. Investor can also invest via one of the CNH bond funds	Investor subscribe to an RQFII fund, which is launched by the RQFII licensed company Or invest via China Interbank Bank Market Quota or QFII quota
Currency of denomination	RMB (offshore)	RMB
Main differences	• No special licence or quota required • Relatively small market compared to onshore • Diversified issuers e.g. Chinese state owned enterprises (SOE), multinational corporations, supranationals,etc	• Investor can only access via licence and quota holders • Eligible applicants for the licence and quota are Hong Kong subsidiaries of Mainland fund management companies or securities firms or approved insurers

Source: Bosera Funds, http://www.bosera.com.hk/column/index.jsp?classid=0001000100090002

- **Dim sum bonds (CNH)**

"Dim Sum" bonds are RMB-denominated bonds issued and settled outside of mainland China. The Dim Sum Bond market has been developing for over 10 years now since its first issuance by China Development Bank in 2007. These offshore RMB bonds were initially issued in Hong Kong by Chinese and Hong Kong banks. Overtime, following gradual internationalisation of RMB, they have since been issued in RMB clearing centres outside of Hong Kong, and by foreign companies too.

The file below provides detailed breakdown of a Dim Sum Bond Index to provide a range of issuers, tenors, credit quality and size of issues.
http://www.actuaries.org.hk/upload/File/HKPEM/SupplDoc201706_Section3.5.2.3_DimsumBondIndex.pdf

Source: https://www.yieldbook.com/x/ixFactSheet/factsheet_monthly_dimsum.pdf

- **On-shore bonds (CNY)**

China's bond market is the world's third largest. China has 2 main bond markets – namely the Inter-bank Bond Market, which is regulated by the PBoC, and an Exchange Bond Market, which is regulated by the CSRC. The former accounts for most of the trading volume in China's bond market.

While China remains a capital-controlled economy, there has been some significant development in how overseas investors can access on-shore investments since foreign institutions (Pan Asia Fund and Asia Debt China Fund) were first granted approvals by the PBoC to invest in the Inter-bank Bond Market in 2005. The opening up of access has gone from a few specific institutions requiring prior approval and operating within a certain quota, to the most recent move by PBoC in February 2016 whereby many financial institutions (such as commercial banks, insurers, securities companies, asset management companies) incorporated outside of mainland China, and medium and long term institutional investors recognised by the PBoC (including pension funds, charity funds and endowments) can access the Inter-bank Bond Market without prior approval or quota requirements.
http://www.actuaries.org.hk/upload/File/HKPEM/SupplDoc201706_Section3.5.2.3_DeutscheBank_ChinaBondOverview.pdf

Source:

- Deutsche Bank, https://www.db.com/hongkong/img/Deutsche-Bank-China-Bond-Overview-July-2016.pdf
- King & Wood Mallesons, http://www.kwm.com/en/knowledge/insights/the-pboc-has-further-opened-up-chinas-inter-bank-bond-market-20160225

3.5.2.5 China equities

Owing to the capital controls in place in China, there are several approaches to accessing investments such as in the equity of companies domiciled in China. Through the Hong Kong Stock Exchange, there are:

- **Red Chips**: representing Chinese companies not incorporated in China and listed in Hong Kong;
- **H-Shares**: representing companies incorporated in China but listed in Hong Kong. These often are dual-listed, and the price differential between their Hong Kong listing and their China listing can differ owing to different levels of liquidity and market demand (see A-shares); and
- Access to A and B shares via **Shanghai Connect** and **Shenzhen Connect**.

Both Shanghai Connect and Shenzhen Connect are part of the Mutual Market Access Program established between Mainland China and Hong Kong for the stock markets of Shanghai,

Shenzhen and Hong Kong. Shanghai Connect is a securities trading and clearing links program developed by the Hong Kong Exchanges and Clearing Limited (**HKEX**), SSE and China Securities Depository and Clearing Corporation Limited (ChinaClear), aiming to achieve mutual market access between the mainland and Hong Kong. Under Shanghai Connect, Stock Exchange of Hong Kong (**SEHK**) and Shanghai Stock Exchange (**SSE**) have established mutual order-routing connectivity and related technical infrastructure to enable investors in their respective market to trade designated equity securities listed on the other's market. Shenzhen Connect by and large similar program principles and design.

Trading of SSE securities under Shanghai Connect is open to all Hong Kong and overseas investors including institutional and individual investors. Trading of Shenzhen Stock Exchange (**SZSE**) securities under Shenzhen Connect, is open to all Hong Kong and overseas investors including institutional and individual investors except ChiNext stocks . ChiNext stocks are limited to institutional professional investors during the initial launch period of Shenzhen Connect.

Among the different types of SSE-/SZSE-listed securities, only A shares are included in both Shanghai and Shenzhen Connect. Other investment types such as B shares, Exchange Traded Funds (**ETFs**), bonds, and other securities are not included.

More information and the finer details about the Stock Connect can be found on the HKEX website: http://www.hkex.com.hk/eng/csm/securities_info_investors.htm

Investors which are able to invest onshore directly will commonly consider:

- A-Shares: a share class for companies incorporated in China, traded on the Shenzhen or Shanghai stock exchange primarily among local investors and are denominated in Renminbi
- B-shares: a share class for companies with A-Share issuance which can be held by international investors, and are traded in non-Renminbi terms. Local investors can also trade in B-shares if they hold legal foreign currency accounts

3.5.3 Overview of market landscape in Hong Kong

Hong Kong competes with Singapore with fund management companies deciding where to have portfolio managers as well as sales teams. Unique to Hong Kong are the Occupational Retirement Schemes Ordinance (**ORSO**) retirement schemes still offered by some large employers, where there could be multi-asset strategies that have differing allocations to growth and defensive asset classes, but the underlying investments are managed by the same portfolio team.

Typical example allocations can be seen below:

Asset Classes	Growth portfolio	Conservative portfolio
Hong Kong Equities	30%	10%
Global Equities	50%	20%
Global Bonds or Cash	20%	70%

- Commonly used indices: The Hang Seng Index is the most commonly used as the benchmark for Hong Kong equities. Hang Seng also has a partnership with Markit IBoxx for producing local bond indices. http://www.hsi.com.hk/HSI-Net/

Other index providers have sought to provide alternatives for the Hong Kong equity market, such as MSCI, which excludes any allocation to HSBC as HSBC is now a London stock.

FTSE produces a special series of indices for MPF business.

The HK Exchange also publishes indices for RMB and metals: http://www.hkexgroup.com/About-HKEX/Company-Information/About-HKEX?sc_lang=en

- Currency hedges

Due to the lack of long-dated bonds and alternative investment opportunities, many insurers allocate investments overseas. Currency risks then need to be managed appropriately for prudent asset liability management.

Some main considerations on hedging include

- Tenor of the hedge
- Collateral management
- Amount to be hedged
- Cashflows hedging vs balance sheet hedging
- Internal hedging policy
- Accounting treatment and valuation basis

Currency hedges beyond 10 years are costly. As tenor of the hedge increases, the market volatility of the hedging instruments will also increase. Collateral management and counterparty risks need to be considered before entering into the hedge.

For currency hedging of HKD against other currencies, the linkage between the swap curves of the currencies of concern is important. The dynamics of HKD and USD swap curves is discussed below.
http://www.hkimr.org/uploads/publication/256/ub_full_0_2_80_wp200406_text.pdf

- Linked exchange rate system
  Hong Kong has a Linked Exchange Rate System which has pegged the HKD to the USD since 1983. This has made asset modeling simpler when capturing currency risks.
  http://www.hkma.gov.hk/eng/key-functions/monetary-stability/linked-exchange-rate-system.shtml

- Hong Kong Derivatives Market
  Interest rates, foreign exchange and equity derivatives are the most common derivative types used among insurers in Hong Kong. Of these, equity derivatives are the most liquid while Hong Kong paper is much less liquid.
  https://asianbondsonline.adb.org/hongkong/structure/instruments/derivatives.php

- Hong Kong swap rates
  The swap rates level will affect the pricing of the cross currency hedge. The driver of the Hong Kong swap curve is considered below.
  http://www.hkma.gov.hk/media/eng/publication-and-research/research/working-papers/HKMAWP08_10_full.pdf

Liability-Driven Investing – While not an asset class per se, liability-driven investing is an approach to portfolio construction which could replace traditional fixed-income investing. This approach relies on liability cashflow forecasting and matching outgo with suitable assets. This approach is more popular in UK and US pension schemes, where long-tailed liabilities and constraints on implementation might mean partnerships between banks and insurance companies to structure swaps and bond portfolios to match liabilities more closely. However, owing to the current environment of very ultra interest rates and also limited market liquidity for interest rate and inflation swaps in Hong Kong, LDI has not been widely used as a strategy for hedging liabilities.

3.5.4 Regulations and industry standard practice

The securities and futures markets in Hong Kong are governed by the Securities and Futures Ordinance (SFO), which came into operation on 1 April 2003.

3.5.4.1 Securities & Futures Commission (SFC)

The Securities and Futures Commission (SFC) is an independent statutory body set up in 1989 to regulate Hong Kong's securities and futures markets.

The regulatory functions of the SFC cover:

- Intermediaries
- Market infrastructure & trading
- Listing and takeovers
- Investment products
- Enforcement

The SFC issues licenses for investment activities, and the most relevant licenses is Type 1 – advising on securities. Actuaries may provide asset allocation advice without being licensed on the basis that the advice does not fall under the definition of 'securities'. More specifics on the regulation of intermediaries can be found on the SFC website: http://www.sfc.hk/web/EN/regulatory-functions/intermediaries/.

Most publicly offered investment products require authorisation from the SFC. This typically involves the review of offering documents. Some common products that actuaries may be involved in such as Investment-linked Assurance Schemes (ILAS), Mandatory Provident Fund (**MPF**), pooled retirement funds and structured investment products fall within the remit of the SFC. More specifics on the regulation of products can be found here: http://www.sfc.hk/web/EN/regulatory-functions/products/.

3.5.4.2 Hong Kong Monetary Authority (HKMA)

The HKMA was established on 1 April 1993. Its main functions and responsibilities are governed by the Exchange Fund Ordinance and the Banking Ordinance and it reports to the Financial Secretary. The HKMA is the government authority in Hong Kong responsible for maintaining monetary and banking stability. Its main functions are:

- Maintaining currency stability within the framework of the Linked Exchange Rate system
- Promoting the stability and integrity of the financial system, including the banking system
- Helping to maintain Hong Kong's status as an international financial centre, including the maintenance and development of Hong Kong's financial infrastructure
- Managing the Exchange Fund. The Exchange Fund's primary objective, as laid down in the Exchange Fund Ordinance, is to affect, either directly or indirectly, the exchange value of the currency of Hong Kong.

More information on the HKMA's work can be found on its website: http://www.hkma.gov.hk/eng/publications-and-research/reference-materials.shtml

As part of its function to maintain and develop HK as an international financial centre, the issuance of Exchange Fund Bills and Notes by the HKMA helps to facilitate the development of a HKD debt market. The Exchange Fund Bills and Notes constitute direct, unsecured, unconditional and general obligations of the Hong Kong Special Administrative Region

(**HKSAR**) Government for the account of the Exchange Fund and have the same status as all other unsecured debt of the government. The Bills and Notes are for the account of and payable from the Exchange Fund.

The Exchange Fund Bills and Notes Issuance Program ensures the supply of a significant amount of high-quality HKD debt paper, which can be employed as trading, investment or hedging instruments.

The Government Bond Programme (GB Programme), consisting of the institutional bond issuance programme and the retail bond issuance programme, is an initiative of the government to develop the local bond market in Hong Kong. The GB Programme's primary objective is to promote the further and sustainable development of the local bond market. Through implementing the GB Programme, the HKSAR government aims to increase the breadth and depth of the local bond market, so that the bond market may complement the equity market and the banking sector as an effective channel of financial intermediation.

The HKSAR government maintains a strong fiscal position and does not need to finance its expenditure by issuing government bonds. The GB Programme is designed to issue government bonds in a systematic and consistent manner. Under the GB Programme, the HKSAR Government is not subject to any rigid issuance target and flexibly manages the size and tenor of individual government bond issues, subject to prevailing market conditions and demand.

The HKMA is tasked to co-ordinate the offering of government bonds and to manage the investment of the sums raised under the GB Programme. The issuance of Exchange Fund Notes and Government Bonds has been streamlined over the years to minimise overlap in longer tenors.

The yields on Exchange Fund Bills and Notes (http://www.hkma.gov.hk/eng/market-data-and-statistics/) and the government bonds are commonly used to represent 'risk-free' rates of interest for Hong Kong; however, unlike US Treasury bills and UK gilts, there isn't a large and liquid secondary market for these securities.

The HKMA is responsible for regulating and supervising banking business and the business of taking deposits in Hong Kong. It is also responsible for the authorisation of licensed banks, restricted licence banks and deposit-taking companies in Hong Kong, which are collectively known as authorised institutions. In so far as an actuary's work fall within banking activities, he/she could be regulated by the HKMA.

3.5.4.3 The Stock Exchange of HK (SEHK)

The SEHK is a recognised exchange company under the SFO. It operates and maintains a stock market in Hong Kong and is the primary regulator of Stock Exchange Participants with respect to trading matters and of companies listed on the Main Board and GEM of the Stock Exchange. The Futures Exchange is also a recognised exchange company under the SFO. It operates and maintains a futures market in Hong Kong and is the primary regulator of Futures Exchange Participants with respect to trading matters.

More information on listing disciplinary and enforcement can be found on HKEX website: http://www.hkex.com.hk/eng/rulesreg/listdisenf/index.htm.

Industry bodies for investment practitioners are local CFA (HKSFA) and CAIA branches of Hong Kong.

3.5.4.4 Investment restrictions for insurers operating in Hong Kong

- **Life insurance**

  Cap 41 Insurance Companies Ordinance describes some of the investment considerations for Hong Kong insurers. Section 8, 28, 29, 30 set out the assets which qualify as assets in Hong Kong, requirements about investments, maintenance of assets in Hong Kong, and custody of assets respectively. Part 4: section 16 also provides detailed headings identifying long term assets for life insurers.

  GL13, Guideline on Asset Management by Authorised Insurers issued by the Office of the Commissioner of Insurance (**OCI**) [(now taken over by Independent Insurance Authority (IIA)] (https://ia.org.hk/en/legislative_framework/files/GL13.pdf) [1, 2] details the asset liability management and investment process, policy and procedures, and monitoring and control that are important considerations for insurers, as well as the responsibility of the Board of Directors of insurers.

- **General insurance**

  OCI requires all general insurance companies to maintain a solvency ratio of at least 200% (some individuals might have separate agreement with OCI on a case by case basis). When calculating the OCI solvency ratio, two rounds of haircuts will be applied on different kind of assets:

[1] The new IIA took over the statutory duties of regulating insurance companies from the OCI on 26 June 2017.
[2] All Guidance Notes promulgated by the OCI have been renamed as Guidelines, and the abbreviation have been changed from "GN" to "GL".

- 1st round: A fixed % haircut would be applied for each asset class to reflect their corresponding risk. For example: The value of any land or building is admitted up to its net book value plus 75% of the appreciation in value;
- 2nd round: There will be an admissibility limit for each category of asset to encourage diversification. For example, if a company holds more than 30% of asset on listed shares, unit trusts and mutual funds, only up to 30% can be admitted.

Further details are available in the following:

- "CAP 41G_e_b5.pdf" – ICO Chapter 41G, Insurance Companies (General Business)(Valuation) Regulation (https://www.elegislation.gov.hk/hk/cap41G); and
- "GL2.pdf"– GL2, Guidance Note on Insurance Companies (General Business)(Valuation) Regulation (https://www.ia.org.hk/en/legislative_framework/files/GL2.pdf)

3.5.4.5 Investment guidelines and restrictions for MPF investment products

The Mandatory Provident Fund Schemes Authority has a list of guidelines on investments pertaining to securities, approved exchanges, investment management and strategies, which are listed in http://www.mpfa.org.hk/eng/legislation_regulations/legulations_ordinance/guidelines/current_version/investment/Index.jsp

3.5.5 ALM for retirement funds

For a defined benefit retirement scheme, liability-driven investment is often seen in markets with large defined benefit arrangements, where funded defined benefit plans utilise ALM studies to direct the allocation into suitable assets to generate returns needed to minimise company contributions or to hedge the exposure to the interest rates used to value the liabilities.

Nature of schemes

In Hong Kong, almost all ORSO retirement schemes pay out a lump sum at retirement or upon leaving, subject to Mandatory Provident Fund Schemes Authority (**MPFA**) regulations. This means that liabilities have a shorter duration relative to pension arrangements that pay out an annuity for life. Further, the scheme sponsor's obligations to provide benefits is extinguished once the member retires or withdraws. Another key point is the funding regulations in Hong Kong, whereby sponsors have a short timeframe to make good any shortfall on the solvency basis [please refer to the pension section], which means sponsors typically have to make lump sum contributions as opposed to relying on the investment

strategy in the hope of positive short-term investment performance to repair the gap. Funding shortfalls can be repaired over the working lifetime of members [please refer to the pension section], and this is typically reflected in the ongoing employer contribution rate instead of being factored into investment strategy. Therefore, the combination of regulation and scheme design reduces the appeal for setting the investment strategy through use of ALM techniques.

The MPFA also regulates ORSO schemes and does not require sponsors of defined benefit schemes to seek investment advice when setting strategy and selecting managers.

Challenges

Another side of the equation is the market for suitable securities to carry out liability-driven investments. Bond issuance in Hong Kong is largely by corporations, and duration (as measured by the iBoxx Markit HKD index) is around 5 years, with the bulk of the debt outstanding having maturity of around 1.5 to 5 years as at 30 June 2016, compared to the duration of liabilities of typically 10-12 years. It is possible to mitigate some of this difficulty by utilizing US debt at longer terms, given the currency peg. However, local interest rates are lower than the returns from US bonds and this makes the upside from the mismatch looks less attractive to retirement scheme investors.

3.5.6 ALM for insurers

Unlike other developed markets, there is a shortage of investment grade bonds and sovereign bonds, and also HKD denominated paper of 10 years and ever is relatively illiquid. Insurers in Hong Kong have long liabilities particularly with the popularity of whole of life products and will often need to find solutions to back their liabilities.

USD denominated paper is one of the common solutions for insurers in Hong Kong. However, insurers should be aware of the risk associated with the peg system in place. Banks can also act as the guarantor in Fx swap arrangements with currency overlay. This can be a less attractive option to the gain because of the cost of the swap. Swaps of 10 years or more are uncommon, while on the other hand, shorter dated currency swaps do not always adequately cover currency risks, as the roll over may become expensive during a stress event.

Examples of other long duration assets are mortgage loans and infrastructure debt or equity. Insurers can place paper privately through banks with corporate counterparties. Mortgage loans can be retail or commercial mortgages. Infrastructure debt is usually unrated loans with longer duration. They are typically funded and syndicated through banks.

Insurers must also be mindful of the statutory and solvency requirements that they are subjected to. A number of insurers in Hong Kong have parent companies overseas, and will therefore report under multiple sets of financial reporting and solvency regimes. Hong Kong

is currently in the process of developing a risk based capital solvency regime from a liability-based solvency regime. In terms of accounting, IFRS is market value based valuation, meanwhile Hong Kong statutory valuation is not economic based.

3.5.7 Recent industry developments

3.5.7.1 Ethics and environmental, social and governance (ESG) in investing

The SFC published a voluntary code around responsible investing, targeted at asset owners: http://www.sfc.hk/web/EN/rule-book/principles-of-responsible-ownership.html

The HK Exchange and Clearing have provided resources to help listed companies on ESG reporting: http://www.hkex.com.hk/eng/rulesreg/listrules/listsptop/esg/

Currently the MPFA has no requirements around ESG integration in investment options or investment strategy for retirement schemes.

Across Asia, the concept of integrating ESG thinking in investment-related decisions is growing; however, there is yet to be an ‘industry standard’ on how to achieve this so different investors are interpreting and implementing these ideas themselves, given their own business culture and internal resources.