TOPIC 1 - OVERVIEW

1.   HISTORICAL BACKGROUND

- Hong Kong gave birth to **a number of stock exchanges** over the years and by the 1970s there were four:

    ➤ Hong Kong Stock Exchange (various up to 1947)

    ➤ Far East Exchange (1969)

    ➤ Kam Ngan Stock Exchange (1971)

    ➤ Kowloon Stock Exchange (1972)

- In 1980, **the four exchanges were merged into one** by creating The Stock Exchange of Hong Kong Limited (SEHK), with computerized trading starting on 2 April 1986

- Following the world equity markets crash of 1987, when the Hong Kong market closed for three days, the Governor appointed **Ian Hay Davison** to review the constitution, management and operation of the SEHK

- The **Davison Report** recommended:

    ➤ Fundamental revision of the SEHK and its management

    ➤ An extension of the settlement period to 3 days

    ➤ Development of a central clearing system

    ➤ A review of Hong Kong Futures Exchange Limited (HKFE)

    ➤ Development of an independent statutory regulatory body to ensure market integrity and investor protection

- The Securities and Futures Commission (**SFC**) was established as the independent statutory regulatory body in 1989 – its main objective is to ensure fair, orderly and efficient securities trading

- Reacting to globalization and market developments, the SEHK, HKFE and the Hong Kong Securities Clearing Company Limited (HKSCC) were merged in 2000 under a new holding company, Hong Kong Exchanges and Clearing Limited (**HKEx**)

- HKEX is now a listed company of the SEHK

1.1   Equity Market

- At December 2018, the Hong Kong equity market was the fifth largest in the world. See below

Exchange	Domestic Market Cap At December 2018 (USD billion)
NYSE Euronext (US)	20,679
NASDAQ OMX (US)	9,757
Japan Exchange Group	5,297
Shanghai Stock Exchange	3,919
Hong Kong Exchanges	3,819
Euronext	3,730
London Stock Exchange Group	3,638

- Equities were not an important source of capital in Hong Kong until 1969, when the **Hong Kong equity market boomed** on the back of a booming property market

- The SEHK **Main Board** is a capital formation market for larger, more established companies with a profit track record

- **GEM** has been developed to accommodate small and mid-sized companies

- **Securities traded** on the SEHK include:

  - Ordinary and preference shares

  - Warrants

  - Callable Bull/Bear Contracts

  - Unit trusts/mutual funds

  - Debt securities such as Exchange Fund Notes (EFNs)

  - Depository receipts

  - Equity-linked instruments

  - Stapled securities

1.2   Debt Market

- Unlike the equity market, development of the Hong Kong debt market has been slow as the Hong Kong government has enjoyed many years of budget surpluses, with little need to issue debt

- In recent years, the debt market has grown and has developed some depth

- Part of the growth can be attributed to the issue of **Exchange Fund Bills and Notes**, which were introduced in 1990 to help banks with liquidity management

- Further developments have been the establishment of the **Hong Kong Mortgage Corporation Limited** (HKMC) with mortgage-backed securities and the issue of bonds by the **Mass Transit Railway** and the **Hong Kong Airport Authority**

- Hong Kong is developing into a major offshore debt market for China with a Renminbi (RMB) clearing system for mainland banks being introduced in 2007. In 2010, the arrangement was expanded to allow other institutions to issue RMB debt in Hong Kong (Dim Sum Bonds)

- HKEx introduced the Northbound Trading of Bond Connect allowing investors to buy bonds in the China Interbank-Bond Market (CIBM) via HKEx. CIBM is the 3rd largest market after US and Japan. CIBM includes a small number of RMB bonds issued by foreign entities – known as panda bonds

1.3   Derivatives Market

- HKFE was established in 1976 and has developed into one of the leading Asian derivatives markets for futures and options

- Derivatives are discussed briefly in Topic 4

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2.   THE STOCK EXCHANGE OF HONG KONG LIMITED

2.1   Major Features

- The Hong Kong stock market has been:
  - ➢ 1st largest by capital raised from IPOs (2018)
  - ➢ 3rd largest in Asia by market capitalization (June 2019)
  - ➢ 5th largest in the world by market capitalization (June 2019)
  - ➢ At a total market capitalization of HK$29,999 billion (August 2019)

- **A highly liquid market** covering all major sectors

2.2   Market Sectors

- In June 2019, the Hong Kong stock market had the following **active sectors**:

Market Sector	Share (%)
Financials	27.07
Properties & Construction	16.13
Information Technology	14.63
Consumer Goods	11.60
Consumer Services	7.71
Telecommunications	6.31
Utilities	5.66
Industrials	3.05
Energy	3.34
Conglomerates	2.98
Materials	1.53

2.3   Stock Exchanges in Mainland China

- China is keen to encourage **foreign investment** and is moving towards international accounting practices to ensure **market integrity and transparency**

- China joining the **WTO in 2001** has had a significant impact on the role of China stock exchanges

- Currently there are **two stock exchanges**: Shanghai and Shenzhen

Shanghai Stock Exchange (SSE)

- Established in November 1990, the SSE was the **first China stock exchange**

- **A shares** are purchased by local Chinese investors and settled in RMB

- **B shares** are open to individual and institutional foreign investors and settled in US dollars

- There were 1,509 listed companies in July 2019 with a market capitalization of USD 4,097 billion

- **A shares are expected to become more influential** in the world market as China's GDP grows

- The Shanghai-Hong Kong Stock Connect was launched on 17 November 2014 (see topic 5)

- The Shanghai Exchange launched Science and Technology Innovation Board (STAR Market) in 2019, which focuses on high-tech and strategically emerging sectors

Shenzhen Stock Exchange

- Established in December 1990 as China's second stock market

- A shares are settled in RMB

- B shares are settled in HKD

- The Shenzhen-Hong Kong Stock Connect was launched on 16 August 2016 (see topic 5)

3.   THE GLOBAL SECURITIES MARKET

- As a result of globalization, Hong Kong investors trade globally, particularly in US stocks

3.1   The US Market

- As at December 2018, the NYSE Euronext (US) combined with NASDAQ OMX made up 39.7% of the world's equity value – **the world's largest**

- Due to the **HKD peg**, any change in US dollar interest rates or exchange rates automatically affects the Hong Kong market

- Movements on the US stock market can be mirrored on Hong Kong stock market the following day

- The best known **US stock market indices** are: Dow Jones Industrial Index, S&P 500 Index and the NASDAQ Index

3.2   European Markets

- The development of the **European Union and the single currency** has lowered transaction costs of trade and capital flows within Europe

- **Key European markets** are Germany, UK and NYSE Euronext (Europe) which was the result of a merger among Amsterdam, Brussels, Lisbon, Paris, Dublin and Oslo stock exchanges

- London is the largest European stock market with the **Financial Times Stock Exchange (FTSE) 100 Index** tracking the performance of London's top 100 shares

- The Deutscher Aktien Index (DAX) measures German market performance while the NYSE Euronext (Europe) indices measure the pan-European market

3.3   Asian Markets

- **Japan** is the major economic power in Asia with 3,657 listed domestic companies in 2018

- The Nikkei Stock Average covers 225 of the most actively traded stocks on the **Tokyo Stock Exchange** (owned by the Japan Exchange Group)

- Other key Asian markets are Singapore, Korea, Malaysia and Taiwan

4.   KEY FACTORS AFFECTING THE SECURITIES MARKETS

- Stock markets are affected by many factors, including economic, political, regional or international
- This section considers factors that influence the behaviour of securities markets

4.1   Interest Rates

- There tends to be an inverse relationship between interest rates and stock prices
  - ➢ When **interest rates rise**, the cost of corporate borrowing increases, reducing corporate expansion plans and profits leading to a fall in share prices
  - ➢ When **interest rates fall**, the cost of corporate borrowing decreases, increasing corporate expansion plans and profits leading to an increase in share prices
- Changes in interest rates will often drive movements between the share and debt markets

4.1.1   Calculating Interest Rates

- Interest is calculated in one of two ways:

Simple Interest

- Interest is calculated on a constant principal amount throughout period of loan

Formula: Interest earned over a number of periods

= loan principal x interest rate per period x number of periods

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Simple Interest Example
Calculate the amount of simple interest and the total amount obtained at maturity on a deposit of HKD500,000 after four years with an interest rate of 3%

Answer
Interest   = 500,000 x 3% x 4 years

= HKD60,000

Deposit at maturity = 500,000 + 60,000
                                 HKD560,000

Compound Interest

- Interest is calculated assuming all interest income earned is reinvested at the same interest rate and with the principal growing each period

Formula: Amount received at maturity

$$= \text{loan principal} \times \left(1 + \frac{\text{interest rate per period}}{\text{int payments per period}}\right)^{\text{periods x payments per period}}$$

Compound Interest Example
HKD10,000 is invested for three years at a compound interest rate of 10% per annum. What will the deposit be worth at the end of the three-year period and how much interest will have been earned?

Answer

FV	$= 10{,}000 \times (1 + (0.10/1)^{3 \times 1}$
	$= 10{,}000 \times 1.1^3$
	$= \text{HKD13,310}$
Interest	$= 13{,}310 - 10{,}000$
	$= \text{HKD3,310}$

4.1.2 Nominal versus Real Interest Rates

- Two common methods of quoting interest rates:
  - ➤ **Nominal interest rates:** the most common method where no account is taken of compounding
  - ➤ **Real interest rates:** does not include the inflation element of nominal interest rates

   *(1 + nominal rate) = (1 + real rate) x (1 + inflation rate)*

    In approximate terms:

    real interest rate = nominal interest rate – inflation rate

4.1.3 Yield Curves

- The yield of a security is its effective annual return expressed as a percentage of the current market price and is determined by a number of factors, including:
  - ➤ **Risk profile**: the higher the risk of a security, the higher the risk premium within the yield, resulting in a lower price
  - ➤ **Term**: investors who invest for the longer term, expect a higher return (yield) to compensate for lack of liquidity and opportunity cost
  - ➤ **Taxation**: securities offering tax benefits will trade at lower yield as they are more attractive than similar securities without benefits

- Remember: ***The higher the yield, the lower the price, and the lower the yield, the higher the price***


- The **yield curve** is a line plotting the yields of selected benchmark securities of the same type, with different maturities from short- to long-term

- Yield curves are considered by country and by market and are used to forecast the future direction of interest rates and inflation

- Benchmark securities selected are usually highly rated government-issued debt securities, such as US treasury bonds

- Non-government securities, such as corporate debt, are considered to be higher risk than government securities. Yields will be above those of government debt reflecting a premium that compensates investors for the higher risk

Types of Yield Curve
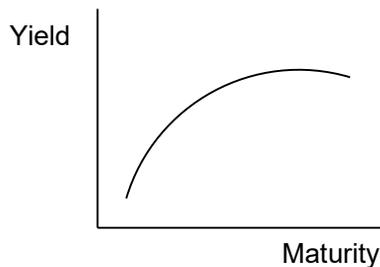
Positive or Normal
Yield increases with an increase in term to maturity. The longer the term, the greater the uncertainty, the higher the required return. Consistent with expectations of rising inflation.
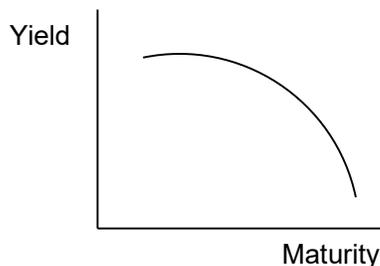
Negative or Inverse
Opposite to the positive yield curve where longer term interest rates are expected to be lower than current and short-term interest rates.
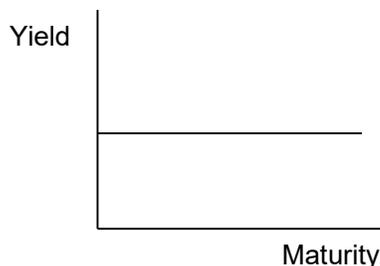
Flat
Can reflect expectations of stable interest rates or the transition from a positive to a negative yield curve, or vice versa.

4.1.4 Duration

- Duration measures the sensitivity of a bond price to changes in interest rates

- As interest rates rise, bond prices will fall as bond yields rise

- The greater the duration of a bond, the greater the bond price movement from a change in interest rates

- Technically, duration is the weighted average of the maturities of all income streams (interest plus principal) from a bond

- Duration is considered further in topic 4

4.2 Interest Rates of Other Countries

- Movements in international interest rates can influence the Hong Kong economic environment

- Interest rate differentials between countries influence of funds flows between countries

4.3 Exchange Rates

- Exchange rates can affect many areas of an economy including: imports and exports, interest rates, flow of funds and financial markets

4.4 Inflation

- Inflation is the general increase in prices over time resulting in a loss of purchasing power

- Can be either cost-push or demand-pull

- Expectations of a rise in inflation can cause interest rates, and bond yields, to rise

- Higher interest rates will cause share prices to fall

4.5 Economic Cycles

- Economic or business cycles move from peak to trough and back to peak

- The length and size of cycles vary

- Identifying the stage of an economic cycle is a fundamental tool used in economic analysis and forecasting – see Topic 6

4.6 Political Factors

- Political factors can affect an economy including: tax rate changes, regulatory reform, changes in government tariffs or subsidiaries and labour/financial market reform

- US political party confrontation has influenced international financial markets

- China examples are the introduction of Qualified Domestic Institutional Investors (QDIIs) and Qualified Foreign Institutional Investors (QFIIs)

  ➢ QDII – China local investors permitted to invest overseas

  ➢ QFII – Foreign investors permitted to invest in China 'A' shares

5.   MARKET INDICES

- Market indices reflect overall share price movements and help investors understand markets

- In Hong Kong, the most widely quoted index is the Hang Seng Index (HSI)

5.1   Hang Seng Index

- Launched on 24 November 1969 and set to 100 on 31 July 1964 as the base date

- Managed by Hang Seng Indexes Company Limited, a wholly owned subsidiary of Hang Seng Bank

- At August 2019, the HSI was made up of 50 stocks accounting for 55.6% of total market capitalization

- HSI stocks are considered to be "blue chip" which refers to the strongest, largest and most prestigious listed companies in a market

Aggregated Market Capitalization Weighted Approach

- This method of calculating a market index uses the following approach:

$$\text{Today's index} = \frac{\text{Today's market capitalization of index stocks}}{\text{Yesterday's market capitalization of index stocks}} \times \text{yesterday's index}$$

> ***Market Capitalization Weighted Approach Example***
> *Assume that the XYZ market index is made up of three stocks: Big Ltd, Medium Ltd and Small Ltd. Yesterday's closing market capitalization was HKD888,000 and the closing index was 125. If the market has just closed as below, what is today's index level?*
>
> | Stock | No. of Shares | Closing Price (HKD) |
> |---|---|---|
> | Big Ltd | 10,000 | 41 |
> | Medium Ltd | 8,000 | 50 |
> | Small Ltd | 5,000 | 21 |
>
> ***Answer***
> $$\text{Index} = \frac{915,000}{888,000} \times 125$$
>
> $$= 1.03 \times 125$$
> $$= 128.8$$

- The above method of calculating a market index was adopted for the HSI from 1969, however with the introduction of many large mainland China state-owned enterprises to the Hong Kong stock market, calculation of the HSI moved to a freefloat-adjusted market capitalization weighted approach in 2006

5.2   Hang Seng Family of Indexes

- There are five index categories:
  - ➢ Market-cap weighted
  - ➢ Factor & strategy
  - ➢ Sector
  - ➢ Sustainability
  - ➢ Fixed income

- There are also groupings according to geography:
  - ➢ Hong Kong
  - ➢ Cross-market
  - ➢ Mainland China

- Details of four examples follow:

Hang Seng Composite Index (HSCI)

- HSCI covers about 95% of the Main Board market capitalization and consists of two sub-groups: Hang Seng Composite **Size** Indexes and Hang Seng Composite **Industry** Indexes

- There are three **size indexes**:
  - ➢ Hang Seng HK **LargeCap** Index covering the top 80% market cap of the HSCI
  - ➢ Hang Seng HK **MidCap** Index covering the next 15% market cap of the HSCI
  - ➢ Hang Seng HK **SmallCap** Index covering the remaining 5% market cap of the HSCI

- There are eleven **industry indexes**:
  - ➢ Energy
  - ➢ Materials
  - ➢ Industrial goods
  - ➢ Consumer goods
  - ➢ Services
  - ➢ Telecommunications
  - ➢ Utilities
  - ➢ Financials
  - ➢ Properties & construction
  - ➢ Information technology
  - ➢ Conglomerates

Hang Seng China Enterprises Index (HSCEI)

- Reflects market values of H-shares – China incorporated companies, listed in Hong Kong

- The index covers 50 companies

- No constituent can have a weighting in excess of 10%

Hang Seng China-Affiliated Corporations Index (HSCCI)

- Covers "red chip" stocks of mainland-controlled companies incorporated outside mainland China and listed in Hong Kong

- Red chips have at least a 30% shareholding that is directly held either by mainland entities or by companies controlled by such entities and at least 50% of sales revenue derived from the mainland

- At 31 August 2019, the index covered 25 companies

- No constituent can have a weighting in excess of 10%

HSI Volatility Index (VHSI)

- Aims to measure the 30-calendar-day expected volatility of the HSI, implicit in near-term HSI options traded on HKEx

- VHSI products can be used to hedge against investment volatility

5.3   S&P/HKEx Large Cap Index and GEM Index

- Both indexes are maintained by an S&P Index Committee made up of representatives from both S&P and HKEx

- The large cap index comprises 25 stocks representing the large cap universe of the HK market

- The GEM Index covers approximately 75% of the GEM Board by market cap

5.4   International Indices

- Some widely used international indices are covered below

FTSE Indices

- The most common FTSE index is the FTSE 100, which tracks the performance of the 100 largest UK companies

Dow Jones Indexes

- The best known index is the Dow Jones Industrial Average (DJIA), which tracks the performance of 30 "blue-chip" US-listed stocks from various industries (except transport and utilities)

- Calculated by dividing total prices of constituent stocks by a divisor, which is adjusted to account for stock splits and other corporate actions

Standard & Poor's Indices

- Consist of numerous global and country-specific indices

- Best known is S&P 500, a widely used benchmark for US equity performance

NASDAQ Indices

- Cover stocks traded on National Association of Securities Dealers Automated Quotations (NASDAQ)

- Perceived as an exchange for new, high growth and technology stocks

- The most common is the NASDAQ composite, which includes all domestic and internationally based common types of securities

Nikkei Indexes

- A series of indices that primarily track the Japanese stock market

- Most widely watched is the Nikkei 225 Stock Average which comprises 225 of the most actively traded stocks on the Tokyo Stock Exchange

STOXX Indexes

- STOXX is an index provider owned by Deutsche Borse Group

- EUOR STOXX 50 Index tracks the performance of around 30 leading firms in the Eurozone

- EURO STOXX Total Markets Index covers about 95% of the free-float market capitalisation of those European markets involved

MSCI Indices

- Widely used by global portfolio managers as benchmarks, the firm was formerly Morgan Stanley Capital International

- Measure performance of different national stock markets and also referenced to regional, sector and industry criteria