TOPIC 1 - OVERVIEW

1. THE ROLE OF THE FINANCIAL SYSTEM IN THE GLOBAL ECONOMY

1.1 Supply and Demand

- Consumers are influenced by the following factors when **deciding to buy** an item:
  - Item price
  - Consumer's level of income
  - Tastes and fashions
  - Item availability
  - Substitute price and availability
- **Quantity demanded** is inversely related to price
- Producers are influenced by the following factors when **deciding whether or not to supply** an item:
  - Item price
  - Production cost
  - Distribution cost
  - Item availability
  - Technology availability and cost

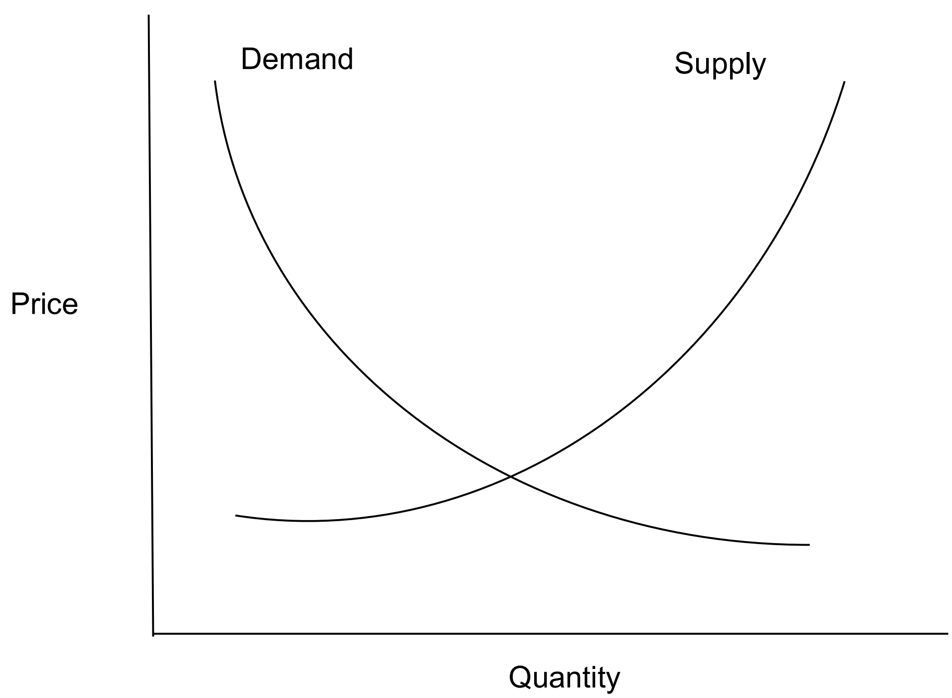

Figure 1: Equilibrium when demand equals supply

1.2 Economic Sectors

- An economy is made up of the following sectors:
  - **Household sector**: individuals and families who consume goods and services
  - **Business sector**: producers of goods and services
  - **Government sector**: all levels or government which source and invest funds
  - **Overseas sector**: importers and exporters
  - **Finance sector**: financial intermediaries and institutions transferring funds between providers and seekers

1.3 Flow of Funds

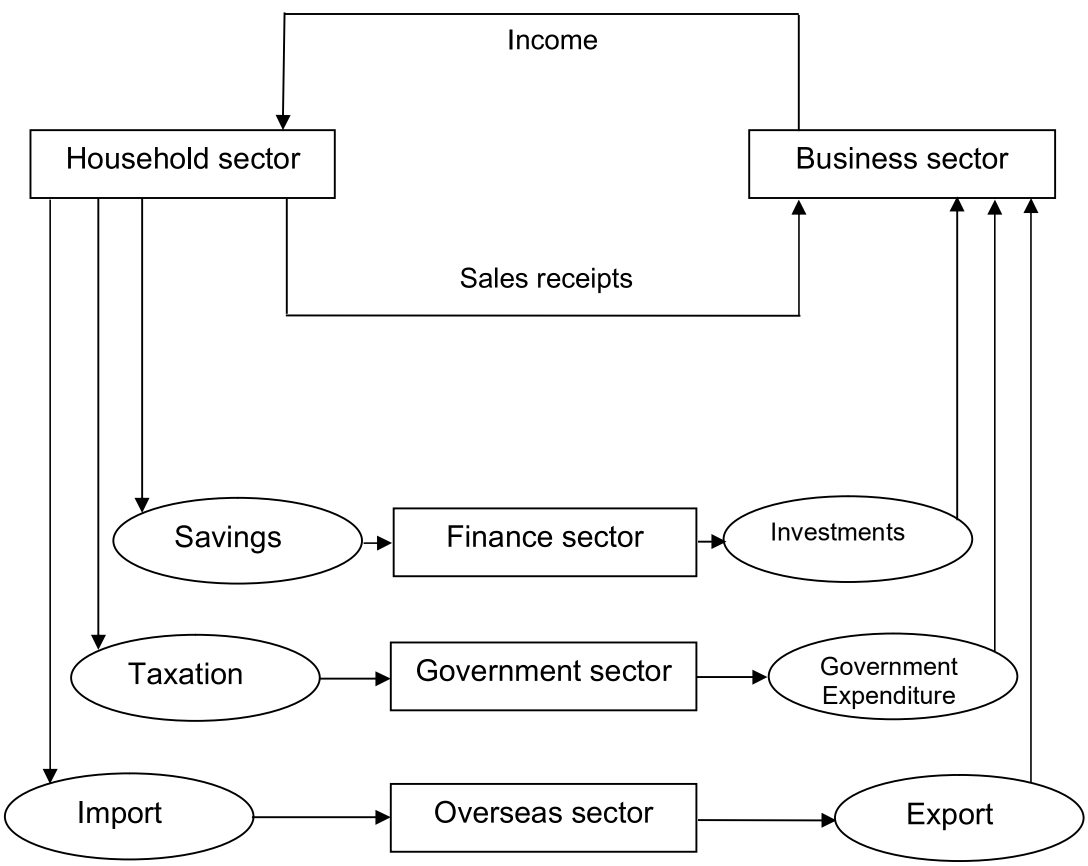

Figure 2: Simplified flow of funds

1.4 International Capital and Investment Flows

- Globalization of financial markets has allowed world-wide flow of capital, enabling global growth through more efficient allocation of international resources
- Between 1990 and 1999, institutional funds under management more than doubled to over USD30 trillion and reached USD63 trillion in 2007
- Growth has been driven by financial liberalization, the rise of institutional investors and growing financial innovation
- However, the growth in global capital flows has led to increasing global instability in the financial sector
- Net capital flows to emerging market economies have shown higher volatility than those to advanced economies

1.5 Participants in the Global Financial System

- As well as a variety of commercial participants, the global financial system includes the following supranational organizations and multilateral agencies playing a critical role:
  - **International Monetary Fund (IMF)**: headquartered in Washington DC, the IMF provides the global public good of financial stability, helping growth of international trade, exchange rate stability and an open system of international payments. The IMF lends foreign exchange on a temporary basis to countries, when needed
  - **Bank for International Settlements (BIS)**: promotes international cooperation among central banks, acting as a prime counterparty in their financial transactions. Headquartered in Basel, Switzerland with representative offices in Hong Kong and Mexico City. Perceived as bank for central banks
  - **The World Bank**: founded in 1944, is the world's largest source of development assistance. It works in more than 100 developing economies providing finance and ideas to improve living standards and eliminate the worst forms of poverty
  - **The Organisation for Economic Co-operation and Development (OECD)**: helps governments tackle the economic, social and governance challenges of a global economy. Its work covers macroeconomics, trade, education, development, science and innovation
  - **World Trade Organization (WTO)**: is an international body dealing with the global rules of trade between nations. As of July 2019, there were 164 members, with Hong Kong joining in 1995 and China in 2001
  - **Asian Development Bank**: established in 1966 as a regional development bank focusing on Asian emerging economies. Aims to reduce poverty in Asia Pacific through inclusive economic growth, environmentally sustainable growth and regional integration. Japan and the US have the strongest influence

- **Asian Infrastructure Investment Bank**: proposed by China in 2013, the AIIB is headquartered in Beijing and supports infrastructure development in the Asia Pacific region. As of 2019, AIIB has 70 members as well as 27 prospective members from around the world. It aims to cooperate with China's Belt and Road Initiative (BRI) to strengthen economic connection among BRI countries

1.6 Money and the Banking System

- Money acts as a:
  - Means of storing wealth
  - Medium of exchange
  - Unit against which to value other goods and services

- Money needs to be durable, storable and portable

- There are 3 classifications to describe the quantity of money in an economy:
  - **M1**: all notes and coins in circulation, plus customers' demand deposits placed with licensed banks (*narrow money*)
  - **M2**: M1 plus savings and term deposits with licensed banks
  - **M3**: M2 plus deposits in other financial institutions (*broad money*)

- Banks are financial intermediaries facilitating the flow of funds in the banking system by carrying out the following functions:
  - **Mobilization of funds**: both wholesale and retails funds
  - **Investment opportunities**: allow investors to save money and manage their investment portfolios
  - **Implementation of monetary policy**: most governments implement monetary policy through the banking system

2. FINANCIAL SYSTEMS AND MARKETS

2.1 Central Banks

- Central banks are responsible for regulating the monetary and banking systems and the money supply
- They serve three parties: banks, government and the public
- A central bank's typical duties fall into four general areas:
  - Managing a nation's monetary policy
  - Ensuring the stability of the financial system
  - Supervising and regulating banks
  - Providing financial services to government, the public, financial institutions and foreign official institutions
- The **Bank for International Settlements (BIS)** assists central banks in the management of their foreign exchange. The BIS focuses on maintaining a high degree of liquidity, as a high proportion of central banks' reserve assets needs to be available at short notice

2.2 The Process of Intermediation and Disintermediation

- **Intermediation** (indirect financing) involves financial intermediaries (eg banks) taking deposits from lenders and lending funds to borrowers
- **Disintermediation** (direct financing) involves market participants lending directly to borrowers without any financial intermediary present. In the OTC debt capital markets, credit rating agencies provide objective and independent credit information to allow orderly pricing
- The main **advantage of intermediation** is the transfer of risk from borrowers and lenders to intermediaries. Financial market risk can be incurred in the following different ways:
  - *Credit risk*: the risk of a counterparty defaulting
  - *Liquidity risk*: the risk of not being able to sell an asset at its market value due to a shortage of buyers
  - *Market risk*: the risk of market prices moving against the investor
  - *Operational risk*: the risk of losing money due to a breakdown in operating processes
- Financial intermediaries can benefit from **economies of scale**, thereby improving the efficiency of resource allocation in an economy
- Financial intermediaries employ **specialist staff** who provide technical expertise to both borrowers and lenders
- Financial intermediaries provide **market liquidity**, employing market makers/dealers/specialists, however a downside is the additional costs that are passed on to borrowers and investors
- The global trend of **electronic intermediation** is changing the nature of financial intermediation

2.3 Characteristics of an Effective Financial Market

- For financial markets to be **effective and efficient**, there must be:
  - Freely available information
  - Buyers and sellers must be able to transact freely
  - An efficient payment and settlement system

- Effective financial markets must be **liquid**. A liquid market has significant numbers of buyers and sellers, whereby single transactions do not affect market prices. Market liquidity is a function of:
  - *Depth*: volume of buyers and sellers
  - *Spread*: difference between buy and sell prices
  - *Immediacy*: the time a transaction takes to complete
  - *Resilience*: the speed at which prices respond to the effect of large transactions

- Market makers play an important role in helping the liquidity and marketability of financial markets

2.4 Types of Financial Markets

- Financial markets can be considered **primary or secondary** and **exchange-traded or over-the-counter (OTC).** Further categories are:
  - Equity market
  - Debt market
  - Foreign exchange market
  - Derivatives market

- Equity and debt markets can be referred to as “capital markets”
- Foreign exchange and derivatives markets can be referred to as “the treasury market”

Primary and Secondary Markets

- *Primary*: where capital is raised for the first time, e.g. a stock market listing
- *Secondary*: where trading takes place subsequent to capital raising

Exchange-Traded vs Over-The-Counter Markets

- *Exchange-traded*: operate via a centralized exchange where securities have standardized features, e.g. Stock Exchange of Hong Kong. Main advantage is self-regulatory bodies, ensuring investor protection. **Novation** eliminates credit risk
- *Over-the-counter*: transactions are tailor-made to requirements of parties involved, with no novation, thereby increasing credit risk. The biggest OTC market is global foreign exchange

Equity Market

- Shares of publicly listed companies are traded on a stock exchange
- Share prices are influenced by business profitability, valuation of similar securities and market supply and demand
- Equity securities include: ordinary shares; preference shares; and equity warrants

Debt Market

- Matches borrowers with lenders/investors
- Generally an **OTC market**, although some debt securities can be listed
- Maturities of up to one year are traded in the short-term market which is referred to as the **money market**
- Maturities of more than one year are traded in the long-term market which is referred to as the **capital market**
- The borrower must repay the principal amount at the maturity date and interest periodically and at maturity
- In the money market, interest is only paid at maturity and is the difference between the purchase price and the maturity value
- Regular interest (coupons) can be either fixed rate or floating rate
- **Short-term debt securities** include: bills of exchange; negotiable certificates of deposit; and commercial paper/promissory notes
- **Long-term debt securities** include: government bonds/notes; floating rate notes; and mortgage-backed securities

Foreign Exchange Market

- An OTC market, with two basic systems:
  - ***Floating rates***: the value of a currency is determined by **market supply and demand**. Most major currencies belong to this system, although some governments intervene by buying/selling large lots – known as a managed float regime
  - ***Fixed rates***: usually, a central bank will intervene in the market, when required, to sustain a particular exchange rate. **Hong Kong uses a linked exchange rate system** where the currency is linked to the US dollar. The Hong Kong exchange rate is determined by market supply and demand, however interest rates are used to stabilize the rate through the **Currency Board** system

Derivatives Market

- Products that derive their value from other assets include: futures, forwards, swaps and options

2.5 Participants in Financial Markets

- Financial system participants include households, businesses, financial institutions and governments, and can be split up into the following categories:
  - Fund providers and fund seekers
  - Capital raisers and investors
  - Financial intermediaries
  - Service providers
  - Credit rating agencies
  - Regulators

2.6 Prudential Regulation and Supervision

- To ensure that people have **confidence in the financial system**, there is a requirement for transparent regulatory and supervisory frameworks. Necessary regulation should provide:
  - Safeguards for investors and depositors
  - Risk management systems
  - Legislative recourse

- Market regulation is often administered through **self-regulatory bodies**. An example is the Stock Exchange of Hong Kong (SEHK) which is the prime regulator of its participants
- The **Hong Kong banking industry** is regulated by the Hong Kong Monetary Authority (HKMA), with international banking regulations incorporated in the Banking Ordinance
- The **Hong Kong securities and futures industry** is regulated by the Securities and Futures Commission (SFC) – covered in Topic 2. The SFC licenses market participants, including securities dealers, securities advisers and asset managers
- The **Hong Kong insurance industry** is regulated and supervised by the Insurance Authority, which promotes the general stability of the insurance industry, protecting existing and potential policyholders
- **Highly leveraged institutions** (HLI) employ high leverage over asset investments. The best known types are hedge funds. The important point is that HLIs are subject to little or no direct supervision from financial sector regulators
- **The rise of offshore financial centres** (OFCs) has triggered closer scrutiny by the international community, bringing with it increased regulatory supervision. OFCs, including Cayman Islands, British Virgin Islands and Bermuda, are involved in banking, asset management and insurance
- **Credit rating agencies** have existed since the 19th century, however it is only in the recent past that countries have begun to regulate them. The SFC introduced regulations for the provision of credit rating services in Hong Kong in 2011

3. FACTORS AFFECTING GLOBAL FINANCIAL MARKETS

3.1 Economic Factors and Indicators

- The financial system is influenced by economic, political and regulatory factors, both domestic and global. Details follow.

Economic Cycles

- Economies go through periods of boom and bust, involving four stages:
  - *Peak to contraction*: there is a decrease in economic growth, driven by falling investment and industrial production
  - *Contraction to trough*: a fall in inflation and private consumption expenditure is accompanied by an increase in unemployment
  - *Trough to expansion*: economic recovery occurs with a fall in interest rates and an increase in investment activity
  - *Expansion to peak*: continued economic growth leads to increases in household and business spending, with higher inflation and low unemployment

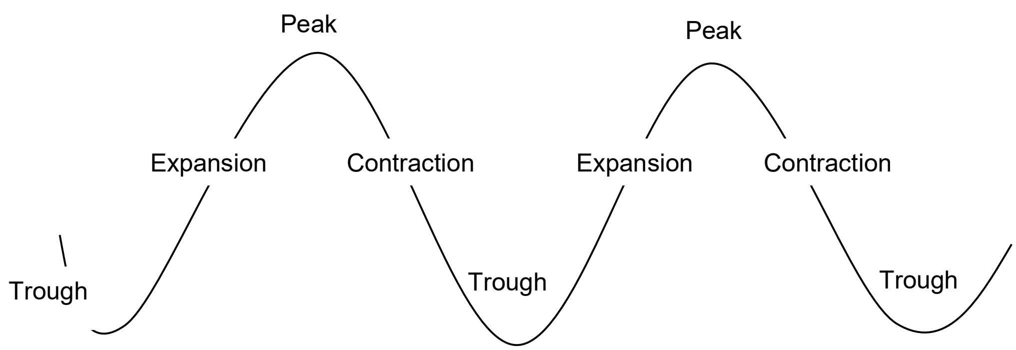

Figure 3: The Economic Cycle

- A fundamental tool in economic analysis and forecasting is recognising the current stage in the economic cycle

Interest Rates and Exchange Rates

- Interest rates reflect the cost of funds in an economy and are determined by the supply and demand for funds. Supply and demand for funds are affected by the following factors:
  - *The state of the economy*: the stage of the economic cycle will determine the demand for funds. During economic contraction, low demand for funds will decrease the interest rate, while during economic expansion, a high demand for funds will increase the interest rate.

- *Government monetary policy*: government action to influence the money supply, and therefore short-term interest rates, is known as monetary policy. This can involve:
  - Open market operations
  - Intervention in the FX market
  - Controls on financial institutions
- *Government fiscal policy*: government expenditure and taxation are tools of fiscal policy. Both can affect the supply and demand for funds
- *Inflation*: is rising prices over a period of time, resulting in a decrease in the purchasing power of money. **Cost-push inflation** involves increasing costs that lead to higher prices and wages, which can be a result of higher import prices. **Demand-pull inflation** occurs when supply cannot meet demand, resulting in higher prices
- *Deflation*: is negative inflation which results in falling prices and a rise in the value of money. (Disinflation is a fall in the inflation rate). Monetary policy can have a direct effect on inflation
- *Overseas interest rates*: influences investment overseas and investment from overseas
- *Interrelationship between interest rates and exchange rates*: exchange rates reflect the interest rate differential between two countries and is known as 'purchasing power parity'
- *Independence of monetary authorities*: many developed economies operate with an independent central bank. This allows objective setting of interest rates to help smooth out business cycles

Government Policies

- Examples of government policies which may affect an economy include:
  - A decrease in **profit tax rates** thereby increasing business investment
  - **Government subsidies** to a particular industry increasing its profitability
  - **Exchange rate controls** influencing imports and exports
  - **Labour market reform** leading to changes in wages and productivity

3.2 Changes Affecting Global Economies

- The following societal changes have made economies more robust and flexible.

Real-Time Information

- Businesses now have large quantities of data available in real-time
- Economic imbalances are now addressed and resolved much more quickly than in the past
- Speed of information, however, does not guarantee accuracy

Deregulation

- The removal of government administrative restrictions has encouraged constructive competition and improved business efficiency
- Increased economic flexibility has helped the energy and airline industries respond efficiently to major industry upheaval (Enron and 9/11)

Financial Innovation and Spread of Risk

- Development of **innovative financial products** has enabled risk to be spread more effectively to those who are able and willing to bear it
- However, the 2008 sub-prime upheaval demonstrated that over-innovation can harm an economy
- Two factors that have assisted this financial innovation are:
  - *Asset securitization:* although securitizing particular receivables (mortgages, student loans etc) has been around for many years, recent developments in synthetic structured finance and refinancing have made risk transmission even more effective
  - *Derivatives:* to hedge default and financial risks, market participants have made extensive use of financial derivatives, including interest rate futures, options, swaps and credit default swaps. The use of derivatives has had its drawbacks, most notably the market upheavals of 2008

3.3 Globalization and Technology

- Development of the global economy has been helped by sophisticated modern technology, enabling **efficient and speedy mobilization of funds** across borders
- A disadvantage of these developments is the encouragement of **speculative capital inflows and outflows** leading to economic and financial instability
- An example of this disadvantage was the **Asian financial crisis of 1997-98** brought about by massive short-term speculative capital flows
- A growing and diverse number of participants can gain access to **up-to-date financial news and information** from around the world
- Increased accessibility to global financial markets has influenced the nature and function of **financial regulation** and has led to the development of **new niche markets and products** to provide opportunities for higher returns, given the reduction in arbitrage opportunities

3.4 Market Expectations

- Market expectations is an important influence on financial markets and can develop from expectations of:
    - **Economic announcements**, including the release of employment, inflation and productivity figures
    - Government policy
    - Domestic or world events

- News regarding inflation and economic growth can affect the **debt markets** as inflation erodes the value of debt and growth can influence inflation
- Global economy expectations influence participants in the **foreign exchange markets**
- **Equity market participants** are influenced by expectations of corporate profitability, business investment and future growth potential

3.5 Lessons from Financial Crises

- Lessons can always be learnt from financial crises. Two that are relevant to our studies are the 1997-98 Asian financial crisis and the sub-prime crisis/credit crunch

The 1997-98 Asian Financial Crisis

- Up to 1997, Asia experienced **spectacular economic growth**; first with the Four Tigers (Hong Kong, Singapore, South Korea and Taiwan) followed by Malaysia, Thailand, Indonesia and the Philippines
- A number of these countries funded their growth with **US$ debt**, which worked while their currencies were pegged to the US$
- From 1995, the US$ started to strengthen and then, one by one, the **Asian currencies de-pegged from the US$,** making repayment of US$ debt a major issue, as currencies de-valued
- Only **Hong Kong had enough US$ reserves** to avoid currency devaluation, although the stock market did crash, as speculators tried to break the dollar peg
- It was discovered that a vast amount of borrowed money had been spent on **speculative property investments**, prestige projects and unneeded factories
- **Lessons learnt** from the Asian financial crisis are:
    - A strong, well-regulated, transparent financial sector is important to a sustainable policy framework;
    - It is important to have an effective mechanism of economic and financial surveillance to identify potential risks;
    - Both governments and corporations require careful debt management; and
    - Good corporate governance is vital for a healthy financial sector

Global Financial Crisis in 2008

- In 2007-2008, many major US financial institutions reported **large losses due to investments in subprime related products**
- The US subprime crisis evolved into a **global credit crisis** with the US government intervening heavily in the operations of major financial institutions
- A subprime loan **is mortgage loan with high credit risk**
- The US subprime loan market grew quickly from 2001 to 2005, **fuelled by low interest rates**
- High risk subprime loans were **repackaged as collateralized debt obligations** (CDOs) via mortgage-backed securities and were often given top credit ratings allowing them to be sold to investment banks
- The subprime loan market was able to grow, as long as **US property prices kept growing**, however in 2006 interest rates began to rise which led to a fall in property prices
- As borrowers defaulted on their mortgages, **property prices fell further**
- Banks had to write off significant amounts of debt and became very risk averse
- **An illiquid debt market further contributed to falling asset prices** which worsened the financial situation and caused real economic decline
- **Lessons learnt** from the subprime crisis are:
    - Credit ratings should be separate for different types of debt;
    - Investors should not rely solely on credit ratings when making investment decisions
    - Financial regulation should strike a balance between consumer protection and viability of asset securitization
    - Policymakers should resist pressure for bailouts to avoid supporting speculative or fraudulent behaviour