Lecture 1 and 2
Globalisation and Foreign Exchange Markets

-International finance deals with the financial managements of business corporations with international financial flows (goods and service transfer requiring financial transactions).
-Many complications arise from needing to exchange currencies. Most exchange rates are floating and it is almost impossible to predict the rate in the future creating uncertainty
-Financial managers need to understand the effects of international events on a firm and able to effective guard against unfavourable events or take advantage of favourable ones
-This requires a good grasp if the factors affecting exchange rates, the workings of international financial markets and the issues involved in global financial management:

-Foreign exchange rates
-Different cultural modes
-Different ways of operating

Relevance of International Finance
-Business corporations that operate in several nations face two key challenges:
1. The need to deal with currencies with unpredictable movements of exchange rates leading to foreign exchange rate exposures
2. To cope with different business environments:

-Regulatory and political regimes e.g. tax rules, corporate governance
-Cultural and language differences
-Common vs. civil law
-Country and political risk

1.1 Globalisation and the growth of international trade and capital flows

-Globalisation refers to the increasing connectivity and integration of countries and corporations and the people within them in terms if their economic, political and social activities. A MNC is a company that produces and sells in more than one country
-In MNCs, capital, labour, management skills and technology are all transferred to other countries to produce abroad rather than export from a domestic factory. This can help reduce cost
-Globalisation proceeded through a process of trade and financial liberalisation through the removal of trade barriers and capital controls in developed markets in the 1980s and developing in the 1990s. These two trends defined globalisation
Trade
-Countries gain from trade if they specialise in the production of goods in which they have a competitive advantage with open economies found to grow faster. However protectionist policies such as tariffs, quotas, subsidies and regulations kept the world closed
-In the 1960s only 20% of countries were open but by 70% of countries were open. There are now multilateral trade agreements and bilateral free trade agreements. FTAs can however lead to obligations on the part of the government
-Out-sourcing us the shifting of non-strategic functions to specialist firms
-However developments such as the European Economic Community, GATT (1947), WTO (1995) which replaced GATT and other free trade agreements have led to greater openness
-Advances in technology have also played a key role with trade more international. This has led to outsourcing: shifting of non-strategic functions e.g. payroll, IT, maintenance to specialist firms to reduce cost
-Evolution toward trade openness had dramatically increased trade flows and one measure of the size of the trade sector is the sum of export and inputs in a given year divided by a measure of output e.g. GDP. Trends show that trade is increasing
Financial Markets
-A country is financially open if it allows foreigners to invest in its capital markets and allows its citizens to invest abroad. The free flow of capital is gauged by the degree of capital market openness with a full open market: 1 and a fully closed: 0 (Quinn and Toyadsa 2004). In early 2000 the measure was 0.8
-Financial integration is evident in:

-Floating of major currencies in 1973 which ended the Bretton Woods arrangements. This introduced uncertainty which has paved the way for the introduction of financial derivatives (for hedging this foreign exchange risk)
-OECD economies started the process of deregulation of banking and financial systems
-Emerging market economies started to deregulate their financial sectors from late 1980s which allowed foreigners access to their systems
-Advancements in information and communication technology (which allow electronic fund transfers worldwide)

-It is not necessarily the case that countries with open capital markets enjoy large inflows as investors can be put off by poor regulation. Also countries that want to keep capital markets closed must realized that regulations are often ineffective
-Financial markets have become more sophisticated due to a derivatives revolution in the 1970s and 1980s. A derivative security is an investment from which the payoff is derived from the performance of underlying assets or asset prices e.g. exchange rates. Derivatives make it easy to hedge risks
-These and other developments such as securitization (repackaging of pools of loans or other receivables to create new financial instruments that can be sold to investors) increased the complexity of the financial intermediation business
-This made it easier to hedge risk but also harder for governments to regulate

<u>1.2 Multinational Corporations</u>
-An MNC is a firm that does business in one or more foreign countries. It consists of a parent company and operating subsidiaries, branches and affiliates
-Multinationals enter foreign markets through exports and imports, licensing arrangements (where they earn royalties from companies that manufacture and distribute their products abroad), franchising (where the MNC is more involved but still receives periodic fees), joint ventures or simply local production and distribution facilities
-The latter is done by acquiring foreign companies or setting up new operations and forms the bulk of foreign direct investment
-Globally integrated firms with strategy, management and operations all streamlined in one global entity are also appearing
-In the US, an MNC aims to maximize shareholder wealth while in other countries interests of labour, government, creditors and suppliers are also taken into account. Modern corporate finance holds that SHW maximization is the ultimate goal
-Other considerations include:
-Investment time horizon: Management should not be willing to trade a short-term increase if it leads to a long-term fall
-Stakeholders: This is when firms try to serve the interests of various stakeholders and this makes objectives less clear
-Agency theory explores the problems that arise because the owners of the firm do not typically manage the firm and devises ways to resolve these problems
-Corporate governance is the legal and financial structure that controls the relationship between the company's owners and management and recent example show that it can be poor e.g. Enron

Corporate Governance around the world
-The recent scandals demonstrate that management does not always act in SH interests
-Corporate governance can be enhance at the firm level by an independent board of directors, concentrated share ownership, executive compensation that motivates management to act in the interests of shareholders, shareholder activism and litigation and the threat of hostile takeovers. A summary of these is:

Method	Pro	Con
Independent board of directors	-Protection of minority SHs -Increase risk sharing	Often not sufficiently independent of management

Partial concentration of ownership and control by a large shareholder	-A large SH has self-interest to monitor management	-Possible collusion against smaller SHs -Reduced liquidity in stock
Executive compensation with options or bonuses related to performance	Provides a direct inventive to maximize stock price	-Rewards managers for luck -Subject to manipulation and can lead to short-term focus
Clearly defined fiduciary duties for CEOs with class-action law suits	Provides a complementary disciplinary device	Increase legal costs
Hostile takeover and proxy contests	Directly disciplines bad management	Provides incentive for raiders to expropriate wealth from creditors and employees

*A hostile takeover is when the raiders bid for a majority of voting rights and then use acquired voting power to replace CEO and redirect strategy
-The Sarbanes-Oxley Act of 2002 attempts to improve corporate governance in the US but many see it as costly to implement
-Data seems to show that countries with greater legal protections of investor rights have more firms listed on public stock markets, larger corporate valuations and greater economic growth
MNCs and FDI
-Foreign direct investment occurs when a company from one country makes an investment in a new or existing firm in another country that leads to an ownership interest >10%. FDI has greatly increased though still mainly occurs between developed countries
-An FDI can be viewed as an international acquisition

<u>1.3 Other important international players</u>
-In the course of its international business activities a MNC may need financing from an internationally active bank, use economic information provided by an international organization, operate within the regulatory framework set by local governments or international institutions and need to deal with investor relations in several countries
-Important international organizations that provide financing to countries include the IMF, World Bank and various multilateral development banks
-The IMF aims to ensure stability of international monetary and financial systems i.e. system of international payments and conducts surveillance and technical assistance. The World Bank was created with the IMF in 1944 and is a complex hybrid of a long-term development bank, an aid agency and a technical assistance outsourcing centre
-Multilateral Development Banks (MDBs) provide financial support and professional advice for economies and development in developing countries. They provide long-term loans at market rates, very long-term loans at below market rates and offer grants for technical assistance and advisory services
-The WTO sets the legal rules for international trade, whereas the Bank for International Settlements (BIS) is the central bank for central banks and promotes monetary and financial stability and fosters cooperation
-The EU unites 27 European countries into a common market with common policies for a wide range of fields: free mobility of capital and people and for some a common currency and monetary policy
-The OECD is another key organization
-Other key players include:
    -Governments which can affect asset prices that affect the cost of debt
    -Individual and institutional investors (pool money on behalf of individuals) whose trading of stocks determines price and implicitly required return
    -Hedge funds and private equity firms: Hedge funds pool money but operate under exemptions

unlike mutual funds. Private equity firms typically control the management of companies they invest in and often conduct acquisitions

1.4 Globalisation and the MNC: Benefactor or Menace?

-Both trade liberalisation and financial globalisation seem to have beneficial economic effects; yet the process towards globalisation has been criticized as increasing real risk I.e. economies suffering recessions and unemployment
-This suggests that unbridled trade openness with the existence of government welfare may be ill advised
-Benefits of financial globalization include channeling savings to most productive uses, pooling risks; allow countries suffering a temporary recession to borrow abroad and possibly increase growth as sharing of risk may make riskier projects more affordable
-However there are costs including greater financial sector vulnerability and increased real volatility, loss of fiscal autonomy and difficulty in collecting taxes with profits shifted which can also mean that imposing capital control can have severe economic costs
-The anti-globalist movement encompasses a number of social movements which suggest it is detrimental to the poor with policies seen to exacerbate unemployment and poverty, damage the environment e.g. pollution and being a threat to jobs domestically
-However evidence suggests there are positive impacts with foreign companies creating jobs, abroad investment allowing domestic investing abroad and shielding the parent from currency fluctuations
-Also MNCs often pay higher wages in developing countries, are an improvement in allocative efficiency of capital and lead to technology transfer and productivity spillovers which can help close the 'idea gap' by introducing new technology
-While it may leave some people worse off it is unclear how the macroeconomic effects are distributed and this leaves room for government action e.g. effective retraining and employment policies for workers who find themselves unemployed
-Overall globalisation presents many opportunities for diversii9fcatuon but also creates new risks. These factors need to be weighed up. However as globalisation is inevitable you need to aim to reduce the costs and take maximum advantage of opportunities
-Non MNCs (purely domestic) are also affected as they compete against MNCs both in terms of price and business model. Non-MNCs face the issues indirectly
-The field of international financial management addresses financial decisions facing corporate manages regarding trade and investment across national borders

Chapter 2
The Foreign Exchange Market

2.1 The organisation of the foreign exchange market

-The foreign exchange market is a large, over-the-counter market composed of banks and brokerage firms and their customers in the financial centres of countries around the world. Volume of trade is estimated to be over $3.9 trillion on active days
-Market economy functions via the price system where the equilibrium price for a good is determined by market forces of supply and demand. However there can be breakdowns in the price system and this is called a market failure
-The interbank market is the wholesale part of the forex market where banks manage inventories of currencies. The exchange rate is simply the price of a currency measured in some other currency
-The foreign exchange market is almost perfectly competitive as there is a homogenous product, easy flow of information, easy access and 24 hour trading
-The foreign exchange markets are:

> -Decentralised
> -Over the Counter
> -Continuous double auction market
> -Trade at very high volumes with the market growing
> -Unregulated market: There are no position limits, trading halts, price limits administered by authorities. These tools are there to control the markets. This provides more scope for exploiting

asymmetric information and market manipulation
-The foreign exchange market is the mechanism by which participants:
-Transfer purchasing power between countries
-Obtain or provide credit for international trade transactions
-Hedge foreign exchange exposures to the risks of exchange rate changes (if you have receivables or payables in the future this can create certainty. Hedging reduces the negative impact of unforeseen future events)
-Speculate on future movements of exchange rates. Due to the small movements transactions have huge volume
*Market makers are both buyers and sellers of currency. You need enough of your own currency to be able to purchase foreign currency and enough of the currency you deal in. This involves an inventory cost. This means you need huge balance sheets to have sufficient assets
-There many types of trades that can be made including the spot market which is the market for immediate exchanges of monies. Others include swaps and forward contracts
-The FX market consists of two tiers:
1. Interbank or wholesale market (multiples of 1m)
*This is a very large, diverse over the counter market, not a physical place where buyers and sellers gather to agree on a price to exchange currencies
2. Client or retail market (smaller amounts)
-The main participants are:
-Large commercial banks (market makers): They trade their own accounts and are obliged to quote bid and ask prices upon demand. They provide predictable immediacy or liquidity (this means that you know you can do a trade)
-Investment banks
-Brokers and brokerage firms: They match bid and ask orders for a fee. They receive one-way limit orders (both single auction buy and sell orders) from clients and release their best bid and ask prices (inside spread). They do not put their own money at risk but receive a brokerage fee and typically have lines to dealers
-Customers: Business corporations, international portfolio investors, other retail customers
-Central banks: They conduct FX transactions on behalf of the government and under FX market intervention to influence the market by being visible in the market to reduce volatility. There is more intervention today
-Approximately 87% of total trades are done by the first two groups I.e. dominated by financial flows rather than financial real trade flows
-Continuous trading couple with decentralised nature of trading allows more scope for arbitrage
-Traders function as foreign exchange dealers making a market in several currencies and these market makers stand ready to buy and sell currencies in which they specialise. They provide liquidity to the market and try to buy low and sell high
-Trades are undertaken by computerised trading systems such as the Dealing 3000 that screens whether credit is available for both parties and then completes the deal
-Other participants include MNCs that exchange currencies for trade, institutional investors, hedge funds and smaller domestic banks. The more removed participants are the more steps it takes to exchange currencies

2.2 Currency Quotes and Prices
-Exchange rates (prices of currencies) are relative prices i.e. exchange rate is the relative price of two monies
-A national currency is either:
-Domestic Currency (DC) or Foreign Currency (FC)
-Commodity Currency (CC) or Price Currency (PC)
CC is the one being traded (financial asset) ad PC is the one that the commodity currency is being price at (money)
*You need to make sure you are CONSISTENT with which perspective you use
-They can be quoted in direct terms (domestic price terms) as domestic currency price of the foreign

currency e.g. 1FC=xDC (FC is the denominator I.e. S=xDC/FC)
-Alternatively indirect terms (quantity terms) as the foreign currency price of the domestic currency i.e. xFC=1DC (I.e. S'=xFC/DC). S=1/S'
-**The denominator currency is measured in terms of 1!!** E.g. If 0.95 AUD=1 USD then AUD=PC, DC and USD=CC, FC and this is a DQ
-All except AUD, EUR and GBP, USD is quoted per unit of FC against 1 unit USD. These are above parity with USD. A direct quote from the US perspective is referred to as American term (I.e. US DQ) and from the UK perspective as European term
-An exchange rate expressed in direct terms is the reciprocal of the indirect rate
-In the retail market the local currency is the money. In the wholesale market the USD is the money and other currencies the product
***UNLESS OTHERWISE STATED THE RATE WILL BE IN DIRECT QUOTATION. YOU MAY BE ASKED TO SAY WHETHER THE QUOTE IS DIRECT OR INDIRECT BASED ON THE BID-ASK SPREAD**

Cross-rates and Arbitrage

-A vehicle currency is a currency that is actively use in many international financial transactions around the world. The transaction costs of making markets in many countries has led to the use of only a few currencies as the major vehicles for financial transactions e.g. if there are N different currencies there are N(N-1)/2 possible exchange rates and as there is often little demand traders make a direct market in important currencies
-Exchange rates between the two currencies that do not involve the dollar are called cross-rates
-To calculate cross rates we can use the mid-rate e.g. given two ER pairs DC/FC_1 and DC/FC_2 i.e. DQ(D) the cross rate is:

$$FC_1/1\times FC_2=\frac{DC/1\times FC_2}{DC/1\times FC_1}$$

-This formula assumes we have no transaction costs and there are no risk premiums
-Cross rates can also be calculated using bid-ask rates. The particular rates will depend on the bank's condition e.g. if it is overstocked in one currency and spread will be higher if the market is uncertain

- Given a pair of ERs: Direct quotes from home perspective
  - $(DC/FC_1)_b$ - $(DC/FC_1)_a$
  - $(DC/FC_2)_b$ - $(DC/FC_2)_a$

- The cross Bid - Ask rates (direct quote from foreign country 1's perspective) are then

$$(FC_1/FC_2)_b=\frac{(DC/FC_2)_b}{(DC/FC_1)_a}$$

$$(FC_1/FC_2)_a=\frac{(DC/FC_2)_a}{(DC/FC_1)_b}$$

-Triangular arbitrage keeps cross-rates in line with exchange rates quoted relative to the US dollar. This would be when a trader buys pounds with Euros and then sells the pounds for dollars and then sells dollars for euro i.e. exchanges three currencies
-If the market rate > Implied Rate (FC_1/FC_2) then CC (FC_2) is overvalued and thus an arbitrageur would sell FC2 i.e. purchase FC2 using DC, buy FC1 with FC2 and then sell FC1 for DC
-If the market rate < Implied rated then FC2 is undervalued and the opposite would happen
-There would thus be an arbitrage opportunity until the equality is restored: Euros/Pound = Euros/Dollar x Dollar/Pound
-When bid-ask spreads are taken into account here is no arbitrage if a market quote between FC1 and FC2 overlaps with the equilibrium cross rates. If no overlap exists: For Quote 3 FC2 is overpriced and for Quote 4 FC2 is under-priced i.e. you look for banks that are behind the market trend and take advantage of the mispricing