Week 1 – Capital Markets & Institutions

Learning Objectives:

1. Explain the functions of a financial system
2. Categorise financial institutions based on sources & uses of funds
3. Describe the main classes of financial instruments issued by the financial system
4. Discuss the flow of funds between savers & borrowers – Primary/Secondary, Direct/Intermediated Finance
5. Distinguish between various types of financial markets according to function

Money

- Acts as a medium of exchange, increases speed & efficiency of transactions in markets – no need for barter
- Store of wealth → Facilitates saving
- Solves the divisibility problem, (e.g. if cake = half a cow) & removes the *double coincidence of wants* requirement

Functions of the Financial System:

Finance is the art & science of managing the scarce resource of money. The **Financial System** comprises a range of financial **institutions, instruments & markets** & is overseen by the Government (fiscal, super & regulations), central bank (monetary) & prudential supervisors (APRA – Banks, ASIC – Markets, ACCC – Competitiveness).

The **Financial System** functions to facilitate the **flow of funds** between **deficit** & **surplus** units through the interaction of financial **institutions, instruments** & **markets**. **Surplus** units have an excess of current funds while **deficit** units have a shortage of current funds. For the financial system to fulfil its **function of facilitating the flow of funds,** it **provides**:

- Investment products for surplus units, (**creation** of **instruments** in the **primary** market to facilitate flow of funds)
  - Allow for trading of **existing instruments** in **secondary** markets
- (Alternative) sources of funding for deficit units → BUT must ensure savings are directed to most efficient users
- Risk management products & services

Financial Institutions

1. **Depository Financial Institutions** (DFI's) – Requires APRA License
   - **Sources** funds from deposits & **Use** funds to provide loans. For example, a commercial bank – ANZ.
2. **Investment/Merchant Banks** (I.B)
   - **Source** funds from providing off balance sheet advisory services (M&A, restructuring, risk mgmt) & **Uses** funds to pay labour. This still facilitates the flow of funds as they link deficit & surplus units. They assist & advise clients to raise funds directly from capital markets
   - **IPO** → I.B **advises** company/deficit unit on IPO's (prospectus etc.) & **markets** the securities to surplus units
3. **Contractual Savings Institutions** (CSI's)
   - **Sources** funds from premiums collected, **Uses** float to earn a return through investing. E.g. Insurer
   - Clients (surplus units) pay premiums for the return of claim benefits if & when the 'event' occurs. The CSI invests these funds (lends to deficit units) in order to attain a return.
4. **Finance Companies**
   - **Source** funds from wholesale markets, **Use** funds to provide loans in the retail market, e.g. RAMS
5. **Unit Trusts**
   - **Sources** funds from public who buy 'units', **Uses** – pooled funds are invested by managers (in asset classes) according to the trust deed. Controlled & managed by a trustee or responsible entity

Financial Assets:

Financial Assets are issued by the party raising funds that entitles the holder to future cash flows. A **financial security** is a financial asset that can be traded on a secondary market.

The financial system encourages savings by offering a range of instruments (which facilitates portfolio restructuring) & providing accurate & timely information. These savings are invested to expand productive capacity → economic growth

Attributes of financial assets:

- **Return/Yield** – total financial compensation from the investment
- **Risk** – Probability that actual return of an investment will vary from the expected return (BULLSHIT)
- **Liquidity** – Ease of which it can be sold at current market prices
- **Time Pattern of Cash Flows** – When the cash flows are expected to be received by investor/lender

Financial Instruments:

Represents an entitlement to the holder to a specified set of future cash flows. When a user of funds obtains finance, the user must prepare a legal document (or financial instrument) defining the contractual arrangement.

- **Equity** – An ownership interest in an asset, e.g. ordinary share, hybrids (preference shares, convertible notes)
  - Don't mature, infinite life. Receives dividends & capital gains, voting rights
- **Debt** – A contractual claim to defined periodic interest repayments & the repayment of principal, e.g. debentures
  - Ranks above equity in claim to future cash streams
  - short term (<1 yr – money market) or long term (capital market)
  - Unsecured debt or Secured debt – specifies the assets of the borrower that are pledged as collateral
  - Can be negotiable – (transferable ownership e.g. commercial bills) or non negotiable (term loans)
- **Derivative** – Facilitates management of certain risks & speculation, don't provide funds to borrower
  - **Future** – *an exchange traded agreement to buy/sell a specified amount of a commodity at a price determined today for delivery or payment at a future date*. They are standardised & traded through a futures exchange.
  - **Forward** – *An OTC agreement that locks in a price that will apply at a future date.* Similar to a future, but more flexible and negotiated OTC with a commercial or investment bank.
  - **Option** – *The right, but not the obligation to buy/sell a commodity or security at a predetermined exercise price*. The buyer pays the premium to the option writer.
  - **Swap** – *An agreement between 2 parties to swap future cash flows, e.g. interest rate or currency swaps*
- **Hybrid** – Incorporates characteristics of debt & equity
  - e.g. preference shares have a specified fixed dividend for a defined period

Financial Markets:

The **Matching Principle** states that short (long) term assets be funded with short (long) term liabilities (equity). Worsened GFC.

A **Primary Market** Transaction occurs when firms, government or individuals issue/create new financial instruments in the money & capital markets. Funds are obtained by the issuer. A **Secondary Market** Transaction is the buying/selling of existing financial instruments, facilitating the transfer of ownership (before maturity) & liquidity, whilst the issuer gains no extra funds. This enhances the marketability & liquidity of primary-issue instruments.

Wholesale Markets involve large sums of money & usually direct financial flows between institutional investors & borrowers. Cost of funds is determined by levels of liquidity, interest rate expectations & maturity structures. In contrast, the **Retail Market** involves smaller amounts of funds & directs flows between intermediaries, households & small to medium businesses.

The raising of funds in the primary market can either as **Direct Finance** or **Indirect Finance.** For **Direct Finance** the contractual agreement is between the provider & user of the funds. There is no intermediary, but a broker who arranges the transaction may receive a commission, e.g. stockbroker. Generally, this is for corporations or government with a good credit rating.

The **Advantages** of **Direct Finance** include:

- Avoid costs of intermediation
- Allows the borrower to diversify funding sources, reducing exposure to a single funding source or market + Flexibility
- Enhance firms reputation through doing transactions in international financial markets

The **Disadvantages** of **Direct Finance** include:

- Matching of preferences between lenders & borrowers is required (amount, maturity structure etc.)
- Liquidity & marketability of the security, does it have a liquid secondary market?
- Search & transaction costs associated with a direct issue (advisory/legal/taxation fess, prospectus)
- Assessment of risk (default risk), accounting standards vary, information may be limited

Intermediated Finance is a financial transaction conducted with a financial intermediary, who has an active role in the relationship between savers & borrowers. Intermediaries obtain funding from savers by issuing financial instruments & lend funding to deficit units in return for financial instruments (2 separate contractual agreements).

The **Advantages** of **Intermediated Finance** include:

- **Asset Transformation** – Resolves conflicting preferences between surplus & deficit units
  - Ability of intermediaries to offer customers on both sides of the balance sheet a range of financial products
  - They can. Incentivises savings for small surplus units.
- **Maturity Transformation –** Savers/borrowers offered products with a range of terms to maturity
  - Pool many small short term deposits and lend out as long term loans – economies of scale
  - Unlikely savers would withdraw deposits at the same time, withdrawals are usually matched by new deposits
    - Liability Management – actively manage sources of funds to meet future loan demand
- **Credit Risk Diversification –** A saver's credit risk exposure is limited to the intermediary, while the intermediary is exposed to the credit risks of all its borrowers. Intermediaries tend to have expertise in assessing risk of borrowers.
- **Liquidity Transformation –** Ability to convert a financial asset into cash (benefits the saver – offer 'at call' accounts)
  - Savings & expenditure vary (don't coincide)
  - Intermediaries have the ability to lower transaction fees by spreading fixed costs (+ time)
- **Economies of Scale** – Create cost efficient distribution systems (e.g. Banks & ATM's, online etc.), spreading overhead

Money Markets are wholesale markets (institutional) in which short-term securities are issued & traded. The securities are highly liquid with maturities of less than 1 year & are standardised. It enables participants to manage liquidity & short term financing to bridge the gap between cash expenditures & receipts.

The **Money Market** is comprised of a number of submarkets:

- **Central Bank**: System liquidity & monetary policy → alter liquidity by buying/selling CGS's to attain targeted cash rate
- **Inter-Bank:** for the management of the short term liquidity needs of commercial banks → Settle transactions & ESA's
- **Bills:** Short term discount securities, no interest, but sold at less than face value
- **Commercial Paper:** Promissory notes are like 'bills' but are usually unsecured & issued by firms with good credit rating
- **Negotiable Certificates of Deposit:** Discount securities issued by a bank

Capital Markets are those which long term securities are issued & traded, it includes:

- **Equity:** Funds are given in return or an ownership interest in the form of a share
- **Corporate Debt:** Longer term debt, e.g. – term loans, debentures, unsecured notes, commercial property (mortgage)
- **Government Debt:** Borrowing for short term liquidity (T-Notes) or long term capex (Treasury Bonds – deficit)
- **FOREX:** Facilitate buying/selling of foreign currency
- **Derivatives:** Synthetic risk management products → futures, forwards, options, swaps

Week 2 – Commercial Banks

Learning Objectives:

1. Evaluate the functions & activities of commercial banks
2. Identify the main sources & uses of funds for commercial banks
3. Outline the nature & importance of banks' off balance sheet business
4. Examine the main risk exposures & consider related uses of regulation & prudential supervision of banks

Commercial Banking:

In Australia, financial institutions that are approved to carry out **financial intermediation** are authorised by APRA & are authorised depository institutions. Commercial banks are extremely important as they make up a significant of the financial system (~50% of assets not including OBS transactions) since being deregulated due to the rise of non-bank financial institutions in the 80's (Govt. Had to choose between total regulations or deregulating the commercial banks).

Main Activities:

- **Asset Management** (Pre 1980's) → Loan portfolio tailored to available deposit base. Restricted loans
    - Highly regulated environment
- **Liability Management** (1980s –) → Deposit base & other funding sources tailored to loan demand
    - Less regulated environment. The banks borrow direct from capital markets to meet forecast loan demand.

Sources of Funds:

- **Deposits** → Current (Cheque/Operating Acct.) or Call/Demand Deposits (Savings Acct. – can withdraw on demand)
    - Highly liquid for surplus units, stable – accounts are maintained for future expenses or firm operating expenses
- **Term Deposits** → 1 month to 5 years
    - Fixed maturity – sacrificing liquidity for return, investors tend to come here in times of market turmoil
- **Negotiable Certificates of Deposit** → Short term deposit security(30-180 Days), Bank may issue into money market
    - Paper issued by the bank at a discount to face value specifying that face value will be repaid at maturity (date)
    - Negotiable security – deep/liquid secondary market, Banks can adjust yield on new CDs to adapt to funding requirements.
- **Bill Acceptance Liabilities** → Bill of exchange
    - **Acceptor Role** – bank commits to repay the face value of the bill to the holder at maturity for a fee (to boost creditworthiness) & has a separate arrangement with the issuer to recover the funds at maturity.
    - **Discounter Role** – Bank buys bill from drawer and resells in the money market. Arranges finance for a customer without using its own funds
- **Debt Liabilities** → Medium – Longer term debt instruments issued by a bank
    - **Debenture** → Bonds supported by a form of security, a collateralised floating charge over the assets of issuer
    - **Unsecured Note** → A bond issued with no supporting security

- **Transferable Certificate of Deposit**→Long term (3-5) fixed rate instruments issued with face value of 100,000+

- **Foreign Currency Liabilities** → Debt instrument issued in international capital mkts. – denominated in foreign currency
  - Diversification of funding, matches foreign assets with liabilities, corporate demand for FOREX products
  - Euromarkets – instruments issued into debt markets or foreign country but not in the currency of that country
- **Loan Capital** → Characteristics of both debt & equity – hybrid securities (e.g. subordinated debentures)
- **Shareholders' Equity** → Ordinary shares issued or retained earnings

Uses of Funds:

Personal & Housing Finance:

- **Housing Finance** – Mortgages (security interest of lender in the property) & amortised Loans for residential property
  - Securitisation – selling off existing loans into a trust to fund new loans. Trustee funds this buy issue securities to investors (e.g. bonds secured by housing loans)
- **Investment Properties –** Bank takes registered mortgage over the property as security
- **Fixed Term Loans –** Typically matures before 5 years, a guarantee may be needed
- **Credit Cards –** Used for electronic transactions using ATM's or EDTPOS, user draws against a predetermined limit
- **Personal Overdrafts** – allows for the mismatch of cash flow timing for individuals

Commercial Lending: Needed since most businesses cannot access capital market (direct finance)

- **Fixed Term Loans** – negotiated terms (maturity, interest rates (fixed/variable – specified to a reference rate e.g. bank bill swap rate), repayment timing, principal repayment, security, yes/no amortised loan instalments)
- **Overdraft** – Allowing a firm to takes its operating account into debit by an agreed amount
- **Bank Bills Held** – Bills of exchange bought by the bank at less than face value & held as asset (not sold into MM)
  - Rollover facility – Bank agrees to discount new bills over a specified period as existing bills mature
- **Leasing** – owner of the assets allows lessee to use assets in return of periodic lease payments

Government: Often place surplus funds in low risk government issued securities

- **Treasury Notes** – short term discount securities issued by the government
- **Treasury Bonds** – medium to longer term securities issued by the government, pay a specified interest coupon stream
  - Low risk, low return, high liquidity
- **Term Loans & Overdrafts** – To various government agencies

Off Balance Sheet Business:

OBS transactions are a major part of banking operations (14,000,000 million in 2010). They include:

- **Direct Credit Substitutes** – Contingent liability, bank makes a payment if the client defaults.
  - The bank supports the financial obligations of a client, acts as a guarantor for a fee *e.g. stand by letter of credit*
  - Allows clients to borrow directly from the markets, reduces risk as either borrower and bank must repay
- **Trade & Performance Related Items**
  - A form of a guarantee provided by a bank to a 3rd party, promising financial compensation for non financial contractual obligations. *E.g. performance guarantees* (failure to complete terms of contract) *or documentary letters of credit* (bank on behalf of client, authorises payment for the delivery of G&S at arrival (importing))
- **Commitments –** Contractual financial obligations of a bank that are yet to be completed/delivered
  - Bank undertakes to advance funds or purchase assets in the future *credit cards, loans, underwriting, forwards*
  - Outright forward purchase agreements – contracts to buy a specific asset at an agreed price at a specified date