# Chapter 2 - Commercial Banks

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- IMPORTANT FOR QUIZ: examine the main risk exposures and consider related issues of regulation and prudential supervision of banks

2.1 Main Activities of Commercial Banks

- In Australia, the APRA (Australian Prudential Regulation Authority) authorises financial institutions to carry out financial intermediation. These institutions are then called **authorised depository institutions (ADIs)**
- Before the 1980s there was a high level of regulation in the banking sector, constraining development
  - **Asset management** was done by banks before deregulation, where the banks would only be able to loan out as much as they had deposited. This was obviously much safer since the banks definitely had the funds available from their loans to meet the cash flows outwards from the deposits
  - Loan portfolio tailored to match the availble deposit base
- After deregulation
  - **Liability management** where banks will manage their liabilities dependent on their amount which as been loaned out, allowing them to lend more than they currently own and raise liabilities based off this
  - This is done through borrowing directly from capital markets and providing other off balance sheet business

2.2 Sources of funds

- Sources of funds appear in the balance sheet as **liability** or **shareholders'** funds
- Banks offer a range of deposit and investment products with different mixes of liquidity, return, maturity and cash flow structure to attract savings:
  - **Current deposits:** funds are held in a cheque account and are highly liquid, usually providing little to no interest rates due to this liquidity
  - **Call or demand deposits:** also known as savings accounts, which can be withdrawn on demand. This and current deposits provide stable funding
  - **Term deposits:** funds are lodged in an account for a predetermined period at a specific interest rate (higher than previous because loss of liquidity due to fixed maturity)
    - In times of volatility, demand for term deposits increases
  - **Negotiable certificates of deposit (CDs):** short term discount security, where paper is issued by a bank in its own name. These bills are issued at a discount to face value, and the face value will be repaid at maturity. These are generally short term (30-180 days)
  - **Bill of exchange:** a security issued into the money market, also at a discount to the face value. The business that issues the bill sells the bill to an investor with the bank's guarantee (to increase creditworthiness - the bank charges a fee for this as the **acceptor**)
    - The bank can agree to buy the bill from the drawer, and will then usually sell it straight away into the money market, meaning it was able to arrange funds for the drawer without using its own funds. This makes the bank a **discounter**
  - **Debt liabilities:** medium-long term debt instruments issued by a bank
    - **Debentures** are bonds supported by a **collateralised floating charge**, which gives the lender a charge over the assets of the issuer
    - **Unsecured notes** are bonds with no supporting security
  - **Foreign currency liabilities:** debt instruments issued into international capital markets, denominated in a foreign currency. This allows for diversification of funding sources

        - Euromarkets are debt markets where the instruments are not denominated in that country's currency
    - **Loan capital:** sources of funds which have the characteristic of debt and equity, e.g. subordinated debentures/notes, which are where the holder receives interest payments on the issuer's assets after all other creditors have been paid
    - **Shareholder's equity:** ordinary shares and such, = retained funds - additional shareholder's funds

2.3 Uses of funds

- Uses of funds appear in the balance sheet as **assets**
    - Majority of bank assts are loans which give claim to future cash flows
- Personal and housing finance
    - Housing finance, i.e. mortgages (which are **amortised loans** - principal and interest are paid in cash flows)
    - Investment properties
    - Credit cards
    - Fixed term loans
- Commercial lending
    - Fixed term loans
    - **Overdraft facility** allows a business to take its operating account into debit up to an agreed limit
    - Bank bills held: bills of exchange accepted and discounted by a bank and held as assets
        - Rollover facility is when banks agree to discount new bills over a specified period as existing bills mature
    - Leasing
- Lending to government
    - **Treasury notes**
    - **Treasury bonds**
    - Other bank assets

2.4 Off balance sheet business

- OBS transactions include:
    - Direct credit substitutes
        - An undertaking by a bank to support financial obligations of a client, i.e. the bank acts as guarantor on behalf of a client for a fee. (The bank only makes a payment to the third party if the client defaults on it)
    - Trade and performance related items
        - Form of guarantee provided by a bank to a third party, promising financial compensation for non-performance contractual obligations, e.g. documentary letters of credit (international trade) or performance guarantees (client)
    - Commitments
        - Contractual financial obligations of a bank that are **not yet delivered**. The bank undertakes to advance funds or make a purchase of assets at some time in the future, e.g. forward purchases, underwriting, loans or a **credit card**
    - Foreign exchange, interest rate and other **market rate-related contracts**
        - Use of derivatives to manage risk (in foreign exchange, interest rates, equity prices and commodity), e.g. futures, options, foreign exchange contracts, currency swaps and FRAs. Used for speculations
- OBS activities tend to raise concerns about bank regulation due to their risk taking positions in derivatives

    - The notional value of OBS activities is more than five times the total value of assets held by the banks

2.5 Regulation and Prudential supervision

- Capital adequacy: how much capital is adequate for commercial banks, which became an increasingly relevant issue following the insolvency problems of the GFC
- The GFC brought attention onto the regulation of the financial system, since a lot of financial institutions collapsed during the crisis:
    - The five largest US investment banks, with combined liabilities of $4 trillion, either went bankrupt (Lehman Brothers), were taken over by other companies (Bear Stearns and Merrill Lynch) or were bailed out by the government (Goldman Sachs and Morgan Stanley)
- Huge weakness was the amount of leverage on the balance sheets of these institutions
- Regulation of the banking system is necessary since the banking sector supports the health of the economy
    - Prudential supervision ensures the soundness and stability of a financial system

2.6 Background to Capital Adequacy Standards

- Businesses activities of financial institutions inevitably involve the need to write-off abnormal business losses
- Capital held by financial institutions is a buffer against these losses
- If capital is inadequate, the institution may face insolvency
- The capital adequacy standards set down in Basel II and III define the minimum capital adequacy for a bank, to promote stability in the financial system
- Functions of capital:
    - Source of equity funds for a corporation
    - Provides equity funding for growth
    - Demonstrates shareholder's commitment to organisation
- Basel 1:
    - Globalisation of banking system, worked on adequacy of banks' capital and development of common minimum standard of capital adequacy that international banks should maintain
    - Applied a standardised approach to measurement of capital adequacy
- Tier 1 Capital: consists of the highest quality capital elements which satisfy all essential capital characteristics:
    - Provide a permanent and unrestricted commitment of funds
    - Freely available to absorb losses
    - Do not impose servicing charge
    - Must comprise half of a bank's minimum required capital
- Tier 2: includes other elements which fall short of the quality of Tier 1 capital:
    - **Upper tier 2** consists of elements which are essentially permanent in nature, including hybrid capital instruments
    - **Lower tier 2** consists of **non-permanent instruments,** i.e. dated instruments like debt

2.7 Basel II structural framework

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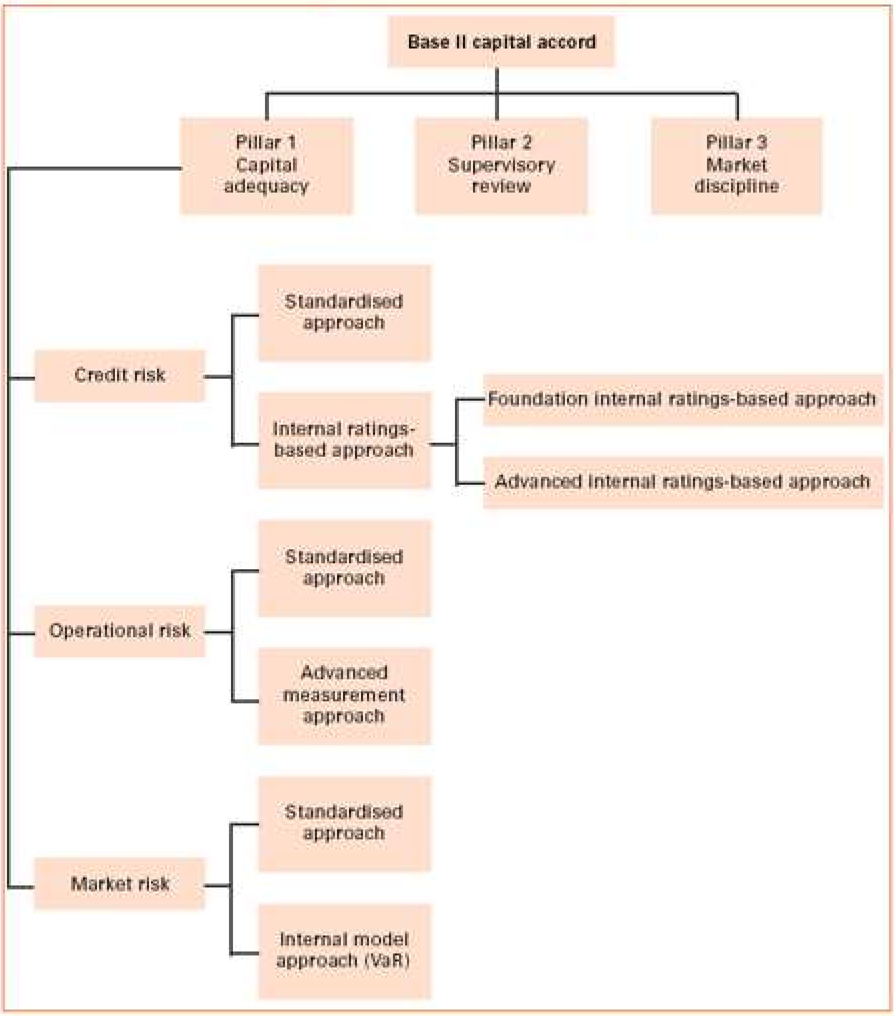
Figure 2.1 Overview of Basel II capital accord framework

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- Basel II extends Basel I to increase sensitivity to different levels of asset and OBS business risk
- Main elements of Basel II:
  - **Credit risk** of banks assets and OBS business
  - **Market risks** of bank's trading activities
  - **Operational risks** of bank's business operations
  - **Form and quality** of capital held to support exposures
  - **Transparency** through accumulation and reporting of information
  - Risk identification, measurement and management processes
- Minimal capital adequacy requirement applies to commercial banks and other institutions
  - Minimum risk based capital ratio of 8% (from risk weighted assets)
    - Three quarters of this (6%) must be held as Tier 1 capital
  - Regaultor can require an institution to hold a higher capital ratio
- **Pillar 1: CAPITAL ADEQUACY**
  - **Credit risk:** probability that borrower will not meet commitments when due
    - Standardised approach: risk weights applied to balance sheet and OBS items to calculate minimum capital requirement

        - OBS items converted to balance sheet equivalents by determining credit conversion factor
        - Asset risk weightings:
            - 0% for notes and coins, and claims against governments and banks
            - 20% for claims against local governments and banks
            - 50% for loans secured by mortgages
            - 100% for all other assets and claims

    - **Operational risk:** risk of loss from inadequate or failed internal processes, people and systems or from external events, e.g. fraud, employment practices, damage to physical assets, system failure, etc.
        - Measured with what-if analyses
    - **Market risk:** split into two components
        - *General market risk:* changes in the overall market for interest rates, equities, foreign exchange and commodities
        - *Specific market risk:* probability that the value of security will change due to issuer specific factors, e.g. their creditworthiness
        - Measured with value at risk models, which is a statistical probability model measuring financial risk exposures
- **Pillar 2: SUPERVISORY REVIEW**
    - Intended to ensure banks have sufficient capital to support all risks and encourage improved risk-management policies and practices in identifying, measuring and managing risk exposures
        - Includes risks not captured in Pillar 1 an factors external to a bank, and additional risk-management practices such as education/trainign, exposure limits, etc.
- **Pillar 3: MARKET DISCIPLINE**
    - Aim to develop disclosure requirements that allow the market to assess information on capital adequacy to increase transparency of risk exposure and risk management
        - Prudential supervisors to determine minimum disclosure requirements
- Basel III was developed in 2010, to enhance risk coverage of Basel II framework by enhancing capital adequacy requirements

2.8 Liquidity Management and Other Supervisory Controls
- Liquidity risk - unable to access funds to meet day-to-day expenses
    - Banks tend to have liquidity problems due to

2.9 Summary
- Banks are dominant institution and have moved to liability management
- Sources of funds include deposits (current, call and term deposits) and non-deposit sources (bill acceptances, debt, etc.)
- Uses of funds include government, commercial, personal lending
- OBS transactions are a major part of bank business, including direct credit substitutes, trade related items, commitments, etc