Chapter 2
Commercial banks

Learning objective 2.1: evaluate the functions and activities of commercial banks within the financial system

- Commercial banks are the largest group of financial institutions within a financial system and therefore they are very important in facilitating the flow of funds between savers and borrowers.
- The core business of banks is often described as the gathering of savings (deposits) in order to provide loans for investment.
- The traditional image of banks as passive receivers of deposits through which they fund their various loans and other investments has changed since deregulation. For example, banks provide a wide range of off-balance-sheet transactions.

Learning objective 2.2: identify the main sources of funds of commercial banks, including current deposits, demand deposits, term deposits, negotiable certificates of deposit, bill acceptance liabilities, debt liabilities, foreign currency liabilities and loan capital

- Banks now actively manage their sources of funds (liabilities).
- They offer a diversity of products with different return, risk, liquidity and cash-flow attributes to attract new and diversified funding sources.
- Sources of funds include current deposits, call or demand deposits, term deposits, negotiable certificates of deposit, bills acceptance liabilities, debt liabilities, foreign currency liabilities, loan capital and shareholder equity.

Learning objective 2.3: identify the main uses of funds by commercial banks, including personal and housing lending, commercial lending, lending to government, and other bank assets

- Commercial banks now apply a liability management approach to funding growth in their balance sheets.
- Under this approach a bank will (1) encourage depositors to lodge savings with the bank, and (2) borrow in the domestic and international money markets and capital markets to obtain sufficient funds to meet forecast loan demand.
- The use of funds is represented as assets on a bank's balance sheet.
- Bank lending is categorised as personal and housing lending, commercial lending and lending to

government.

- Personal finance is provided to individuals and includes housing loans, investment property loans, fixed-term loans, personal overdrafts and credit card finance.
- Banks invest in the business sector by granting commercial loans. Commercial loan assets include overdraft facilities, commercial bills held, term loans and lease finance.
- While banks may lend some funds directly to government, their main claim is through the purchase of government securities such as Treasury notes and Treasury bonds.

Learning objective 2.4: outline the nature and importance of banks' off-balance-sheet business, including direct credit substitutes, trade- and performance-related items, commitments and market-rate-related contracts

- Viewing banks only in terms of their assets and liabilities greatly underestimates their role in the financial system. Banks also conduct significant off-balance-sheet business.
- The national value of off-balance-sheet business is over four times the value of the accumulated assets of the banking sector.
- Off-balance-sheet business is categorised as direct credit substitutes, trade- and performance-related items, commitments, and foreign exchange, interest rate and other market-rate-related contracts.
- Over 94 per cent of banks' off-balance-sheet business is in market-rate-related contracts such as foreign exchange and interest-rate-based futures, forwards, options and swap contracts.

Learning objective 2.5: Consider the regulation and prudential supervision of banks

- One of the main influences of change in the banking sector has been the regulatory environment within which banks operate.
- Commercial banks are now said to operate in a deregulated market. Relative to previous regulatory periods this is a reasonable description; however, there still remains quite a degree of regulation that affects participants in the financial markets, including the banks.
- Each nation-state is responsible for the regulation and supervision of its own financial system. In particular, central banks and prudential supervisors are responsible for the maintenance of financial system stability and the soundness of the payments system. At the global level, the Bank for International Settlements takes an active interest in the stability of the international financial system. To this end, the Basel Committee on Banking Supervision has developed an international standard on capital adequacy for banks.

- The current capital adequacy standard is known as the Basel II capital accord, under which banks are required to maintain a minimum risk-based capital ratio of 8.00 per cent. This will increase with the introduction of Basel III.
- Basel III was put into place after the GFC. However, APRA is yet to fully specify how the new accord will operate in Australia.
- Capital is categorised as either Tier 1 capital, Upper Tier 2 capital or Lower Tier 2 capital. At least half of a bank's capital requirement must be held in Tier 1 capital.
- As part of the calculation process, risk weights are applied to balance-sheet assets using specified risk weights. These weights may be based on the counterparty to an asset, or on an external rating provided by an approved credit rating agency.
- Off-balance-sheet items are converted to a balance-sheet equivalent using credit conversion factors before applying the specified risk weights.
- The Basel II capital accord comprises three pillars.
- Pillar 1 relates to the calculation of the minimum capital requirement. Pillar 1 considers three areas of risk: credit risk, operational risk and market risk. Within each of these risk categories banks have a choice of applying a standardised approach or an internal approach to measuring their capital requirement. Subject to approval from the bank supervisor, an internal approach method allows a bank to use its own risk management models.
- Pillar 2 provides for a supervisory review process and includes four basic principles: (1) the assessment of total capital requirements by a bank, (2) the review of capital levels and the monitoring of banks' compliance by supervisors, (3) the ability of a supervisor to increase the capital requirement of a bank, and (4) the intervention of a supervisor at an early stage to maintain capital levels.
- Pillar 3 seeks to achieve market discipline through a process of transparency and disclosure. Banks are required to provide information and data on a periodic basis to the supervisor. Some of these reports may be made public.

Learning objective 2.7: Examine liquidity management and other supervisory controls applied by APRA

- The bank regulator, APRA, applies a number of important prudential controls on commercial banks. These include liquidity management policies, risk management systems certification, business continuity management, audit (external auditors, on-site visits), disclosure and transparency, large credit exposures, foreign currency exposures, subsidiaries and ownership and

control.

True/False questions

1. **F** Each nation-state is no longer responsible for the prudential supervision of commercial banks as this is now the responsibility of the Bank for International Settlements.
2. **T** There is a direct correlation between the level of bank regulation and the dominance of the commercial banks within a financial system.
3. **F** Banks obtain funds from a number of different sources. These sources of funds appear as assets on a bank's balance sheet.
4. **F** Liability management is the strategic limitation of commercial bank lending to match a bank's current deposit base.
5. **T** Funds held in a cheque account are highly liquid and are called 'current deposits'.
6. **F** Call deposits are not a stable source of funds for banks because the deposits can be withdrawn on demand.
7. **T** A negotiable certificate of deposit is a discount security that may be issued into the money markets.
8. **T** One of the attractions for a bank of funding a client through a bank bill facility is that the security can be sold into the money markets.
9. **F** A bank may seek to obtain funds by issuing unsecured notes with a collateralised charge over the assets of the institution.
10. **F** Bank regulators restrict the type and amount of securities that commercial banks can issue into the international capital markets.
11. **T** Mortgage originators often use the process of securitisation to finance their housing lending activities.
12. **F** A housing loan with an amortised loan requires the borrower to make periodic interest-only instalments and repay the principal at the maturity date.
13. **F** Small- to medium-sized businesses mainly borrow direct from the capital markets, while large corporations with good credit ratings prefer to borrow from the banks.
14. **T** A reference interest rate such as the BBSW may be used periodically to set the interest rate on a variable-rate loan.
15. **F** The deregulation of the banking sector means that it is no longer necessary for the central bank to concern itself with the overall stability of the financial system.

16. **T** Off-balance-sheet business is a transaction where a contingent liability exists and therefore it cannot be recorded on the balance sheet.

17. **T** Derivative products are primarily designed to facilitate hedging risks such as changes in interest rates or exchange rates.

18. **F** Under the Basel II capital accord, banks are required to maintain a maximum risk-based capital ratio of 8.00 per cent at all times.

19. **F** Pillar 3 of the Basel II capital accord requires commercial banks to report directly changes in their capital structure to the Bank for International Settlements.

20. **T** The standardised approach to the measurement of Pillar 1 credit risk allows a bank to use external credit ratings.

Essay questions

The following suggested answers incorporate the main points that should be recognised by a student. An instructor should advise students of the depth of analysis and discussion that is required for a particular question. For example, an undergraduate student may only be required to briefly introduce points, explain in their own words and provide an example. On the other hand, a post-graduate student may be required to provide much greater depth of analysis and discussion.

1. 'Banks have moved from a practice known as asset management to the practice of liability management.' Explain the differences in these two approaches and briefly discuss the role of deregulation in facilitating this change in banking practice. (LO 2.1)

- Asset management relates to the practice of a bank only giving loans (assets) when it had sufficient deposits—that is, asset growth is managed, and often constrained by, the bank's deposit base.
- Liability management relates to the practice of raising funds (liabilities) in the capital markets sufficient to meet expected forecast loan demand—that is, lending is not constrained by the liability side of the balance sheet.
- For example, a commercial bank may forecast an increase in loan applications over the next six-month planning period. After considering its current sources of funds, it may decide to issue paper into the international capital markets in order to raise sufficient funds to meet the forecast demand.

- Modern banking practice is the application of liability management. The removal of regulation has facilitated this change. Banks are no longer constrained by the size of their deposits in determining how much to lend.

2. 'Banks have always been the dominant institutions within the financial system, but their relative importance has fluctuated due, in part, to changes in the regulatory environment in which they operate.' Analyse and discuss this statement. (LO 2.1)

- Until early 1980s commercial banks operated in a protected but highly regulated market.
- In order to avoid regulation other non-bank financial institutions emerged and grew strongly, attracting an increasing market share.
- During this period the size of the banking sector diminished.
- Government, through the central bank, found their influence on economic activity also diminished as their control of the overall financial system lessened.
- There are two choices—regulate all financial institutions, or deregulate the banks.
- Most developed countries, including Australia, have deregulated the commercial bank sector.
- For example in Australia in the 1980s, controls on interest rates and bank products were removed. The exchange rate was floated. Foreign banks were granted banking authorities.
- In the new competitive environment the banking sector has grown strongly.
- Commercial banks must still meet certain regulatory requirements, such as minimum capital and liquidity requirements, set by the bank supervisor to ensure an efficient, strong and stable financial system.

3. A customer has approached your commercial bank seeking to invest funds for a period of six months. The customer is particularly worried about risk following the GFC and the market volatility that continues to characterise world financial markets. Explain the features of call deposits, term deposits and CDs to the customer and provide advice on risk-reward trade-offs that might be associated with each product. (LO 2.2)

Term deposit:

- pays a fixed interest rate for the nominated fixed investment period
- rate of interest will be bank's carded rate for that term and amount
- interest may be payable periodically (e.g. monthly) or at maturity
- principal is repaid at maturity.

Certificate of deposit:

- discount security issued by a bank
- an investor will purchase the CD at less than the face value
- the investor will receive the full face value back at maturity
- price is the face value discounted by the yield
- yield/price relationship will vary with changes in market rates.

Risk-reward trade-offs:

- a call deposit will pay a very low rate of interest but will be essentially risk free
- a CD is a highly liquid form of investment that will pay a higher rate than the call deposit
- a CD can easily be sold into the money market to obtain funds, whereas with a term deposit there is a loss of liquidity as the funds are locked-up for the fixed period
- however, a term deposit may pay a higher rate of return.

4. Discuss the four main uses of funds by commercial banks and identify the role that the purchase of government securities plays in commercial banks' management of their asset portfolios. (LO 2.3)

- Personal and housing finance
- Commercial lending
- Lending to government
- Other bank assets
- For banks, government securities are a primary source of liquidity:
  - government securities easily converted into cash
  - invest short-term surplus funds—securities provide a return, cash does not
  - augment investment earnings—another source of income
  - use as collateral for future borrowings—security to support bank's own borrowings
  - use for repurchase agreements to raise exchange settlement account funds—sell securities back to central bank and receive cleared funds
  - improve the quality of the overall balance sheet—lower risk government securities offset higher risk loans to customers
  - manage the maturity structure of the overall balance sheet—average maturity structure of government security portfolio will be less than the loan portfolio

- manage the interest rate sensitivity of the overall balance sheet—purchase government securities with interest rate structures that offset interest rate risk within the overall loan portfolio.

5. Commercial banks are the principal providers of loan finance to the household sector. Identify five different types of loan finance that a bank offers to individuals. Briefly explain the structure and operation of each of these types of loans. (LO 2.3)

- Owner-occupied housing finance—loans to purchase residential property such as a house or unit. Security is a mortgage taken over the land and property thereon. Mortgage registered on title of land. Loan may have a fixed or variable interest rate. Loan instalments paid periodically (monthly) and typically amortised (interest and principal components).
- Investment property finance—very similar to above, except property is usually leased to a third party. Interest rate generally higher reflecting higher risk of lease agreement.
- Fixed-term loans—used to finance non-property transactions such as buying a car. Bank will seek security such as a guarantee from the borrower or a third party. Higher interest rate reflects higher credit risk associated with borrower and lower quality security.
- Personal overdrafts—allows an individual to place their account into debit up to an agreed limit. Used for managing cash flow mismatches over time. Should be fully fluctuating. Pay interest on the debit amount; also unused limit fee.
- Credit card finance—plastic card issued with an available credit limit, that is, the cardholder can make purchases or obtain cash advances up to the amount of the credit limit. High interest rate charged on used credit.

6. ABC Limited plans to purchase injection moulding equipment to manufacture its new range of plastics products. The company approaches its bank to obtain a term loan. Identify and discuss important issues that the company and the bank will need to negotiate in relation to the term loan. (LO 2.3)

- The bank and the borrow will structure the loan and negotiate the terms and conditions of the loan
- Period of the loan—consider matching principal; what are the funds being used for
- Interest rate—fixed versus variable interest rate; if variable, what is the reference interest rate (e.g. BBSW) and the margin above the reference rate

- Security—will the lender be able to take a mortgage over property or a charge over the other assets of the borrower
- Timing of repayments—how frequently will loan instalments occur; will the loan be amortised (interest and principal components), or an interest only loan with principal repaid at maturity.

7. The off-balance-sheet business of banks has expanded significantly and, in notional dollar terms, now represents over four times the value of balance-sheet assets. (LO 2.4)

(a) Define what is meant by the off-balance-sheet business of banks.

- a transaction that is conducted by a bank that is not recorded on the balance sheet
- a contingent liability that will only be recorded on the balance sheet if some specified condition or event occurs.

(b) Identify the four main categories of off-balance-sheet business and use an example to explain each category.

- Direct credit substitutes—support a client's financial obligations, such as a stand-by letter of credit or a financial guarantee
- Trade and performance related items—support a client's non-financial obligations, such as a performance guarantee or a documentary letter of credit
- Commitments—a financial commitment of the bank to advance funds or underwrite a debt or equity issue. For example, the unused credit limit on a credit card, or a housing loan approval where the funds have not yet been used
- Foreign exchange, interest rate and other market rate related contracts—principally derivative products such as futures, forwards, options and swaps used to manage f/x and interest rate risk exposures.

8. Following the GFC, the off-balance-sheet activities of commercial banks attracted a great deal of attention among commentators. With reference to the size and composition of commercial banks' off-balance-sheet activities, outline some of the possible reasons for this concern. (LO 2.4)

- The notional value of the off-balance sheet activities of banks is five times the total value of the assets held by the banks.
- Because this off-balance sheet activity is less transparent, it is difficult for regulators to assess the financial health of financial institutions.

- Also of concern is the type of securities that constitute off-balance sheet activities. These may include the types of derivative securities that played such an important role in the GFC.

9. Nation-state bank regulators impose minimum capital adequacy standards on commercial banks. (LO 2.5)

(a) Briefly explain the main functions of capital.

- equity and quasi-equity capital is a source of long-term funds for an institution
- it provides the equity funding base that enables on-going growth in a business
- it is a source of profits
- it may be necessary to use capital to write-off periodic abnormal business losses.

(b) What is the minimum capital requirement under the Basel II capital accord?

- The prudential standard requires an institution, at a minimum, to maintain a risk-based capital ratio of 8.00 per cent at all times.
- At least half of the risk-based capital ratio must take the form of tier 1 capital. The remainder of the capital requirement may be held as tier 2 (upper and lower) capital.
- Where considered appropriate, a regulator may require an institution to maintain a minimum capital ratio above 8.00 per cent.

(c) Identify and define the different types of acceptable capital under the Basel II capital accord. Provide an example of each type of capital.

- Capital, within the context of the Basel II capital accord, is measured in two tiers
- Tier 1 capital, or core capital, comprise the highest quality capital elements:
  - provide a permanent and unrestricted commitment of funds
  - are freely available to absorb losses
  - do not impose any unavoidable servicing charge against earnings
  - rank behind the claims of depositors and other creditors in the event of winding-up.
- Tier 1 capital must constitute at least half of a bank's minimum required capital base
- Tier 2, or supplementary, capital includes other elements which also contribute to the overall strength of an institution as a going concern
- Tier 2 capital is divided into two parts:
  - upper tier 2 capital—comprising elements that are essentially permanent in nature, including some hybrid capital instruments which have the characteristics of both equity and debt

- lower tier 2 capital—comprising instruments which are not permanent; that is, dated or limited life instruments.

- Examples:
  - tier 1 capital: ordinary shares; retained earnings
  - tier 2 capital (upper): mandatory convertible notes; perpetual subordinated debt
  - tier 2 capital (lower): term subordinated debt approved by the regulator.

10. Pillar 1 of the Basel II capital accord includes an operational risk component. (LO 2.6)

(a) Define operational risk.

The Bank for International Settlements categorises operational risk as:

- internal and external fraud
- employment practices and workplace safety
- clients, products and business practices
- damage to physical assets
- business disruption and system failures
- execution, delivery and process management.

(b) Using the standardised approach, explain how a commercial bank is required to measure the operational risk component of its minimum capital adequacy requirement.

- Basel II requires banks to hold additional capital to support their exposure to operational risk
- With the standardized approach to operational risk an institution is required to map and divide its activities into two areas of business:
  - retail/commercial banking
  - all other activity.
- An institution must document its mapping process, detailing the policy and procedures used to map the full range of business activities. This process must be subject to independent review.
- The retail/commercial banking area capital requirement is determined using a proportion of an institution's total gross outstanding loans and advances as an indicator of that area's operational risk exposure. This also includes the book value of securities held in the banking book.
- The operational risk capital requirement for the all other activity area of business is determined using a proportion of an institution's net income as an indicator of that area's operational risk exposure. Net income is defined as profit from ordinary activities before goodwill, amortization and income tax.

- Operational risk capital for retail/commercial banking is calculated by taking the last six consecutive half-yearly observations of total gross outstanding loans and advances, then multiplying a proportion, being 3.5 per cent, of total gross outstanding loans and advances at each observation point, by a factor of 15 per cent, to produce a result in respect of each observation, then determining an average result for the six observations.
- The operational risk capital for all other activity is calculated by taking the last six consecutive half-yearly observations of net income earned over a six month period, multiplying each observation point by a factor of 18 per cent to produce a result in respect of each observation, then determining an average result for the six observations.
- The total operational risk capital requirement under the standardised approach to operational risk is the sum of the two average results determined above.

11. The third Pillar 1 component of the Basel II capital accord relates to market risk. (LO 2.6)

(a) Define market risk.

- the risk of losses resulting from movements in market prices
- for capital adequacy purposes there is general market risk and specific market risk
- general market risk relates to changes in overall market for interest rates, equities, foreign exchange and commodities
- specific risk is the risk that the value of a security will change due to issuer specific factors, such as a change in the creditworthiness of the issuer. This is only relevant to interest rate and equity positions.

(b) A bank may use its own internal value-at-risk (VaR) model to measure market risk. Briefly explain how a VaR model operates. In your answer identify the basic VaR model requirements set by APRA.

- VaR models endeavour to estimate maximum potential gains or losses that may be incurred on a portfolio based on a specified probability over a fixed time period.
- The regulator requires a model to apply a 99 per cent confidence level, assuming a one-day holding period. This assumption implies that, on average, trading losses from market-related contracts will exceed the VaR estimate only once in every 100 trading days.
- A VaR model recognises balance sheet and off-balance-sheet items and, based on specific assumptions on prices, values and volatility, determines a VaR estimate.

- A VaR model will typically:
  - estimate sensitivity to small changes in prices, for example a 1 basis point change in interest rates
  - assume that market price movements follow a certain statistical distribution, usually a normal or log-normal distribution
  - enable inferences to be drawn about potential losses, with a given degree of statistical confidence, for example a 99 per cent probability of a certain dollar amount loss
  - recognise correlations between different portfolio components; that is, the model allows for market price changes that move together, or offset each other
  - account for the effects of portfolio diversification
  - consider the liquidity of different portfolio instruments; that is, the ease or ability of an institution to liquidate (sell) securities or close out an open risk position.

12. Within the context of the Basel II capital accord, explain and discuss:

(a) Pillar 2: The supervisory review of capital adequacy.

- The supervisory review process establishes a forum for dialogue between commercial banks and their supervisors
- Bank supervisors are expected to intervene when capital assessment by a bank is seen as inadequate for its risk profile
- Pillar 2 encourages additional internal risk management practice by banks
- Supervisors are responsible to ensure compliance by banks with the minimum standards and disclosure requirements attached to the capital accord
- The Basel Committee on Banking Supervision has identified four key principles of supervisory review:
  - Principle 1: banks should have a process for assessing their overall capital adequacy in relation to their risk profile and a strategy for maintaining their capital levels
  - Principle 2: supervisors should review and evaluate banks' internal capital adequacy assessments and strategies, as well as their ability to monitor and ensure their compliance with regulatory capital ratios. Supervisors should take appropriate supervisory action if they are not satisfied with the result of this process
  - Principle 3: supervisors should expect banks to operate above the minimum regulatory capital ratios and should have the ability to require banks to hold capital in excess of the minimum

- Principle 4: supervisors should seek to intervene at an early stage to prevent capital falling below the minimum levels required to support the risk characteristics of a particular bank and should require rapid remedial action if capital is not maintained or restored.

(b) Pillar 3: Market discipline. (LO 2.6)

- The purpose of Pillar 3 is to encourage market discipline by developing a set of disclosure requirements which allow market participants to assess important information relating to the capital adequacy of an institution
- This is important because under the capital accord banks are given greater discretion in assessing their capital requirements through the use of internal methodologies and models
- The objective is to ensure banks' risk exposure, risk management and capital adequacy positions are more transparent so that market discipline can reinforce the regulatory process
- Institutions must provide the prudential supervisor with all material information relevant to risk exposures, risk management and capital adequacy
- Supervisors will determine the minimum disclosure requirements for institutions within their jurisdiction. They will also determine the frequency of various reporting requirements
- Basic reporting requirements will include reports on the:
  - scope of the application of the capital accord within an organization
  - capital structure of the institution
  - methodologies, approaches and assessment of capital adequacy
  - determination of all aspects of credit risk exposures
  - application of credit risk mitigation
  - determination of equity risk within the banking book
  - impact of securitization of assets
  - the determination of market risk exposures
  - the measurement of operational risk
  - the assessment of interest rate risk within the banking book.

13. As part of the prudential supervision of banks the regulator requires banks to use an internal model such as VaR to estimate potential gains and losses. Outline some of the strengths and weaknesses of VaR models and briefly explain why regulators have moved to implement a 'stressed VaR' requirement for Australian banks. (LO 2.7)

Strengths:

- enable inferences to be drawn about potential losses with a given degree of statistical confidence, for example a 99 per cent probability of a certain dollar amount loss.
- recognise correlations between different portfolio components (i.e. the model allows for market price changes that move together or offset each other)
- account for the effects of portfolio diversification
- consider the liquidity of different portfolio instruments—that is, the ease or ability of an institution to liquidate (sell) securities or close out an open risk position.

Weaknesses:

- are based on a limited set of historical data which may not be a correct reflection of future data
- assume liquidity in all markets—that is, the ability of an institution to trade all components of its portfolio. This will not always be the case, particularly in times of financial stress
- assume that all instruments can be liquidated in one day. This is not possible. Contractual constraints also mean that some items cannot be liquidated
- do not include excessive intra-day price volatility—that is, unusually large short-term exchange rate or interest rate movements
- assume a normal distribution, when data indicate that in some markets prices may be volatile and a normal distribution is not always evident.

The 'stressed' VaR aims to ensure that banks are prepared for events that would normally have a very low probability, especially when the models are based on historical data and normal distributions.

Extended learning questions

14. The Basel II capital accord comprises a framework of three pillars. Pillar 1 established the minimum capital required by a commercial bank and incorporates three risk components: credit risk, operational risk and market risk. (LO 2.8)

(a) Define credit risk.

- credit risk is the risk that counterparties to a transaction will default on their commitments
- for example, the risk that a borrower may default on the payment of interest and/or repayment of loan principal.

(b) What approaches may be used to measure the credit risk capital adequacy component of Pillar 1?

- Basel II provides three alternative ways for a bank to measure credit risk:
    1. the standardised approach
    2. the foundation internal ratings-based approach,

       or
    3. the advanced internal ratings-based approach.

(c) Using the standardised approach to credit risk, explain how a commercial bank will use this method to calculate its minimum capital requirement.

- The standardised approach to credit risk requires banks to assign each balance sheet asset and off-balance sheet item a risk weight.
- The risk weight must be based on an external rating published by an approved credit rating agency (such as Standard and Poor's), or a fixed weight specified by the prudential supervisor.
- The risk weighted amount of a balance sheet asset is calculated by multiplying its current book value by the relevant risk weight.
- Balance sheet example: a bank gives a $500 000 loan to a company that has an A- credit rating (external rating grade 2 = risk weight 50%). The capital required is the book value x the risk weight x 8.00% capital adequacy requirement. That is, $500 000 x 0.50 x 0.08 = $20 000. The remaining $480 000 can be funded from bank liabilities.
- Off-balance sheet exposures that give rise to credit risk are first converted into so-called balance sheet equivalents according to specified credit conversion factors prior to allocating the relevant risk weight.
- Off-balance sheet example: a bank provides a company with a B credit rating a $25 000 documentary letter of credit. This has a credit conversion factor is 20 per cent and an external rating grade 5 representing a risk weight of 150 per cent. The capital required by the bank to support this off-balance sheet transaction is $25 000 x 0.20 x 1.50 x 0.08 = $600.

15. Commercial banks are exposed to the very real risk that at some point their critical business operations could fail. Business continuity risk management may be said to incorporate a disaster recovery planning process and a disaster recovery response process. (LO 2.9)

(a) Define business continuity risk management.

- The purpose of business continuity risk management is to ensure a bank and its personnel are prepared to respond to an event that disrupts critical business functions and are able to effectively recover those functions.
- It relates to an institution's ability to maintain its day-to-day business operations.
- The risk of adverse operational and financial outcomes resulting from inadequate or failed internal or external processes, people, systems or events.
    - For example, losses incurred from fraud by personnel, or failure of computer or communication systems, or loss of premises due to a fire or earthquake.

(b) Identify and briefly explain the core components of a disaster recovery planning process.

1. The establishment of an organisational business continuity risk management structure that is horizontally and vertically integrated throughout the bank, including a global risk committee, a business continuity risk management group and divisional contingency planning units. This includes planning teams, emergency response teams and recovery teams
2. Risk analysis and business impact analysis—risk analysis ensures all risk exposures are identified. The business impact analysis measures the operational and financial effects of a disruption to a business function.
3. Business function recovery prioritisation to ensure available resources are used to effectively recover critical business functions.
4. Development of disaster recovery strategies that will maintain critical business functions if a business disruption occurs; includes disaster recovery service agreements and support agreements.
5. Education and training maintain the preparedness and capability of a bank and its people to respond to a disaster situation.
6. Integrated testing of disaster recovery strategies ensures they will be effective in the event of a disruption to critical business functions.
7. Plan maintenance that incorporates on-going monitoring, review, reporting and auditing of the bank's business continuity risk management processes.

(c) Identify and briefly explain the core components of a disaster recovery response process.

1. Plan activation, including disaster alert trigger points, notification procedures for emergency response teams, and activation of recovery strategies.
2. Impact assessment and evaluation by divisional recovery teams, including estimates of resources and time required to recover functions and advice on which recovery strategies need to be implemented.
3. Recovery control centre where key personnel will direct recovery operations. The centre facilitates the control, command and coordination of the management decision processes.
4. Communications and media liaison. Communications to be established with divisional recovery teams, and providers of recovery facilities, service and support agreements. Media liaison to be established with bank supervisors, government authorities, the press, customers and other market participants.
5. Implementation of prioritised business recovery using back-up strategies, facilities, service agreements and support agreements established in the bank's overall business resumption plan
6. Performance evaluation, reporting and plan review.

16. An essential element of business continuity risk management is education and training. (LO 2.9)

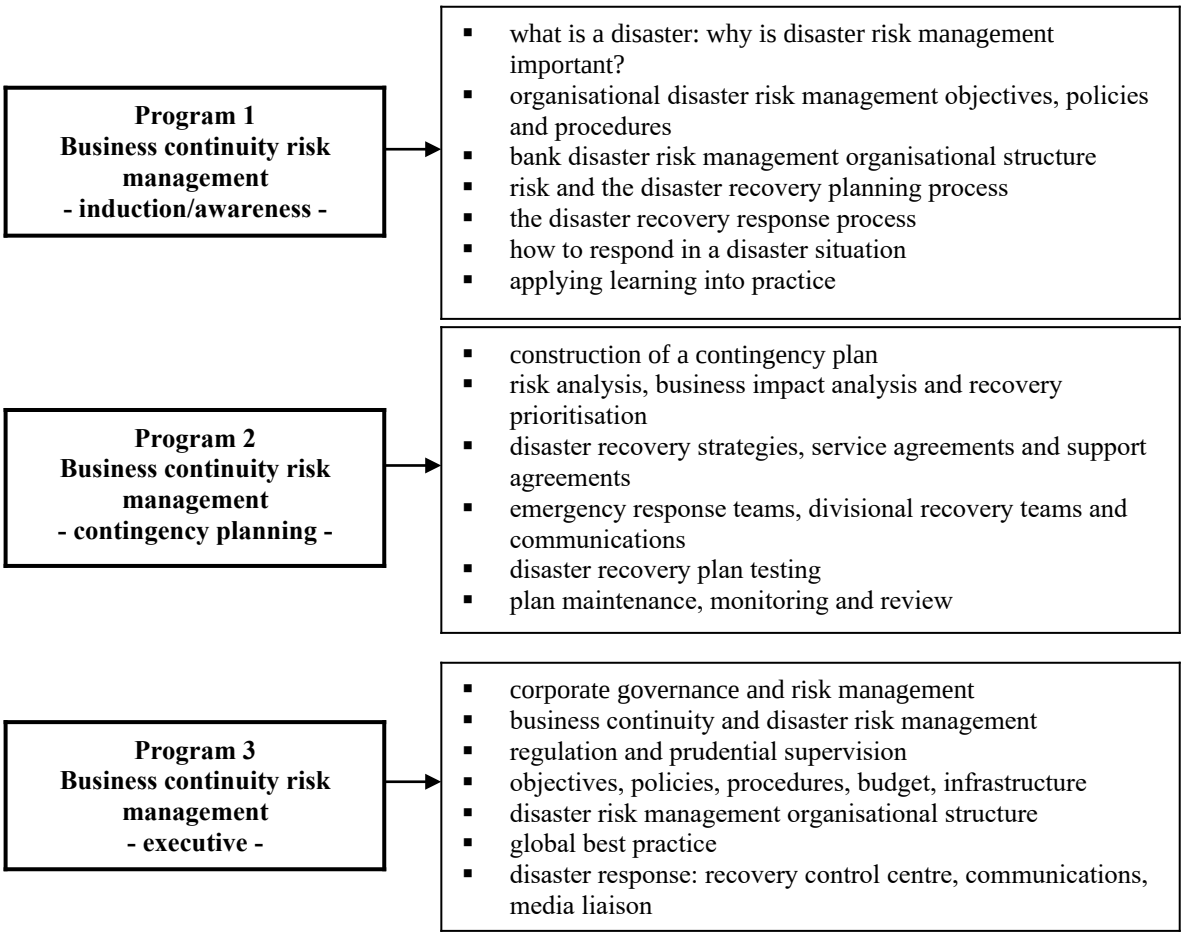
(a) Why is education and training important in the context of business continuity risk management?

- Education and training is integral to achieving an institution's business continuity risk management objectives.
- Education and training will improve the capability and preparedness of institutions and their personnel to plan for, and respond to, an occurrence that may affect the continuity of critical business functions.
- Effective responses by personnel will minimise risk to personnel, limit the operational impact of a business disruption, and lessen the financial cost of a disruption.
- The objective of business continuity risk management is to establish policies and procedures that will ensure the capacity of a bank to maintain the continuity of its critical business functions and resume normal operations within defined time parameters. Education and training is an essential in achieving this outcome.

(b) Identify three discrete education and training programs that a bank should provide.

1. Induction/awareness program.—To be completed by all bank personnel, plus non-bank personnel from organisations that provide critical services to the bank. It introduces the basic operational risk management knowledge and awareness required of all personnel.
2. Contingency planning program for personnel responsible for core components of the disaster recovery planning and response processes that need specialist knowledge and skills to effectively complete those tasks. Participants include organisational business continuity risk management group members, divisional contingency planning unit members and nominated global risk committee members.
3. Executive program for the board of directors and executive management to assist in determining appropriate business continuity risk management objectives, policies, strategies and procedures.

(c) Briefly discuss what issues should be incorporated in each of the three education and training programs.



17. (a) Discuss the nature of corporate governance and its relationship with ethics. (LO 2.10)

(b) Discuss the importance of corporate governance and ethics for Australian ADIs both in terms of complying with regulations and effectively meeting the expectations of stakeholders. (LO 2.10)

- Corporate governance is the framework of rules, relationships, systems and processes within and by which authority is exercised and controlled in corporations. It encompasses the mechanisms by which companies, and those in control, are held to account. Corporate governance influences how the objectives of the company are set and achieved, how risk is monitored and assessed, and how performance is optimised.
- Although corporate governance does not specifically concern 'ethical' behaviour, it may work hand-in-hand with a firm's statement of ethical or professional conduct.
- For ADIs, where the confidence of customers and clients is of the utmost importance, demonstrating strong governance frameworks and ethical behaviour is a very important component of corporate strategy.