Financial Institutions, Instruments and Markets

8th edition

Instructor's Resource Manual

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Chapter 1

A modern financial system

Learning objective 1.1: Understand the effects and consequences of a financial crisis on a financial system and a real economy.

- The global financial crisis (GFC) had a significant effect on financial systems and the real economies of many countries and highlighted the interconnectedness of the world's financial markets.
- The interconnected global financial system traces its origins to the introduction of money and the development of local markets to trade goods.
- Money is a medium of exchange that facilitates transactions for goods and services.
- With wealth being accumulated in the form of money, specialised markets developed to enable the efficient transfer of funds from savers (surplus entities) to users of funds (deficit entities).
- Financial instruments incorporate attributes of risk, return (yield), liquidity and time-pattern of cash flows. Savers are able to satisfy their own personal preferences by choosing various combinations of these attributes.
- By encouraging savings, and allocating savings to the most efficient users, the financial system has an important role to play in the economic development and growth of a country. The real economy and the financial system are connected.

Learning objective 1.2: Explain the functions of a modern financial system and categorise the main types of financial institutions, including depository financial institutions, investment banks, contractual savings institutions, finance companies and unit trusts.

- A financial system encourages accumulated savings that are then available for investment within an economy.
- A modern financial system comprises financial institutions, instruments and markets that provide a wide range of financial products and services.
- A range of different financial institutions has evolved to meet the needs of financial market participants and to support economic growth.
- Depository institutions—such as commercial banks, building societies and credit unions—specialise in gathering savings in the form of deposits and using those funds in the provision of loans to customers.
- Investment banks tend to specialise in the provision of advisory services to clients (e.g. merger and acquisition advice).
- Contractual savings institutions, such as insurance offices and superannuation funds, enter into contracts in which they receive funds on the undertaking that they will pay a policy holder, or member of a fund, a specified sum when a nominated event occurs.
- Finance companies sell debt instruments directly to surplus entities and then use those funds to provide loans and lease financing to borrowers.
- Unit trusts sell units in a trust. The accumulated funds in the trust are pooled and invested in asset classes specified within the trust deed.
- Commercial banks dominate in terms of their share of the assets of financial institutions.

Learning objective 1.3: Define the main classes of financial instruments that are issued into the financial system, that is, equity, debt, hybrids and derivatives

- Financial instruments are central to any financial relationship between two parties.
- Where the saver acquires an ownership claim on the deficit entity, the financial instrument is referred to as equity.
- Where the relationship is a loan, the financial instrument is referred to as a debt instrument.
- A financial instrument that incorporates the characteristics of both debt and equity is known as a hybrid.

- Another category of instruments is derivatives (futures, forwards, swaps and options). The main use of a derivative is in the management of commodity and financial risks.

Learning objective 1.4: Discuss the nature of the flow of funds between savers and borrowers, including primary markets, secondary markets, direct finance and intermediated finance

- Financial markets and instruments allow borrowers to meet the requirements of the matching principle; that is, short-term assets should be funded by short-term liabilities and long-term assets should be funded by long-term liabilities and equity.
- The markets in which new debt and equity securities are issued are known as primary markets.
- Markets that facilitate the sale of previously issued securities, such as a stock exchange, are called secondary markets.
- By providing a market for the trading of existing securities, secondary markets serve the most important function of adding liquidity to financial instruments.
- Where an active secondary market exists for a financial instrument, the instrument is usually referred to as a security.
- In the primary market, surplus entities may acquire assets directly from the issuer.
- Alternatively, the flow of funds may be through a financial intermediary, in which case the surplus entity establishes a financial relationship with the intermediary rather than with the ultimate borrower.
- Intermediated flows are attractive to many savers since the intermediary provides a range of financial attributes that may not otherwise be available.
- The advantages of financial intermediation include asset transformation, maturity transformation, credit risk diversification and transformation, liquidity transformation and economies of scale.

Learning objective 1.5: Distinguish between various financial market structures, including wholesale markets and retail markets, and money markets and capital markets

- The financial markets are categorised as money markets (short-term securities) and capital markets (longer-term securities).

- Submarkets in the money markets include central bank transactions, the inter-bank market, the bills market, the commercial paper market, the government securities market and the CD market.
- The capital markets include the equity market, the corporate debt market, the government debt market, the foreign exchange market and the derivatives market.
- Within the money and capital markets there are also the wholesale markets (institutional investors) and the retail markets.
- Money markets experienced significant liquidity problems during the GFC. The lingering effects of the crisis and new concerns about the economic stability of many developed nation-states continue to weigh on the financial markets.

Learning objective 1.6: Analyse the flow of funds through the financial system and the economy and briefly discuss the importance of 'stability' in relation to the flow of funds

- Sectorial flow of funds may be observed within an economy.
- Sectors include the business corporations sector, the financial corporations sector, the government sector, the household sector and the rest-of-the-world sector.
- These sectors may be net surplus sectors (providers of funds) or net deficit sectors (users of funds).
- Factors that affect these sectors are government policy initiatives and economic performance.
- A stable financial system is characterised by the smooth flow of funds between surplus and deficit units. The GFC highlighted the importance of maintaining stability in the financial system.

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. The GFC has had a significant impact on the stability of international financial markets. Discuss the implications of the crisis for the 'real economy' and evaluate the regulatory responses that have been implemented in an attempt to stabilise the financial system. (LO 1.1)

- The GFC was the beginning of an unprecedented period of volatility.
- The volatility continued throughout 2010–2011 as the GFC evolved from a 'financial crisis' to a 'sovereign debt' crisis when doubts began to emerge over the solvency of several countries and the viability of the common European currency under such stressful conditions.
- The financial volatility quickly spread to the real economy as early as 2009 and by 2015 the effects of the crisis had not fully abated. Unemployment in many major economies increased substantially and remains high several or more years after the worst of the crisis passed.
- The regulatory response to the GFC has centred on improving the capital requirements of financial institutions. Although there have been a number of different regulatory changes, the more substantial will no doubt be the Basel III capital accords which will be phased in by 2018.
- For the most part, however, governments and central banks have been preoccupied in attempting to use fiscal and monetary policy to stabilise the economic situation and encourage recovery. The limits of the effectiveness of these policies have been tested, with economic conditions remaining stubbornly weak despite massive government spending programs and near-zero interest rates.

2. The GFC is now thought of as having had two parts or phases. Describe each part or phase and outline some of the measures that have been taken by governments and central banks in Australia, Europe and the USA in order to stem the effects of both phases of the crisis on their respective real economies. (LO 1.1)

- The first phase of the crisis occurred during 2007 and 2008. During this time, financial markets suffered substantial declines as trouble in the mortgage derivatives markets engulfed some of the world's biggest financial institutions.
- The second phase of the crisis began when the true financial or economic position of several European countries—especially Greece, Spain, Portugal and Ireland—became apparent. Doubts surfaced regarding the ability of these countries to meet their obligations

to bond holders. Since these bonds were held by banks in many European countries, fears of a collapse of the financial system were sparked.

- Governments around the world have taken some extreme steps to mitigate the effects of the crisis. In Australia, a large government stimulus package was initiated soon after the first phase of the GFC. This included the 'roof batts' program that has attracted so much commentary. In the USA, the government initiated bail-outs and buy-outs of financial institutions and absorbed billions of dollars of 'toxic' assets. The Fed cut interest rates to near zero and engaged in a multi-year program of quantitative easing. In Europe, the bail-outs included not only financial institutions but some governments with interest rate cuts, bail-out programs and economic stimulus being managed through the European Central Bank (ECB).

3. Explain why an investor should consider the time–pattern of cash flows and the variability of the cash flows associated with a multi-period investment rather than simply assessing the investment on the basis of the total cash flows received. (LO 1.1)

- The value of an investment today is not assessed simply on the basis of the total cash flows to be received in the future.
- The time pattern of cash flows is important because cash flows that are received sooner are worth more than cash flows that are received later.
- The variability of the cash flows is important because the greater the variability of the cash flows the greater the chance that the actual cash flows will be different from that which was expected. Variability is a reflection of the risks involved in the investment.

4. Risk preferences shape the decisions that people and businesses make when under conditions characterised by risk and uncertainty. Outline the three ways in which economists categorise decision makers and explain how each type of decision maker will choose differently when confronted with a risky choice. (LO 1.2)

- Economists put decision makers into three categories: risk averse, risk neutral and risk seeking.
- A risk averse individual will not accept a fair gamble and would prefer a certain payoff. In order to entice such a person to invest in more risky assets, those assets must provide a higher expected return.

- A risk neutral individual will be indifferent to a fair gamble. This individual will accept a constant expected return regardless of risk. It is not necessary to offer higher expected returns at higher levels of risk.
- A risk seeking individual desires risk for its own sake. This individual will prefer riskier investments even if they offer a lower expected return. This individual will invest in the most risky investment, which, if the trade-off between risk and reward is positive, will be the asset with the highest expected return.
- More details about how people choose under conditions of risk and uncertainty can be found in Chapter 7 where behavioural finance is discussed.

5. Identify and discuss three changes in the distribution of assets among the financial institutions that have occurred during the period of the global financial crisis and Australia's recovery from it (2008 to 2013). The information required is presented in Table 1.1. (LO 1.2)

- The GFC had a significant impact but it did not significantly curtail the growth of assets held by Australia's financial institutions.
- Not surprisingly, given the nature of the GFC, securitisation vehicles suffered a considerable decline.
- The recovery of the financial markets following the GFC, along with Australia's high savings rate and compulsory superannuation, saw a significant increase in superannuation fund assets between 2008 and 2013. In fact, they almost doubled in dollar terms.
- Although the assets of building societies increased slightly, taken together with credit unions, these two types of institutions continued a long-run trend of accounting for a falling percentage of the total assets held by all financial institutions.

6. Financial instruments may be categorised as equity, debt or derivatives. Discuss each category. In your answer, make sure you explain the differences between debt, equity and derivatives. (LO 1.3)

- A deficit entity is a borrower or user of funds.
- Debt is a loan that must be repaid under the terms and conditions of the loan contract—interest payments, principal repaid.
- The loan contract will specify the timing and amount of cash flows—type and rate of interest, frequency of payments, maturity of loan.

- Equity represents an ownership position—example, a shareholder is a part-owner of the corporation in which shares are held.
- The equity holder is entitled to share in any profits (losses) that are realised.
- Equity has no maturity date—need to sell asset to realise value.
- Derivatives—futures, forwards, options and swaps.
- Derivatives are not used to raise funds, but typically to manage a particular risk exposure—for example, the risk that interest rates might rise on a loan.

7. During the GFC, the funding of longer-term assets with short-term borrowing was identified as a point of weakness in the operations of financial institutions. Discuss this statement with reference to the matching principle. (LO 1.4)

- The matching principle refers to the idea that short term assets should be funded with short term liabilities and longer term assets should be funded with longer term liabilities and equity.
- Many of the notable collapses of financial institutions were characterised, in part, by a failure to adhere to this principle. In a number of cases, notably Bear Sterns, a substantial proportion of longer term assets were funded on very short term liabilities.
- This behaviour ensured that these financial institutions were very vulnerable to a 'run' on their short term funding. When counter-parties refused to 'roll-over' short term debt facilities, there was not enough equity capital to sustain the operations of the firm and the longer term assets that had been accumulated.

8. (a) What are the differences between primary market and secondary market financial transactions?

- Primary market transactions relate to the creation of a new financial asset—for example, a company issues new shares or the government issues Treasury bonds; new funds being raised
- Secondary market transactions relate to the sale and transfer of existing financial assets; for example, a shareholder sells their shares to another investor and receives value—transfer of ownership; no new funds raised.

(b) Why is the existence of well-developed secondary markets important to the functioning of the primary markets within the financial system? (LO 1.4)

- Primary market transactions provides funds for business development and thus economic growth.
- Investors will purchase primary market securities if they know that there is a deep and liquid secondary market in which they are able to sell the securities at a later date, if necessary.
- Secondary market transactions provide price discovery in that the securities will be sold at the current market value.

9. Explain the meaning of the terms 'financial assets', 'financial instruments' and 'securities'. What is the difference between these terms? Give examples of financial instruments and securities. (LO 1.4)

- A financial asset represents an entitlement to future cash flows.
- A financial instrument is a financial asset whose value is represented in paper or electronic form; for example, Treasury bond, term deposit.
- A financial security is a financial asset where there is a formal secondary market where the asset may be bought or sold; for example, shares, money market securities such as bills of exchange and commercial paper.

10. Banks are the major providers of intermediated finance to the household and business sectors of an economy. In carrying out the intermediation process, banks perform a range of important functions. List these functions and discuss their importance for the financial system. (LO 1.4)

- Asset transformation—wide range of deposit and lending products
- Maturity transformation—satisfies different time preferences of savers and borrowers
- Credit risk diversification and transformation—credit risk is with the financial intermediary, intermediary diversifies across thousands of borrowers
- Liquidity transformation—satisfies short-term preferences of depositors for access to funds, and longer-term preferences of borrowers for commitment of funds
- Economies of scale—cost efficiencies, standard documentation, technology information and product delivery systems.

11. 'The development of domestic capital markets is extremely important for economic growth as they provide the long-term funds necessary for productive

investment.' Discuss this statement using the equity market and the corporate debt market as examples. (LO 1.5)

- When companies or entrepreneurs develop new innovations or inventions, capital investment is required in order to bring the new products or services to the marketplace.
- Developed capital markets, efficiently facilitating the flow of funds, ensure that the savings of surplus units accumulate into pools that are sufficiently large to fund this investment.
- Expectations about the return, risk, liquidity and time–pattern of the cash flows associated with new investments can be formed by comparing the investment's potential with alternative investments already available in the marketplace.
- The equity and debt securities of new or existing firms can be sold on the financial markets at a price that reflects the characteristics of the cash flows relative to alternative investments. The sale of these securities allows firms to invest the funds in new projects.

12. Corporations often issue long-term debt instruments into the international capital markets to raise funds. Explain the relationship between the issue of paper into the international capital markets and the foreign exchange market and the derivatives market. (LO 1.5)

- Capital markets such as the corporate bond market and the stock market provide access to longer-term funds—both debt and equity.
- If a borrower raises funds in the international capital markets then these funds may be denominated in a foreign currency. The borrower will typically need to exchange the foreign currency into its local currency using the foreign exchange market.
- An investor that wishes to purchase overseas investments will need to obtain the relevant foreign currency in order to carry out the transaction—this is also done in the f/x market.
- A borrower in the capital markets may be concerned that interest rates will rise and may use a futures contract, a forward rate agreement, an option or a swap transaction to manage that risk exposure—that is, a derivatives market transaction.

13. Discuss the sectorial flow of funds. In your answer, identify five sectors that are representative of the sectorial flow of funds. Why is an understanding of the sectorial flow of funds important for economic policy determination? (LO 1.6)

- The net flow of funds between surplus units and deficit units within economic sectors.

- Domestic economy is typically divided into four sectors:
    - business corporations
    - financial corporations
    - household sector, and
    - government.
- The fifth sector is the rest-of-the-world.
- Sectors may be deficit sectors or surplus sectors.
- Typically, the business sector will be a deficit sector (a net user of funds) while the household sector will be a surplus sector (a net provider of funds). Sectors will vary between countries and over time due to changing economic, social and political conditions.
- Understanding the net flow of funds is important if governments and businesses are to make policy investment decisions—for example, should a hospital be built, or should a manufacturing plant be established. What is the effect of current and proposed legislation on the flow of funds?

Extended learning questions

14. The evolution of domestic financial systems into an integrated global financial system has occurred, and continues to occur, due to a number of specific factors. Identify and discuss the factors that have influenced the development of the global financial system. (LO 1.7)

- Changing customer needs—greater consumption, increased asset accumulation, need for retirement savings, demand for more financial services, aging populations
- Technology driven innovation—integration of technology into business and social lifestyles, electronic information and product delivery systems, ATM and EFTPOS networks, internet banking and broker services, competitor innovation
- Regulation—significant deregulation of financial systems (floating of exchange rates, removal of interest rate controls), standardisation of many aspects of nation-states regulations (capital adequacy), restructure of regulatory frameworks within major nation-states
- Changing financial landscape—increased global competition, much tighter margins in capital markets, takeovers (industry rationalisation), financial conglomerates (banking and insurance), more sophisticated product ranges (derivatives).

15. The Asian financial crisis provided some valuable lessons about the global financial system. What are some of those lessons and why are they relevant for today's emerging markets? (LO 1.8)

- The lessons of the Asian financial crisis have prompted the Reserve Bank to identify a list of questions that point to the likelihood of a potential currency crisis or a wider economic crisis:
    - does the country have a fixed exchange rate and free movement of international capital?
    - is the exchange rate overvalued?
    - has a country with similar economic characteristics recently experienced a currency crisis?
    - is there a large budget deficit and a lot of government debt outstanding?
    - is there loose monetary policy and high inflation?
    - is the domestic economy in, or at risk of, a recession?
    - is there a large current account deficit?
    - is there a large amount of foreign debt?
    - is there an asset price boom (especially credit-driven) occurring?
    - are there a lot of bad debts in the banking system, or is there a poor system of bank supervision?
    - has there been a lot of un-hedged foreign currency borrowing?
    - are there poor accounting standards, few disclosure requirements, or ambiguous bankruptcy procedures?
- The above points form a strong starting point for financial crisis analysis. However, not all factors will necessarily always be evident. The existence of some factors does not in itself imply an imminent crisis situation. Also, as with past financial crises, each future crisis will have its own particular set of defining characteristics.
- In 2014, a director of the IMF, Jose Viñals, outlined the ways in which the Asian crisis remains relevant for emerging markets, including Asia. His speech entitled 'Back to the Future: Lessons from Financial Crises' can be found on the IMF website (www.imf.org).
- Viñals stressed the growing interconnectedness of the Asian financial system. Viñals likened the future of the Asian financial system to the European financial system, where cross-country exposures must be monitored carefully. As we have seen, this interconnectedness and failures

to ensure that particular countries did not live beyond their means were fundamental to the Eurozone crisis.

FINANCIAL NEWS CASE STUDY

In Chapter 1, the GFC was discussed in considerable detail along with the response of governments both in terms of regulation and economic stimulus. Although markets have recovered since the dark days of the crisis, central banks face the unenviable task of winding back the stimulus programs, the low interest rates and large purchases of government securities, which have propped up the markets since 2008. In 2013, US President Barack Obama announced Ben Bernanke's successor at the Federal Reserve, Janet Yellen. Managing this stimulus wind-back is viewed by many to be her greatest short-term challenge.

Over several years, financial markets have become used to low interest rates and continued monetary stimulus. This has been one of the driving forces behind the recovery of the US stock markets, which returned to record highs. On the one hand, strong financial markets are a good thing but central banks are wary about creating another 'bubble' by keeping interest rates artificially low. The problem is that the underlying economic conditions, although improved, are not showing clear signs of robust growth. Without continued monetary stimulus it is feared that the economy might soon begin to show signs of weakness and precipitate a correction on the financial markets. As a result, central banks have found themselves in a position that requires extremely delicate management of monetary policy. According to *The Atlantic*:

Ever since Lehmangeddon, the Fed has been stuck in a brave, old monetary world where even zero interest rates aren't enough to jumpstart the economy. It's a world that, outside of Japan, we haven't seen since the 1930s. And one that the Fed has tried to find a way out of in fits and starts. By late 2012, it had settled on a two-pronged strategy to do so: purchases and promises. The Fed purchased $85 billion of long-term bonds a month with newly-printed money, and promised to keep rates at zero at least until unemployment fell below 6.5 per cent or inflation rose above 2.5 per cent. But now these programs are winding down, and we still haven't gotten the catch-up growth that's always a day (or 6–12 months) away.

In this sensitive and confusing climate, every announcement released by the Federal Reserve is heavily scrutinised and sometimes the rhetoric can be more powerful than the Fed's actions. During 2013, talk of a wind-down in the stimulus led to falls in both the bond market and the stock market even though the Federal Reserve continued to purchase bonds in substantial volumes and even though its underlying inflation and unemployment targets remained unchanged. What makes the situation more challenging is that the underlying economic situation remains under a cloud. According to *The Atlantic*, the unemployment rate has fallen but new jobs have not been created. That is, the unemployment rate has declined in part because people have given up looking for work and dropped out of the labour market. In such an environment, the Federal Reserve's promise to keep interest rates low until unemployment falls below 6.5 per cent is 'useless'.

With the Fed's promises blunted, at least so far as they relate to the unemployment rate, a key plank of the Fed's rhetoric looks rather shaky. So shaky in fact that it might have to be supported by continued purchases of government securities. But this is just the thing that the Fed wants to wind back.

SOURCE: Extracts from Matthew O'Brien, 'This is Janet Yellen's Biggest Challenge', *The Atlantic*, 14 February 2014.

DISCUSSION POINTS

- **Give a brief overview of challenges that face central banks seeking to wind down the economic stimulus programs initiated during the GFC.**

  Central banks have been providing stimulus to major economies since the onset of the GFC. It is widely recognised, however, that these stimulus programs cannot continue indefinitely. Continued stimulus runs the risk of overheating the economy and perhaps creating another 'bubble' in the financial markets. Withdrawing the stimulus while economies are still showing some signs of weakness may cause distress on the financial markets and undo the progress that has been made towards recovery. Balancing this complex set of considerations is the major challenge that central banks face.

- **Discuss the consequences in terms of economic growth and the stability of financial markets of (1) untimely removal of the stimulus, and (2) prolonged stimulus past the point at which it was desirable or required.**

  In the first instance, untimely removal of economic stimulus may 'derail' a recovery. On the other hand, stimulus that continues too long may sow the seeds of another boom and subsequent crisis.

- **To what extent do you think Australia's central bank, the Reserve Bank of Australia, faces a similar challenge?**

  For a long while it appeared as though the RBA would not confront this sort of situation. However, the economy has been sluggish since the GFC and interest rate cuts have been necessary. With interest rates at very low levels, certain sectors of the economy, especially housing, have shown signs of becoming overheated while other sectors continue to underperform. Like many of its overseas counterparts, the RBA does face the tricky situation of attempting to return interest rates to more normal levels without initiating a significant downturn in some sectors of the economy.

True/False questions

1. **F** The GFC was a 'contained crisis' and only affected a small number of financial institutions in the United States.
2. **T** The Eurozone crisis emerged first in countries such as Spain, Greece and Ireland but quickly spread northwards due to the interconnectedness of Europe's financial institutions.
3. **T** In Australia, the effects on the real economy of the GFC were offset by a large government-funded stimulus program.
4. **F** Providing advice on mergers and acquisitions represents a significant part of the business operations of depository financial institutions.
5. **F** In Australia, the assets of financial institutions have gradually declined over time.
6. **T** Monetary policy is the actions of a central bank that influence the level of interest rates in order to achieve certain economic objectives.
7. **F** A principal role of investment banks is to gather deposit savings from customers and provide loans to their retail clients.
8. **F** Finance companies are examples of contractual savings institutions.
9. **F** The matching principle contends that short-term assets should be funded with equity.

10. **T** Equity in a corporation represents an ownership position that is represented by the issue of ordinary shares.

11. **T** Debt differs from equity in that debt normally has a specified life and pays some form of return to the debt holder.

12. **F** A derivative contract is a hybrid security that incorporates the characteristics of both debt and equity.

13. **T** The issue of new shares by a corporation provides the firm with additional equity funding and is an example of a primary market transaction.

14. **F** The issue of new money-market debt securities by a borrower is said to be a secondary market transaction.

15. **T** In a direct financial flow the surplus entity provides funds to the deficit entity and acquires a primary claim from the user of the funds.

16. **T** Three advantages of intermediated finance are asset transformation, liquidity transformation and maturity transformation.

17. **F** Money-market securities are exclusively debt instruments and capital-market instruments are exclusively equity securities.

18. **T** Bills of exchange and promissory notes are discount securities that may be traded in the money markets.

19. **F** Borrowers in the international markets obtain long-term loans from the foreign exchange market.

20. **T** The corporate sector borrows to fund business activities and therefore is typically a deficit sector within the economy.