

Chapter 1

Overview of the financial system

The financial system's functions

- 1 'Money' is a means of exchange used to settle financial transactions and is therefore part of the financial system's settlement function. 'Finance' usually refers to the flow of funds function where surplus units supply funds to deficit units through the financial system. The term 'finance' can also be used to describe a broader reference to the financial system generally. (p. 3)

Glen Stevens' speech (August 2010) uses the term 'finance' in its broadest sense. He explains that finance makes an enormous contribution to economic development and to quality of life, but that the industry is subject to a cycle of innovation, risk-taking and occasional crisis. (www.rba.gov.au/speeches/2010/sp-gov-170810.html)

- 2 The settlement function facilitates the settlement of commercial transactions where each buyer provides the agreed value to each seller. The financial system provides buyers with a range of methods for settling their transactions; this function is performed mainly by Australia's banks through the payment services they provide to their depositors. (p. 3)
- 3 Surplus units are individual households, businesses, governments and other organisations that have savings that are supplied to the financial system through bank deposits, contributions or some other financial instrument. Deficits units are households, businesses, governments and other organisations whose expenditures exceed their income and thus require additional funds from the system, for example through a loan contract. Hence surplus and deficit units are suppliers and demanders of funds in the flow-of-funds function. (pp. 3–5)
- 4 The flow-of-funds function is arranged mainly through financial markets or through financial institutions. The former is known as direct financing since the funds are supplied to deficit units who sell financial securities (such as bonds or shares) to surplus units. Securities represent financial contracts that specify the obligations of deficit units and the rights of surplus units. The latter process is known as indirect financing (or intermediation). It is achieved through two sets of financial contracts; one between surplus units and financial institutions, which provide the capacity for the institutions to make lending contracts with deficit units. (p. 4)
- 5 Default risk is the chance that a borrower will not meet their debt obligations to their lender. Market risk is the possibility of loss arising from unexpected movements in a market variable such as an interest rate, exchange rate or share price. In relation to a company that plans to borrow \$100 next month from a bank:
 - If that a loan contract specifying an interest rate has already been finalised, the company's market risk is that interest rates next month are lower than

expected (because they have agreed to pay more), whereas the bank faces the risk that rates unexpectedly rise (because they have agreed to accept less). The bank is also exposed to default risk—that after supplying funds to the company that the company is unable to meet their contractual obligations to the bank.

- If that a loan contract has not been finalised, the company's market risk is that interest rates next month are higher than expected. (pp. 5–6)
- 6 The financial adviser should recommend the financial products that best suit his/her clients' circumstances. However the existence of secret commissions creates an incentive for the adviser to recommend products that pay the adviser the largest amount, without the knowledge of the client. This type of situation is known as a moral hazard. (p. 6)
 - 7 Surplus units prefer financial contracts that are short and flexible and the amount of funds supplied by a single surplus unit is usually relatively small. Deficit units will typically require larger amounts of funds for long periods and cannot be flexible (if the lender desires earlier repayment). This mismatch can be overcome through the pooling of funds. A retail bank, for example, will have many depositors with bank balances that are comparatively small and that fluctuate. By pooling together the funds provided through many of these accounts the bank is able to provide loans for much larger amounts and for long, fixed terms. (p. 5–7)

The basic forms of finance

- 8
 - Figure 1.2 shows that in 1980 household debt was around 10% of the value of housing and about 8% of the value of total assets. In the following 30 years we observe substantial increases in the amount of household debt, particularly after 1990, and by 2010 household debt is approximately 29% of the value of housing and 19% of total assets. This increase in the use of debt (on average) by households is a result of the deregulation of the financial system which improved efficiency in the flow-of-funds, giving households greater access to debt.
 - Debt finance is borrowed funds. Debt contracts specify the borrower's payment obligations; these usually comprise interest and the repayment of the loan, specified by their amounts and timing. The contract may also specify the assets that the borrower pledges as security, which would become the lender's property in the event of default by the borrower. Debt payments are part of a firm's costs and thus have priority over payments to its owners. Equity finance represents the funds invested in a company by its owners. It entitles owners to share in the firm's earnings usually through the payment of dividends, which are cash payments from a company's earnings to its shareholders. Earnings are residual in nature since they are a firm's revenues minus its costs (including interest). This is shown by the financial statement presented as Table 1.2. (pp. 7–11)
- 9 Debt is borrowed funds commonly arranged through a loan contract that specifies the interest payable (fixed/floating), repayment schedule/maturity date and the security arrangements (if any). Borrowers expose lenders to credit risk (a type of default risk)—this is the chance that the borrower will not pay their scheduled payments to the lender. In order to lend to riskier borrowers, lenders need to be compensated for the credit risk they are exposed to. Hence the higher the credit risk of the borrower, the

higher the interest rate charged. This is reflected in the relationship $r = r_{\text{default free}} + r_{\text{risk premium}}$. (pp. 8–10)

- 10 The risk and return function in Figure 1.3 is positively sloped because investors/lenders will require higher expected rates of return to compensate them for exposure to higher levels of risk. The function commences at the default-free rate (on the vertical axis). The over-confidence in lending (in the U.S.) that preceded the GFC is reflected in a risk and return function that is relatively flat—lenders underestimated the risk of borrowers and charged a lower risk premium and interest rate than what was appropriate. As problems regarding loan quality emerged lenders became very cautious and reluctant to lend, and this could be represented in a much steeper risk-return function. (pp. 9–10)
- 11 [Note that question should refer to Table 1.2] Equity is also known as ‘risk capital’ because the returns to owners are uncertain and unenforceable. Owners (usually shareholders) have a residual claim—this means that all costs, expenses (including interest charges) and taxes must be paid by the business whilst the remainder belongs to the owners and can be distributed as dividends and/or retained to finance growth within the business. In Table 1.2 the firm has sales of \$500 from which it must pay costs (\$240), overheads (\$60), interest (\$70) and tax (\$40) leaving earnings which belong to the owners of \$90. If the firm experiences difficult times, the earnings attributable to owners would fall or become negative but the firm would still be obliged to meet its interest/loan commitments. (pp. 10–11)
- 12 Consider a firm that requires new financing in order to buy equipment. The advantages of debt are (i) its lower cost reflecting a lower risk to suppliers (than equity) as well as the tax deductibility of interest payments, and (ii) the leverage effect of debt that can reduce returns to the firm’s owners. The advantages of equity are that (i) the funds raised are not repaid, (ii) the firm is not legally obliged to pay dividends and (iii) using equity reduces the firm’s risk of insolvency. (pp. 11–13)
- 13 A firm’s earnings are the difference between its revenue and its costs/expenses. The data in Table 1.2 arrive at earnings before interest and tax (EBIT) after the firm’s operating costs and overheads have been met. In this example EBIT is sufficient to cover the firm’s interest and so the firm is profitable. Once tax on the profit has been met, its after-tax profits (‘earnings’) are achieved; meaning earnings are the residual after costs have been met. If for instance the firm’s revenues had been \$370m, its pre-tax profit would have been zero and thus the firm would not have achieved earnings. (pp. 10 and 14)
- 14 (i) Price of gold increases from \$1 000/oz to \$1 200/oz

<u>\$20 000 equity</u>		<u>\$5 000 equity and \$15 000 debt</u>	
Sell 20 oz @ \$1 200/oz	\$24 000	Sell 20 oz @ \$1 200/oz	\$24 000
Buy 20 oz @ \$1 000/oz	- 20 000	Buy 20 oz @ \$1 000/oz	- 20 000
		Pay interest of \$15 000 @ 10%	- 1 500
Pre-tax earnings	<u>\$4 000</u>	Pre-tax earnings	<u>\$2 500</u>
Return on equity = $4\,000/20\,000 = 20\%$		Return on equity = $2\,500/5\,000 = 50\%$	

The leveraged investment results in a much higher return on equity because the owners have much less money tied up in the investment.

(ii) Price of gold decreases from \$1 000/oz to \$800/oz

<u>\$20 000 equity</u>		<u>\$5 000 equity and \$15 000 debt</u>	
Sell 20 oz @ \$800/oz	\$16 000	Sell 20 oz @ \$800/oz	\$16 000
Buy 20 oz @ \$1 000/oz	- 20 000	Buy 20 oz @ \$1 000/oz	- 20 000
		Pay interest of \$15 000 @ 10%	- 1 500
Pre-tax loss	<u>-\$4 000</u>	Pre-tax loss	<u>-\$5 500</u>
Return on equity = $-4\,000/20\,000 = -20\%$		Return on equity = $-5\,500/5\,000 = -110\%$	

Leverage increases both the potential risks and return to equity holders. (p. 12)

Structure of Australia's financial institutions and markets

- 15 Most banks are authorised deposit-taking institutions that provide payment services, accept deposits and make loans to retail banking (households/small business) and/or wholesale banking (large businesses) customers. Investment and merchant banks are institutions that provide direct-financing services (such as the issue of securities) as well as risk-management products and advice to business. Fund managers provide investment services to their customers, that is, they invest the funds (usually in the financial markets) and manage the investments. The two principal forms of fund managers are superannuation schemes and public unit trusts. (p. 15)
- 16 The **money market** allows deficit units to raise funds from surplus units through the sale of short-term (< 1 year) debt securities. These securities pay the holder their face value at maturity, therefore in order to earn a return the investor will purchase the security for less than its face value—hence they are referred to as ‘discount’ securities. The **bond market** also allows deficit units to raise debt funds from surplus units but these are long-term instruments and maturity can be many years away. In addition to repaying their face value at maturity, a bond requires the borrower to make regular interest payments to the lender. The **share market** allows businesses to raise equity funds through the sale of shares. By buying shares the surplus unit becomes a part owner of the firm. Recall that equity does not need to be repaid. Note that in each of these markets the security holder can sell their securities (at the prevailing market price) for cash if they choose. (p. 16)

Australia's financial regulators

- 17 APRA's main financial responsibility is the prudential supervision of financial institutions whereas ASIC's main responsibility is to enforce company and financial services law to protect consumers of financial services, investors and creditors. (p. 17)

- 18 The RBA's main responsibilities are to implement monetary policy, oversee the stability of the financial system, regulate the payments system, issue notes and act as the Commonwealth Government's banker. (p. 17)
- 19 ▪ The RBA's *Financial Stability Review* identifies that the problems leading to the GFC originated in the US sub-prime residential mortgage market. The period of most stress and uncertainty in global markets occurred over the six months from September 2008 to March 2009. This period was marked by exceptionally large risk premiums in a range of markets leading to steep declines in world equity prices and other financial assets, and serious dysfunction in wholesale debt markets. Some institutions, such as the Lehman Brothers in the US, collapsed while other institutions experienced large reductions in asset values and funding difficulties. Confidence in financial institutions fell markedly and severe tightening of lending conditions ensued. Governments around the world sought to maintain their financial systems by expanding depositor protection and providing guarantees for banks' wholesale funding. Australian banks experienced significant falls in their share values and increased funding costs, however their exposure to problem loans was low and their profitability remained strong.
(www.rba.gov.au/publications/fsr/)
- Glenn Stevens identified three longer-run consequences of the GFC. (i) Increased levels of government debt by countries caught up in the crises as a result of buying some of the ailing institutions, fiscal stimuli packages and a downturn in economic activity putting budgets into deficit. (ii) More government intervention in the financial markets such as government ownership of banks and various guarantees offered to depositors and lenders. (iii) Greater levels of regulation on financial institutions.
(<http://www.rba.gov.au/speeches/2010/sp-gov-200710.html>)
- 20 Base your answer on the latest edition of the Financial Stability Review available at <http://www.rba.gov.au/publications/fsr/index.html>.