Banking and Capital Markets

Unit 1 Banks and Financial Markets

Contents

Unit Overview

Financial intermediaries and financial markets provide alternative channels for the flow of funds between households as savers, and firms in need of finance as borrowers. In bank-oriented financial systems, indirect finance is the predominant channel for the flow of funds: households lend their funds to financial intermediaries in the form of deposits, and financial intermediaries provide finance to firms in the form of loans. In market-oriented financial systems, direct finance is the predominant channel: firms are financed by issuing equity and debt securities that are purchased by households, or by financial institutions on behalf of households. Financial systems in continental European countries are predominantly bank-oriented, while financial systems in Anglo-Saxon countries are market-oriented. Contrasting legal traditions, as well as historical and political factors, have been cited as explanations for differences between countries' financial systems. Such differences have implications for the methods by which the financial system facilitates risk-sharing, corporate governance, dissemination of information, and debt restructuring or resolution of firms in financial distress.

Learning Outcomes

When you have completed your study of this unit and its readings, you will be able to:

- identify the principal types of financial intermediation service, and classify and elaborate the main characteristics of financial intermediaries and financial markets
- explain how financial intermediaries and financial markets facilitate the flow of funds between surplus and deficit sectors of the economy
- identify the distinguishing features of bank-oriented and market-oriented financial systems
- critically evaluate the importance of legal traditions, and historical and political factors, in explaining the evolution of different financial systems
- critically evaluate the performance of bank-oriented and market-oriented financial systems in facilitating risk-sharing, corporate governance, dissemination of information, and debt restructuring or resolution of firms in financial distress.

Reading for Unit 1

Kent Matthews and John Thompson (2014) Chapter 1 'Trends in domestic and international banking', Chapter 4 'Banking typology', and Chapter 9 'Securitization'. In: *The Economics of Banking*. 3rd Edition. Chichester UK, John Wiley and Sons. pp. 1–21, pp. 55–70, pp. 141–56.

Franklin Allen and Douglas Gale (2001) Chapter 2 'The historical development of financial systems', Sections 2.2, 2.3 and 2.4, and Chapter 3

'Institutions and markets'. In: *Comparing Financial Systems*. Boston MA, MIT Press, pp. 25–46, pp. 47–78.

Rafael La Porta, Florencio Lopez-De-Silanes, Andrei Shleifer and Robert Vishny (1997) Legal determinants of external finance. *Journal of Finance*, 52 (3), 1131–50.

Raghuram Rajan and Luigi Zingales (2003) The great reversals: The politics of financial development in the twentieth century. *Journal of Financial Economics*, 69 (1), 5–50.

1.1 Introduction

This unit provides an introduction to the most important features of financial intermediaries such as banks, and of financial markets such as stock markets. The importance of financial intermediaries and financial markets in the financial system differs between countries. The distinction between economies with bank-oriented financial systems, and those with market-oriented systems, is a central theme of this unit.

Section 1.2 provides an overview of financial intermediaries and financial markets. Financial intermediaries such as commercial banks, investment banks and savings banks, as well as other institutions such as mutual funds, insurance companies and pension funds, adopt a wide range of business models. For example, commercial banks generate profits by accepting deposits and borrowing funds in other ways, and using these funds to grant loans. Investment banks do not accept deposits on a significant scale, and generate revenue primarily in the form of fee income from transactions they facilitate, such as bond issues or IPOs (initial public offerings of a company's equity). Financial markets, too, are diverse, and are distinguished primarily by what is traded: equities, government ('sovereign') bonds, corporate bonds, foreign exchange, or derivatives such as options and futures contracts.

Financial intermediaries and financial markets interact and combine in various ways to constitute a country's financial system. The financial system provides a number of channels through which funds flow between the non-financial sectors of an economy, such as households, firms, government, and the foreign sector. Section 1.3 discusses the role of the financial system in facilitating the flow of funds. The financial system is in a continual state of change, and the roles of financial intermediaries and financial markets, and their relative importance, can evolve and vary over time. As an example, we can consider the practice of securitisation as a manifestation of the movement towards disintermediation, whereby flows of funds previously facilitated by financial intermediaries have been redirected into channels supported by financial markets.

Section 1.4 provides further discussion of bank-oriented and market-oriented financial systems, focusing primarily on metrics that can be used to classify countries according to this distinction. Widely used measures include the size of banking sector assets and stock market capitalisation

relative to GDP; and data on household portfolio allocation between bank deposits, direct investments in securities such as bonds and equities, and the value of households' stakes in vehicles such as mutual funds, life insurance, and pension funds. Another possible measure is data on the sources of finance to firms; although this data is not published regularly.

Section 1.5 addresses the question as to why some countries have bank-oriented financial systems, while others are market-oriented. One explanation, formulated by La Porta and others in a series of papers in the second half of the 1990s, emphasises the importance of legal traditions for the development of the financial system. An alternative explanation, proposed by Rajan and Zingales in an influential paper published in 2003, emphasises the role of vested interests such as established or incumbent industrial firms and their bankers in inhibiting the development of a competitive market-oriented financial system. Incumbents fear that the development of a competitive market-oriented financial system might lead to the elimination of the rents (excessive profits) that are earned in the absence of a market-oriented system.

This unit concludes in Section 1.6 with a discussion of the strengths and weaknesses of bank-oriented and market-oriented financial systems. As a channel for the flow of funds from savers to firms requiring finance for investment projects, are banks more or less effective than financial markets? This question is examined with reference to several specific functions that are performed differently by financial intermediaries and financial markets: risk-sharing; corporate governance; dissemination of information; and debt restructuring or resolution of firms in financial distress.

1.2 Financial Intermediaries, Financial Markets, and the Flow of Funds

This section provides a short overview of different types of financial intermediation services, financial intermediaries and financial markets.

1.2.1 Financial intermediation services

Financial intermediation services can be subdivided into retail and wholesale banking.

Retail banking is the provision of banking services to consumers, households and small firms. Core services include the acceptance of deposits from households, paid into current accounts or savings accounts. Current accounts, sometimes known as cheque accounts, demand deposits or sight deposits, allow immediate withdrawal of funds, but typically pay little or no interest. Savings accounts, sometimes known as time deposits, pay interest but may require a specified notice period before funds can be withdrawn. On the lending side, loans may be either secured or unsecured. Mortgages are the principal category of secured loans to households, used to finance the purchase of property. The property acts as collateral, meaning that the bank

has the right to take possession if the borrower fails to make the scheduled repayments. Unsecured loans are used to finance purchase of items such as cars or home improvements. Lending to small businesses typically takes the form of overdrafts or term loans. An overdraft allows the borrower to withdraw funds exceeding the current balance on the account, up to a specified limit. A term loan is a business loan with a specified maturity and a schedule of interest and capital repayments.

Wholesale banking is the provision of financial services to large firms or corporations, including other banks and financial institutions. Wholesale banking can be subdivided into corporate banking and investment banking.

Corporate banking covers the acceptance of deposits and lending to corporations. Lending mechanisms include lines of credit, allowing the borrower access to funds up to a specified maximum. A revolving credit facility provides similar flexibility on a larger scale. A syndicated loan is a large, long-term loan funded by several banks jointly. Special Purpose Vehicles (SPVs) are set up by banks to provide long-term finance for large investment projects undertaken by large companies. Borrowing and lending between banks takes place on inter-bank markets. Investment banking covers the provision of specialised banking and financial services to large companies, governments, and private clients. These include the facilitation of stock market flotations, privatisation of state-owned entities, and mergers and acquisitions. Underwriting of new issues of securities (corporate bonds, equities, or government bonds) usually involves a syndicate of investment banks each taking responsibility for selling an allocation of the new issue. Investment banks also provide asset and wealth management services. Investment banks trade in financial markets on their own behalf (proprietary trading) or on behalf of their customers.

Reading 1.1

Please now read Chapter 1 Trends in domestic and international banking, in Matthews and Thompson (2014), pages 1–20, which provides an overview of global trends in banking and financial intermediation since the 1980s.

Matthews & Thompson (2014) Chapter 1 'Trends in domestic and international banking' in *The Economics of Banking*.

1.2.2 Financial intermediaries

Financial enterprises are widely known as financial intermediaries or financial institutions. The range of financial intermediaries that operate in any one financial services industry, and the names given to them, vary from country to country.

A *commercial bank* is one whose main business is financial intermediation: accepting deposits and granting loans. Most commercial banks supply both retail banking and corporate banking services. Retail banking covers the provision of banking services to individual consumers, households and small firms, either on the high street or via phone or online. Corporate banking covers the provision of banking services to large firms or

corporations. Commercial banks are typically owned by shareholders, and seek to earn profits to provide shareholders with a return on their investment in the bank's capital (equity). In recent decades many countries have tried to increase competition in banking through financial deregulation. Consequently, many commercial banks have diversified into provision of non-bank financial services, such as stockbroking, real-estate services and insurance, often by means of acquisition of other financial services firms. Examples include Barclays and HSBC in the UK, and JP Morgan Chase Bank and Wells Fargo in the US.

Investment banks provide investment banking services, as outlined above. Typically, an investment bank comprises an advisory division, specialising in underwriting, stock market flotations, and other consultancy services; and a trading division, specialising in trading on financial markets, and asset management. Most investment banks are shareholder-owned and therefore profit-motivated. The global financial crisis of 2007–09 produced a major upheaval of the US investment banking industry, including the liquidation of Lehman Brothers; the acquisition of Bear Stearns and Merrill Lynch by JP Morgan and Bank of America, respectively; and the conversion at the height of the crisis of Goldman Sachs and Morgan Stanley to bank holding company status, in order to secure eligibility for Federal Reserve 'safety net' support.

Universal banks originated in Germany, where banks were allowed to undertake both retail banking and investment banking, providing financial services for corporate clients and holding corporate equities and directorships in companies, sometimes including companies to which they lent. Traditionally, this meant that German universal banks could establish closer connections with corporate clients than was possible in 'arm's-length' commercial banking in the US and UK. In many countries, the distinction between commercial banks and investment banks has become less rigid over time. In the US, for example, the Glass-Steagall Act (1933) separated commercial banking from investment banking, by preventing affiliations that would have allowed investment banks to trade in funds raised from commercial bank deposits. This legal separation ended in 1999. As a consequence of deregulation, there has been a move towards universal banking in many countries including the US and the UK, either through banks being permitted to own non-bank subsidiary companies, or (in the US especially) through the acquisition of investment banks by commercial banks.

In several countries, various types of *mutually-owned bank* compete with shareholder-owned commercial banks to supply retail banking services. Although the precise nature of the mutuals varies between the countries in which they operate, typically they accept deposits and grant loans to members, who carry voting rights. Mutuals earn surpluses, rather than profits, which are either distributed to the members or retained to finance expansion. In principle, since there is no requirement to make shareholder profit, mutuals should be able to offer more competitive interest rates to depositors and borrowers than commercial banks.

In the US historically, Savings and Loan (S&L) associations, also known as thrifts, were prominent lenders in the US mortgage market, accepting deposits and granting mortgages and personal loans to individual members. The number of S&Ls was reduced by around 50% during the protracted S&L crisis between 1986 and 1995, when many S&Ls failed and were liquidated. The few surviving UK building societies that avoided demutualisation through acquisition or conversion to shareholder-owned commercial banks are constituted in a similar manner to the US S&Ls.

In several continental European countries, savings banks, which typically originated in philanthropic efforts to encourage saving among poorer people, provide a vehicle for deposits of household savings, typically used to finance investments in low-risk securities such as government bonds. Cooperative banks, which operate in continental Europe and elsewhere, are owned by their members and adopt the cooperative principle of one-member-one-vote. Some cooperative banks, such as those that form part of the membership of the Credit Agricole group in France, originally provided banking services to farmers. Today some cooperatives provide banking services to both members and non-members; and some have issued equity and obtained stock market listings, diluting the original cooperative ethos. Credit unions, which are prominent in a number of countries including the US, Canada, Australia and Ireland, are cooperative banks defined by a 'common bond', which restricts membership to individuals who share some form of association, such as a common employer, profession or church. In the US, the emergence of multiple common bond credit unions has narrowed the distinction from other types of bank.

In some countries, certain *government-owned banks* have traditionally played an important role as financial intermediaries. In Germany, a tier of medium-sized banks, the Landesbanken, are owned by the individual states, and provide wholesale banking services. The Landesbanken also provide an investment vehicle for the surplus deposits of the smaller Sparkassen or savings banks, which are locally managed banks predominantly owned by cities or municipalities. The Sparkassen offer a broad range of retail banking services under a common brand. In several countries, the post office supplies financial services, including deposit-taking. In Germany, Postbank was formed from the de-merger of the postal savings division of Deutsche Bundespost in 1990. Postbank was acquired by Deutsche Bank between 2008 and 2012, and currently operates as a brand in Deutsche Bank's retail division. As a state-owned institution, the Japanese post office was cited as the largest deposit-taking institution in the world as recently as 2008. Depositors' savings were invested in loans to the government, and the financing of public projects. Prior to privatisation of the Japanese post office, Japan Post Bank was formed in 2006. The bank was floated on the Tokyo Stock Exchange in 2015.

Reading 1.2

Matthews & Thompson (2014) Chapter 4 'Banking typology' in *The Economics of Banking*.

For an overview of financial intermediation services, and a banking typology, please now read from Matthews and Thompson (2014), Chapter 4 Banking typology, pages 55–70.

When you have read this chapter, please answer the following questions (from page 70 in Matthews and Thompson).

- What risks do all banks face in their operations?
- What are retail banks? What are the main features of their balance sheets?
- What are wholesale banks? How do they differ from retail banks in their operating methods?

Several other types of financial institution provide services that are in some ways similar to those of banks, but are subject to separate regulation.

Investment companies pool the resources of their clients, in order to create a portfolio of investments in the shares of other companies, or in other assets such as bonds, property, commodities or precious metals. Unit investment trusts maintain a fixed portfolio of investments, with no active fund management. Actively managed funds may be either open-end or closed-end. Open-end funds, also known as mutual funds, issue and redeem their shares on a daily basis, in line with the amounts investors wish to invest or withdraw. Closed-end funds are publicly-traded companies, which issue a fixed number of shares that can be traded in the same way as shares in any other company. Note that the claim of a bank depositor on the bank equates to the original deposit *plus* any accumulated interest, and not on the value of the assets whose acquisition was financed using the bank deposit. By contrast, the claim of an investor in an investment company depends directly on the current market value of the assets that were purchased on the investor's behalf, and not on the amount originally invested.

Insurance companies provide insurance-based products, classified as either life assurance or general insurance (such as home and car insurance). Life assurance involves financial intermediation on a large scale, since the revenue received as premiums are the savings of policy-holders, which the life assurance company invests in assets in order to produce an investment return for the policy-holder or his or her dependents when the policy matures or in the event of the policy-holder's death. Some insurance companies specialise in either life assurance or general insurance, while some offer both. In many European countries, insurance companies are owned by banks. This provides both diversification and a readily available customer base.

Pension funds collect contributions from employees and their sponsoring employer throughout the employee's period of employment, in order to create a pool of assets that will pay benefits after retirement. The fund manager invests these contributions to create an accumulated fund of sufficient value to cover the benefits that retirees are entitled to draw. In

many countries pension funds receive favourable tax treatment, such as tax-deductible contributions and tax-free investment income.

A number of *non-bank financial companies* provide finance to the corporate and retail sector. In the UK, many large retailers provide credit opportunities either through a direct subsidiary or as agents for a bank or other financial institution. *Alternative financial services* describes a range of activities that fall outside the scope of traditional banking, many of which are targeted at low-income customers. This category includes payday loans, rent-to-own agreements, pawnshops, and traditional door-to-door moneylending. Person-to-person lending, crowdfunding, and microfinance in emerging countries, are more recent business models for lending that have developed largely outside the established banking industry.

1.2.3 Financial markets

There are numerous ways of classifying financial markets. We can distinguish between primary and secondary markets; between money and capital markets; between markets for debt and for equity; and between markets in assets and markets in derivatives based on those assets.

Primary and secondary markets

Primary markets are those markets in which new securities are issued (sold) for the first time through an initial public offering (IPO), from which the funds raised go to the enterprise issuing the securities. Alternatively, an IPO can involve the sale to the general public of existing securities that were previously owned privately, in which case the sale proceeds go to the previous owners. After securities have been issued, they are subsequently traded as claims to ownership on secondary markets. In secondary markets brokers act as intermediaries between buyers and sellers, delivering orders to the market, and charging commissions for their services. Clearing and settlement of trades is usually overseen by a centralised clearing house. The best-known examples of secondary markets are stock markets, or stock exchanges, where large volumes of previously issued equities are traded.

Money and capital markets

The distinction between money and capital markets depends on the maturity of the securities traded in each market. Typically, short-term securities (with a maturity of less than one year) are traded in the money markets. *Treasury bills* are government securities with a maturity of three to twelve months, and are widely considered as virtually risk-free. A strong, active money market is an important foundation for strong commercial banking. Medium-term and long-term securities are traded on the capital markets, the most significant of which are equity and bond markets. Institutional investors (insurance companies and pension funds) and specialist agents such as investment banks, brokers and dealers, are major capital market participants.

Debt and equity markets

An enterprise typically can raise funds in the capital markets in two distinct ways.

First, it can borrow funds, by issuing or selling a debt instrument such as a bond, or raising a loan from a bank. The markets for bonds and bank loans are collectively known as debt markets. A bond is a promissory note that promises to repay the investor the principal and an agreed rate or amount of interest. Bonds tend to be long-term financial assets, and bank loans typically are short-term to medium-term assets, but both pay interest.

The second way in which an enterprise can raise finance is through the issue of equity, known as common stock (US) or ordinary shares (UK). Equities represent future claims on an enterprise's net profits and a residual claim on its net assets in the event of liquidation. Equity holders receive periodic (typically annual) payments, called dividends, from the enterprise. Equities are viewed as long-term securities since they have no final maturity date, unlike most bank loans and bonds.

Primary instruments and derivatives markets

A primary instrument is a security whose price depends directly on the underlying value of an asset. Examples include equities, bonds, and currencies. Derivative instruments, or derivatives, are securities that produce payoffs that depend on the values of other securities or assets, such as bond or equity prices, market index values, or commodity prices. Financial derivative markets have grown spectacularly since their foundation in the 1970s and 1980s. Derivatives instruments include options, swaps, and futures.

Spot markets and futures markets

This distinction depends on the delivery date of the security. Spot market securities are traded for (virtually) immediate delivery, while futures are traded for delivery at some time in the future. Futures are a type of derivative, because their value is derived from the value of the underlying security (in this case the security which, under the futures contract, is to be delivered in the future).

1.3 The Financial System and the Flow of Funds

Financial intermediaries interact in financial markets with each other and with other economic agents, including the government, regulatory authorities, consumers and non-commercial firms. This section provides a model of financial flows within such a system. The modes of interaction within financial systems are not fixed once and for all. For example, banks and other institutions that provide credit, and which receive future streams of interest and capital repayments, or other streams of future revenue, have re-packaged and re-sold bundles of claims through a practice known as

securitisation. This may be interpreted as a form of re-engineering of the financial system.

A financial system may be defined as a group of institutions, markets and regulations enabling the allocation of resources within time and space (Levine, 1997). Financial markets and financial institutions interact and combine in various ways to constitute a country's financial system. The financial position of any agent (in the broadest sense, ranging from individuals to whole sectors of the economy) can be summarised as follows:

$$S - I = \Delta A - \Delta L \tag{1.1}$$

where S represents savings, I is investment, ΔA is the change in total assets, and ΔL is the change in liabilities. If an agent saves more than it invests, it accumulates more assets than liabilities. Its net wealth increases, and it operates a financial surplus. An expression of this kind can be used to define the net financial surplus or deficit of any sector. Typically, the personal or household sector is a surplus sector, and the company and government sectors are deficit sectors.

This conceptual framework allows a deeper understanding of the concepts of *direct and indirect finance* first developed by John Gurley and Edward Shaw, the founders of modern theories of the role of finance, in their 1960 book, *Money in a Theory of Finance*. Following this approach, the economy may be divided into four sectors, which are 'non financial' in the sense that finance is not their main business:

- households
- firms
- government
- foreign sector (rest of the world).

This division can be used to highlight the role of the financial system. In flow-of-funds accounting, the surplus of one sector is always equivalent to the sum of the deficits of other sectors (with the opposite sign). For example, the surpluses of the household and foreign sectors correspond to the deficits of firms (businesses) and government. There are net flows of finance from the surplus sectors to the deficit sectors.

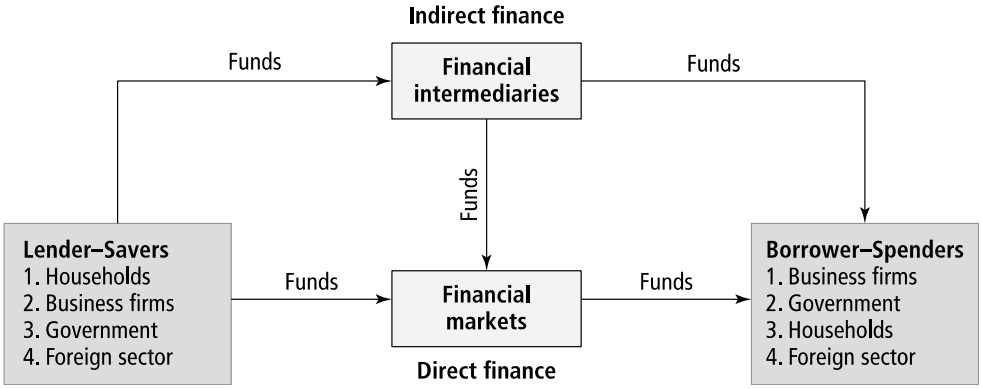
Those net flows go through the financial system (or financial sector) via two basic routes. One route involves *direct finance*: firms, for example, obtain finance directly from households by selling bonds or new equities through a financial market such as the stock market. A large portion of new issues of securities are purchased not by individuals directly, but on their behalf by pension funds or mutual funds: institutions which manage savings placed with them by households as pension scheme contributions or as investments.

The second route involves *indirect finance*: surplus units (households) lend their funds to financial intermediaries, which lend in their own right to deficit units (firms), or finance them in other ways. These are the two basic or pure routes by which funds flow through a financial system in a simple

model. In reality, many flows of funds are more complex, and combine elements of both routes. For example, not all of the finance raised by firms comes from outside the firms' sector; much of their investment is financed from their own savings (retained profits). As channels for the flow of funds, financial intermediaries and financial markets are not completely separable. For example, some financial intermediaries do not solely receive non-marketable deposits and make non-marketable loans; they also participate in financial markets by trading securities. Certain financial intermediaries, i.e. investment banks, specialise in managing the issue of new equity or debt securities by large companies.

Figure 1.1 provides a simplified representation of financial flows, from surplus to deficit sectors, involving direct finance and indirect finance, and financial intermediaries and financial markets.

Figure 1.1 Financial flows



Unless prevented from doing so by regulation, the different routes identified above compete with each other. There have been important structural shifts in the flows of funds, especially in the US, where the direct finance route has gained in relative importance compared to the indirect finance route. The reasons for this movement towards *disintermediation* are varied. The growth of the practice of securitisation represents a key development, and is an important element in the disintermediation movement.

Securitisation can be defined broadly as a process in which borrowers and savers are wholly or partly matched through financial markets. This definition includes the following:

- a shift on the part of firms towards greater reliance on financial securities such as bonds and equities, relative to loans from banks and other intermediaries
- deposit replacement
- asset-backed securitisation.

Replacement of loans by financial securities

The issue of financial securities in the capital markets, as opposed to obtaining loans, is a type of securitisation. A borrower with a high credit rating may be able to raise finance via the issue of securities more cheaply

than by means of a bank loan. This may be realised as a direct replacement of debt claims, whereby a firm replaces a bank loan by a sale of securities (such as bonds or equity) in financial markets. The issue of securities is mostly organised by financial institutions, such as investment banks, which receive a fee. Part of the issue may be taken up by the investment bank itself, which commits to purchase any portion of the security issue that is not absorbed by the markets.

Deposit replacement

Deposit replacement occurs because investors have found other places to deposit funds that were traditionally placed in savings accounts. Examples are mutual funds, money markets funds and other retail investment products. Non-bank financial institutions increasingly accept funds that might formerly have been placed in savings accounts, and use the funds to purchase both real and financial securities. These institutions are sometimes regarded as financial intermediaries; but strictly speaking this is inaccurate because in many cases the assets they hold are directly owned – as shares in a pool of assets – by their investors or depositors.

Asset-backed securitisation

Asset-backed securitisation involves the repackaging of assets from within the lending portfolios of banks, in order to create a financial asset that can be sold in the capital markets. It is useful to consider bank lending as a bundle of services involving the following elements:

- loan origination: locating a creditworthy borrower and providing a loan
- loan warehousing: holding the loan on the bank's balance sheet
- loan servicing: collecting payments of interest and principal and administering and enforcing the loan contract
- loan monitoring: conducting periodic surveillance to ensure that the borrower has maintained financial viability.

Asset-backed securitisation is sometimes described as a symptom of the fragmentation of traditional lending. Asset-backed securitisation involves originating loans, repackaging them into what are known as structured securities, and then selling these securities on the capital markets. Securitisation does not eliminate the role of banks in the intermediation process as described above; but it involves the repackaging and selling of a bundle of loans to a third party. Securitisation provides the bank with a mechanism for removing assets from their balance sheet, thereby enhancing their liquidity, reducing their capital requirements, diversifying or reducing the risk in their lending portfolios, and improving the average quality of their assets.

Despite the increasing trend towards securitisation in some financial systems, securitisation remains limited to certain countries and certain types of loans, for which credit risk is relatively easy to assess and mechanisms for indirect monitoring of borrowers are available. The more complex structured securities are less common than the publicity they receive might

suggest. Inadequate risk management practices on the part of many financial intermediaries, especially in respect of some of the more complex or exotic structured securities such as collateralised debt obligations (CDOs), were heavily implicated among the causes of the global financial crisis of 2007–09. The volume of structured securities issued and traded declined substantially in the period immediately following the crisis. You will study asset-backed securitisation in more detail in Unit 5.

Reading 1.3

Matthews & Thompson (2014) Chapter 9 'Securitization' in *The Economics of Banking.*

At this stage, please now read from Matthews and Thompson (2014), Chapter 9 Securitization, Sections 9.1 and 9.2, pages 141–46, which provide an overview of securitisation in the form of loan replacement and deposit replacement. The rest of Chapter 9 considers the process and advantages of asset-backed securitisation, and you will study this in more detail in Unit 5.

In most financial systems, indirect finance remains the dominant mode for the flow of funds between surplus and deficit agents. In most countries banks are the main providers of external finance for firms and governments; and, in addition to operating the payments system, the core of banking still consists of receiving non-marketable deposits and making non-marketable loans. As you will see later in this module, this has important implications for the way we approach the study of banks and capital markets.

1.4 Comparative Financial Systems

The different elements of financial systems discussed in the previous section do not interact in the same way in all societies and at all times. Rather, there are systematic differences between financial systems around the world. One of the most crucial areas of differentiation has undoubtedly been the contrast between bank-oriented and market-oriented financial systems. In this section, we focus on indicators that are helpful in drawing this distinction.

Each country's financial system has been shaped by the historical development of social, cultural, legal and political environment. Consequently the financial systems of different countries have varying characteristics. The way in which financial markets and financial institutions interact in Japan and Germany, for example, is significantly different from the US and UK. In Japan and Germany banks play a dominant role, and the financial systems are said to be bank-oriented. In the US and UK equity markets are more prominent, and the financial systems are said to be market-oriented.

The system of universal banking that has developed in Germany since the 19th century enables banks to play an active role in monitoring and controlling the enterprises they finance. German banks account for a substantial share of the external financing of companies, and handle the bulk of their issues of bonds and equity in the capital markets. Banks maintain an

extensive presence on the supervisory boards of companies, and have substantial control of shareholder voting rights through ownership and control of shares by proxy, which retail investors deposit at the banks. The close links between German banks and industry contribute to the formation of what is in effect an internal capital market, comprising the circle formed by a bank and the firms to which it is closely linked, which is shielded from competitive pressure from outside the circle.

Allen and Gale (2001) provide a historical account of the development of the market-oriented financial systems of the US and UK, and the bank-oriented systems of Germany, Japan and France. This historical review leads to the following conclusions.

- A wide range of different financial systems exists in the industrialised world.
- Financial intermediaries play an important role in overcoming market imperfections.
- Financial systems are fragile, and prone to the periodic outbreak of crises.
- Governments and central banks play an important role in regulating the financial system.

Reading 1.4

Please now read Chapter 2, Sections 2.2, 2.3.and 2.4 and Chapter 3 of Allen and Gale (2001) *Comparing Financial Systems*, and write an answer to the following question.

- To what extent has historical accident been responsible for the development of bank-oriented and market-oriented financial systems?

Allen & Gale (2001) Chapter 2 'The development of financial systems' & Chapter 3 'Institutions and markets'. *Comparing Financial Systems*.

As you will have noticed from your reading of Allen and Gale Chapters 2 and 3, the classification of financial systems as bank-oriented or market-oriented is a complex task, and the use of different criteria may lead to different classifications, with some countries' systems containing both bank-oriented and market-oriented elements. Among the most widely used metrics for drawing this distinction are the following:

- the size of banks' assets and stock market capitalisation relative to GDP
- household portfolio allocation
- sources of finance to industry.

The size of banks and the stock market relative to the economy

Table 1.1 reports deposit money bank assets as a percentage of GDP, and stock market capitalisation as a percentage of GDP, for France, Germany, Japan, the UK and US.

The comparison between France, Germany and Japan on the one hand, and the US on the other, reflects consistently the contrast between bank-oriented and market-oriented systems as described above.

For the UK, the pattern is more ambiguous. The ratio of stock market capitalisation to GDP in the UK is high in comparison with France, Germany and Japan, which is consistent with the characterisation of the UK as a market-oriented system. But (in 2016) the ratio of bank assets to GDP is also higher in the UK than in France and Germany, but lower than in Japan.

Table 1.1 Deposit money bank assets, equity market capitalisation, GDP

	France	Germany	Japan	UK	US
Deposit money bank assets, as per cent of GDP (%)					
1996	99.2	130.0	241.5	96.5	52.6
2006	97.7	124.7	151.2	145.0	59.8
2016	112.5	93.4	158.3	130.5	62.7
Equity market capitalisation of listed companies, as per cent of GDP (%)					
1996	36.5	26.6	62.5	121.5	104.7
2006	104.7	54.5	101.8	140.4	141.2
2016	87.6	49.3	100.1	114.0	146.9
GDP ($ billion)					
1996	1606	2504	4834	1409	8100
2006	2319	3002	4530	2693	13856
2016	2465	3478	4949	2651	18625

Source: World Bank (nd accessed 2019)

Household portfolio allocation

Tables 1.2 and 1.3 report the percentage composition of the financial assets of households in 1996 and 2016 in France, Germany, Japan, the UK and US.

Table 1.2 Percentage composition of household assets, 1996

	France	Germany	Japan	UK	US
Currency and deposits	34.2	43.1	50.1	21.9	12.2
Shares and other equity	25.0	12.2	8.4	16.3	32.7
Securities other than shares	5.0	8.4	6.1	0.5	9.2
Mutual fund shares	9.9	7.7	2.3	4.1	8.3
Life insurance reserves	19.1	13.8	17.9	13.0	5.9
Pension funds	–	10.7	8.4	39.6	28.9

Please note that the percentages for each country do not sum to 100. The category 'Other' is not shown.

Source: OECD (nd accessed 2019)

Table 1.3 Percentage composition of household assets, 2016

	France	Germany	Japan	UK	US
Currency and deposits	27.3	39.4	51.5	23.8	13.1
Shares and other equity	21.9	10.5	11.2	10.5	33.9
Securities other than shares	1.3	2.8	1.7	0.4	5.8
Mutual fund shares	5.7	10.1	5.3	4.5	11.2
Life insurance reserves	36.5	16.5	16.5	9.7	5.9
Pension funds	–	14.2	8.0	46.6	27.6

Source: OECD (nd accessed 2019)

In France, Germany and Japan, the proportions of household assets held in the form of currency and bank deposits are substantially higher than in the UK and US. In the US, around one-third of household assets are in the form of direct holdings of equities. This figure is substantially higher than for any of the other four countries, including the UK. A large proportion of the assets of mutual funds, life insurance companies and pension funds are held in equities; and household assets allocated to these vehicles represent substantial indirect holdings of equities. In the UK, the percentage share of pension funds in total household assets is especially high, and increasing over time.

Sources of finance to industry

Data for international comparisons of corporate financing patterns are less readily available. Corbett and Jenkinson (1996) report estimates for Germany, Japan, the UK and US during the period 1970–1989, based on flow of funds data from national income accounts, and figures derived directly from company accounts data. Table 1.4 reports Corbett and Jenkinson's estimates for net sources of finance to industry. These figures demonstrate that retained earnings were the most important source of finance in all four countries. For the two market-oriented systems, retained earnings accounted for over 97% of total finance raised in the UK, and over 91% in the US. US industry was more heavily reliant on bonds than any of the other three countries. In Japan bank finance accounted for a substantially larger share than in the two market-oriented countries. However, this pattern was not replicated in the other bank-oriented system, Germany, where bank finance accounted for a smaller share than in the UK and US.

Table 1.4 Net sources of finance to business, 1970–1989, percentages

	Germany	Japan	UK	US
Internal	80.6	69.3	97.3	91.3
Bank finance	11.0	30.5	19.5	16.6
Bonds	–0.6	4.7	3.5	17.1
New equity	0.9	3.7	–10.4	–8.8
Trade credit	–1.9	–8.1	–1.4	–3.7
Capital transfer	8.5	–	2.5	–
Other	1.5	–0.1	–2.9	–3.8
Statistical adjustment	0.0	0.0	–8.0	-8.7

Source: Corbett and Jenkinson (1996) Table I.

You might argue that these inconsistencies are sufficient for us to abandon the dichotomy between bank-oriented and market-oriented finance altogether. Nevertheless, for a significant number of phenomena, the distinction does appear to make sense. If we accept the validity of the distinction, a few further questions present themselves, which we will address in this unit and in Unit 2.

1. Why do these differences exist?

2. What are the implications of these differences for corporate governance structures?
3. Do different financial systems lead to different levels of economic growth?
4. What do banks do? What do capital markets do? Are they different from one another as regards the tasks they perform with respect to financial exchange?

Section 1.5 addresses the first question; Section 1.6 addresses the second and third questions; and in Unit 2 you will consider the last set of questions in this list.

1.5 Law, Politics and Financial Systems

In this section you will review two attempts to explain the differences between the financial systems of different countries. La Porta *et al* (1997) base their explanation on the origins of the legal system. In contrast, Rajan and Zingales (2003) argue that historical and political factors, including the influence of vested-interest groups of 'industrial incumbents', are more influential in determining the structure of a country's financial system.

1.5.1 Financial systems and law

A series of articles by a group of economists including Rafael La Porta, Florencio Lopez-de-Silanes, Andrei Shleifer and Robert Vishny attempts to link the differences between financial systems to differences in legal systems. Historically, most countries have developed legal codes based on the tradition of Roman civil law, or on that of Anglo-Saxon common law. The differences between the two systems are many, but some of the most salient ones are as follows.

Civil law is based on codified statutes: collections of laws issued by the authorities that attempt to define the legal obligations of individuals in their dealings with one another, and with the state. Civil law is often traced back to the code of laws compiled by the eastern Roman Emperor Justinian, during the 6th century AD. Similar legal systems with roots in these laws developed in various countries, leading to similar legal systems. Common law is case law, based on the decisions of judges that establish precedents, which might later form the basis for legislation. The common law system originated in orders or writs issued by the English monarchy to adjudicate in legal cases. As the number of complainants increased over time, courts were eventually established to hear cases and devise remedies, often based on the application of precedents established by earlier cases.

Most English-speaking countries including the UK and US, and many former British colonies, have adopted common law. Continental European countries, and a number of important non-European countries, by contrast, follow in the civil law tradition. Civil law countries can be subdivided into those that follow the French, German and Scandinavian models. French civil

law countries include Belgium, Italy, Netherlands, Portugal and Spain, and the major Latin American countries. German civil law countries include Austria and Switzerland, as well as Japan, South Korea and Taiwan. Scandinavian civil law countries are Norway, Sweden, Finland and Denmark.

La Porta *et al* argue that common law provides stronger investor protection than civil law. A secure legal environment reduces the risk of expropriation faced by investors as a consequence of agency problems. Investors face agency problems because they are unable to closely monitor the actions of entrepreneurs, businesses, or other borrowers, to whom they have provided finance. Accordingly, capital markets are broader, deeper and more robust, and are used more extensively as a conduit for the flow of funds, in common law countries where investor protection is stronger.

La Porta *et al* examine different aspects of this argument with a range of statistical and econometric analyses, using data for a sample of 49 countries. To quote one set of headline figures, common law countries have 35 listed firms per one million population on average, compared to 10 for the French civil law countries, 17 for the German civil law countries, and 27 for the Scandinavian countries. Generally speaking, the hypothesis of weaker investor protection in civil law countries is supported by the econometric analysis. The hypothesis of greater reliance on capital markets in common law countries is also supported.

Reading 1.5

La Porta *et al* (1997) 'Legal determinants of external finance'. *Journal of Finance*.

Please now read 'Legal determinants of external finance' by La Porta, Lopez-De-Silanes, Shleifer and Vishny (1997). As you read the article, please write notes to enable you to answer the following questions.

- Why are the characteristics of a country's legal system important for the structure of the financial system?
- Do you agree that the type of legal system is decisive?
- How important is the quality of enforcement?

La Porta *et al* (1997) present a significant amount of empirical evidence in support of their main argument. However, they fail to explain what it is about civil law that has prevented the development of an equivalent level of investor protection as common law systems. Could this situation be remedied by passing better laws? Or is there some underlying feature of the civil law system that inhibits the development of more business-friendly law? La Porta *et al* speculate that the level of trust might be important. However, difficulties would still remain in measuring trust, and in explaining its relevance to the development of the legal system.

1.5.2 The influence of incumbent coalitions

Focusing on similar questions to La Porta and his colleagues, Rajan and Zingales (2003) provide an alternative account of why financial systems

develop the way they do. Their point of departure rests on a number of stylised facts.

- Immediately prior to the outbreak of World War I (WWI) in 1913, financial systems in general were more developed than at any other time before the late 1990s. Stock markets played an important role in many countries, with the number of listed companies per million people at a similar level as in 1980.
- Several countries whose financial systems were among the most advanced in 1913, including Germany, France and Russia, did not retain a leading position throughout the 20th century. These three countries were ahead of the US at the beginning of the century, but fell far behind after World War II (WWII). In 1913, France's ratio of stock market capitalisation to GDP was twice as large as that of the US: this is not consistent with the hypothesis of La Porta *et al* that France's civil code is less friendly to business than US common law.
- Indicators of financial development, such as the ratio of bank deposits to GDP, the number of equity issues, the number of companies listed, and the ratio of stock market capitalisation to GDP, show that financial development in the 20th century was not continuous. These indicators dropped sharply after 1913; they began to recover at some time between 1930 and 1950; they then increased slowly, and only returned to their earlier, higher levels towards the end of the century.

In attempting to explain these patterns, Rajan and Zingales point out that while financial development offers benefits for the economy as a whole, not everybody is a winner. Vested interest groups may have an interest in blocking the development of financial markets. Specifically, large established industrial firms, or 'industrial incumbents' can finance new projects out of earnings (as most established firms do) without accessing external capital markets. Even when their business does not generate sufficient earnings to finance desired investments, incumbents can use the collateral from existing projects, and draw on their established reputations, to support borrowing. Bank lending does not require a sophisticated financial system: even within a primitive system, banks will lend willingly against collateral. Due to their privileged access to finance, industrial incumbents enjoy a positional rent, or excess profit. Anyone else who starts a promising business either has to sell out to an incumbent, or solicit an incumbent's support to access finance. In this manner, not only do incumbents earn rents from the markets in which they operate; but they also appropriate most of the returns from new ventures. (Rajan & Zingales, 2003: p. 18)

Incumbent industrialists and bankers obtain rents or excess profits from the opacity of underdeveloped financial systems. They may be expected to display at least passive resistance to financial development, whenever political circumstances allow. In periods of economic openness, a virtuous circle of economic liberalisation and financial development may occur; but WWI and the Great Depression of the early 1930s provided two very different shocks. In WWI, the role of governments expanded dramatically,

and the demands of labour for a share of social wealth became hard to ignore. Free trade recovered after the war, but the Depression highlighted the inconsistencies and unpredictable nature of free trade and laissez-faire. After WWII, many countries settled for a less open and more heavily regulated set of commercial and financial arrangements. This protectionist stance was less extreme in the US than in other parts of the world. Many countries only moved from protectionism towards deregulation and liberalisation after the collapse of the Bretton Woods system in the early 1970s.

Reading 1.6

Please now read Rajan and Zingales (2003) The great reversals: The politics of financial development in the twentieth century. As you read this article, please write notes to enable you to answer the following questions.

- Rajan and Zingales propose an alternative account of financial development in the 20th century. What are the main features of this account?
- In your opinion, is this account compatible with the hypotheses of La Porta *et al*? Justify your answer.

Rajan & Zingales (2003) 'The great reversals: The politics of financial development in the twentieth century'. *Journal of Financial Economics*.

1.6 Bank-oriented versus Market-oriented Financial Systems

Whether a country has a bank-oriented or a market-oriented financial system influences how the economy operates, and how its companies are financed. This section compares the two systems with respect to several distinct functions:

- risk sharing
- corporate governance
- dissemination of information
- debt restructuring and the resolution of firms in financial distress.

1.6.1 Risk sharing

In this section we will focus on the extent to which risk sharing is performed more effectively in bank-oriented or market-oriented financial systems. You will study risk management in the banking sector in detail in Unit 3. And in Unit 2 you will examine how banks assist households to smooth their consumption over time.

Financial systems play an important role in risk sharing, with financial markets being well positioned to perform this function. Mainstream finance theory suggests that the main objective of financial markets is to improve risk sharing. This can happen in a number of ways. For instance, the standard theory of risk diversification requires that investors exchange assets among themselves such that each holds only a small amount of any asset. Diversification reduces the risk of the investor's entire portfolio without lowering its expected return. Furthermore, financial markets allow trading of risk among different types of investors such that risk lovers bear

more risk than risk-averse investors. Allen and Gale (1997) refer to this type of risk sharing as *cross-sectional risk sharing* because it is achieved by exchanging risk in financial markets at a certain point in time. If markets are perfect, no transaction costs arise, and the same information is available to all investors, then financial markets can achieve cross-sectional risk sharing efficiently. On the other hand, markets cannot provide insurance against macroeconomic shocks that affect all assets in a similar manner.

Optional Reading 1.1

Allen and Gale (2001), Chapter 6, provides further discussion of risk sharing in bank-oriented and market-oriented financial systems. However, this is an optional reading.

Risks that cannot be diversified at any point in time can be diversified over time, through *inter-temporal* risk sharing. Allen and Gale (1997) propose a hedging strategy in which risks can be spread across generations with heterogeneous experiences. This is referred to as 'intergenerational risk sharing'. Another strategy may involve the accumulation of assets to reduce fluctuations in consumption over time. With inter-temporal risk sharing, investors accept lower returns than the market can offer in good times and obtain higher returns than the market can offer in bad times. Long-lived financial institutions such as banks can allocate inter-temporal risk and smooth consumption over time by holding large stocks of safe assets, provided they do not face fierce competition from financial markets. If competition is fierce, in a market-oriented system, banks may not be able undertake this role of inter-temporal risk sharing.

Allen and Gale (1998) investigate whether the market-oriented systems are better placed than bank-oriented systems to fund the development of new technology. The central feature of their analysis is that investors have diverse opinions about the effectiveness and profitability of new technologies or industries. Allen and Gale argue that a market oriented-system offers advantages in funding new industries. Markets involve many investors participating directly in making the decision to invest. Provided that the costs of acquiring information are low, investors can gather information, and those that anticipate high profits will provide finance.

In a bank-oriented system, investors delegate the function of acquiring information to an intermediary, in an attempt to economise on information costs. When there is a diversity of opinion about the new industry, there is likely to be disagreement between the investors' decision and the decision taken by the delegated intermediary. If the probability of disagreement is high, then providers of finance will withdraw their money and new industries can find themselves cut off from finance or at least under-funded. Investors anticipate that they will disagree with the delegated monitor, and decide to acquire information themselves.

Accordingly, intermediaries do not function well when there is a diversity of opinion. An implication of this model is that market-oriented systems are

better at funding new industries, whereas bank-oriented systems are better at financing mature industries where there is less divergence in views about profitability, and how the firms should be managed.

In summary, with respect to cross-sectional risk sharing, markets and intermediaries seem to be equally successful, but inter-temporal risk sharing may be achieved more effectively by financial intermediaries than by markets. Financial markets may be better placed to fund firms intending to pioneer new technologies, where there is a diversity of opinion over the probability of success.

1.6.2 Corporate governance

The financial system can play an important role in corporate governance. A financial system can sometimes be classified according to whether intermediaries or markets have a dominant influence on corporate governance. It is widely believed that in a bank-oriented system, the stock market plays a relatively small role in exercising control over enterprises. In Germany, for example, banks play an important role in monitoring and exerting control over firms' decisions through direct mechanisms such as membership of firms' supervisory boards. The equity market is less important. In the UK and US, on the other hand, stock markets play a leading role both in financing industry, and in monitoring and controlling listed companies. Directors (managers) take decisions driven by the shareholders' requirement that the share price and stock market value of the firm increases at a rate that meets their expectations.

The market for corporate control

Many economists argue that the stock market is best placed to provide effective governance mechanisms that improve the efficiency of firms and lead to an efficient allocation of resources. The market for corporate control is the market in which the controlling ownership of a company changes hands through mergers and acquisitions (M&A). Linking managers' compensation to stock market performance is a mechanism used in a market-oriented system to reduce agency problems that arise due to the separation of ownership from management.

Some stock markets, especially in the US and the UK, are an important facilitator for M&A (takeovers, both friendly and hostile). The classic interpretation of the stock market's role is that portfolio owners' choice of shares is based on information about enterprises that is fully reflected in the price of their shares. If an enterprise is inefficient it will be 'punished' by a low share price, which makes the cost of capital high for the enterprise, and makes it vulnerable to a takeover by owners who can install more efficient directors.

However, there are doubts about the effectiveness of hostile takeovers as a mechanism for corporate control. Grossman and Hart (1980) argued that existing shareholders would free-ride on the raiders who plan to capture the

increase in the value of the firm, and prevent the takeover from proceeding. Other critics have pointed out that takeovers that might be beneficial are hindered by the fact that once a bid is announced, other raiders can jump in and try to acquire the targeted firm. The firm that initially incurred the costs to identify the target is not able to recover these costs; consequently, raiders are deterred from initiating bids. Resistance by a target firm's board of directors can make the costs of a hostile takeover prohibitively high.

Monitoring and control of enterprises

In the 20th and 21st centuries, the level of M&A activity has been highly cyclical, especially in the market-oriented financial systems of the UK and US. Empirical evidence raises doubts as to whether takeovers have generally led to improved performance by the acquired company, or the bidder. In contrast, many countries lacking an active market for corporate control have experienced impressive and sustained economic growth. In view of the lack of a market for corporate control in Germany, Japan and many other Asian economies, some economists have suggested that agency costs in these countries are lower because financial intermediaries closely monitor and control firms.

Monitoring involves establishing arrangements in which the bank obtains information about the enterprise's profits and other financial aspects of its performance. Consider these examples.

- A commercial bank that handles the deposit accounts of an enterprise, as well as lending to the enterprise, has information about the company's cash flow from its deposit records, and some knowledge of the quality of the enterprise's management. Traditionally, British commercial banks have monitored loans, especially overdrafts, in this manner, without special conditions being attached to the loan. Syndicated lending, by several banks, to large companies makes this form of monitoring less effective.
- Restrictive covenants stipulated in the loan contract may oblige the borrower to maintain the company's financial ratios (e.g. gearing and liquidity) within acceptable ranges, and regularly disclose relevant financial information. Commercial banks in the UK, US and in other countries use such contracts extensively, to constrain the borrower's activities and minimise default risk.
- Another type of arrangement is more far-reaching. The bank can monitor the company through close connections between borrower and lender, which gives the lender a degree of control. For example, the bank may handle the issue of new shares on the company's behalf; the bank may own shares (equity) in the company; and the bank may sit on the board of directors or a higher, supervisory, board.

In Japan, monitoring and control are achieved through the development of long-term relationships between banks and firms, ownership of debt and equity by banks, and their willingness to intervene if the firm encounters difficulties. In Germany, universal banks hold large proportions of voting

equity, and are represented on boards. In the UK, investment banking was undertaken by merchant banks, which were separate from commercial banks for much of the 20th century. It has been widely argued that concentrated shareholdings, and monitoring by financial intermediaries that prevails in banking systems such as those of Germany and Japan, help to overcome the agency problems created by the separation of ownership from control.

Review Question 1.1

What are the strengths and weaknesses of a bank-oriented financial system for the monitoring of firms?

Banks' control and monitoring of firms may be more effective than that of the stock market because ownership of equity by banks may be more highly concentrated than that exercised by large numbers of unconnected shareholders. If a single shareholder owns the firm, there are strong incentives to maximise the firm's value. When ownership is dispersed and no single shareholder holds a large stake, the incentive to monitor is weak. On the other hand, the effectiveness of banks as outside monitors has been questioned. The close relationship between the bank and the firm might lead to a situation in which the bank monopolises information, and uses its market power to extract excess and unwarranted profits (rents) from the firm (Hellwig, 1991). The firm finds it difficult to switch to other finance providers, allowing the bank to charge higher interest rates on its loans. Managers of firms and banks might even collude to limit the power of outsiders to influence the firm's operations, against the interests of minority shareholders.

1.6.3 Dissemination of information

The acquisition of information and its use to allocate funds efficiently constitutes an important, if not the most important, function of a financial system. It is generally believed that a market-oriented financial system is better than a bank-oriented system in the provision of information. The large number of publicly-listed firms, and tight disclosure rules, imply that plentiful information is made available in a market-based system. Financial analysts, who follow closely the performance of publicly-listed firms, and obtain information from private sources, contribute further to the flow of information. This information should be reflected in stock prices, which provide signals for an efficient allocation of resources between different enterprises.

In simple models, stock markets allocate resources efficiently if, for a given risk, the prices of shares correctly reflect the expected profitability of the issuing companies. If a company's future profits are expected to increase, portfolio owners should have a high demand for its shares, raising the share price relative to current profits, and making the company's cost of capital

low. The low cost of capital should encourage investment in capital goods. Therefore the stock market plays a role in ensuring that capital is allocated to companies that are expected to be able to produce goods or services profitably. This account is based on two key assumptions:

- share prices accurately reflect expectations about future profits
- expectations about future profits are based upon all available information.

The Efficient Markets Hypothesis (EMH) is at the core of this view. This hypothesis is studied in detail in the *Corporate Finance* module. The EMH suggests that prices of shares on the stock market always reflect all available information about the economic fundamentals. In a landmark paper, Fama's (1970) definition of an efficient market elegantly states the connection between the EMH and the role of the stock market (capital market) in allocating resources.

> The primary role of capital markets is the allocation of ownership of the economy's capital stock. In general terms, the ideal is a market in which prices provide accurate signals for resource allocation: that is a market in which firms can make production-investment decisions and investors can choose among the securities that represent ownership of firms' activities under the assumption that security prices at any time 'fully reflect' all available information. A market in which prices always fully reflect available information is called efficient.
>
> Source: Fama (1970) p. 383.

The empirical evidence on the EMH is mixed. But many economists believe that a market-oriented financial system is superior to a bank-oriented system in information acquisition and dissemination due to the availability of stock-price information. However, the acquisition of information is a costly activity; and prices therefore are never perfectly informative or 'informationally efficient', as they would be in the extreme case of costless information under the EMH. Consider the following puzzle. Assume that information is costly to acquire. If information is fully revealed by prices, then no one can earn abnormal returns. But without abnormal returns, no one has any incentive to collect costly information. And if no one collects information, prices cannot fully reflect all available information. The paradox is resolved by noting that information acquisition is worthwhile until the extra return that an investor could gain by acquiring costly information is offset by the cost of acquisition. If information costs are low, then markets should approach full informational efficiency.

In bank-oriented financial systems, financial intermediaries are a key source of information. Due to information asymmetries between borrowers and lenders, the screening and monitoring of borrowers by lenders plays a crucial role. The question as to whether a bank-oriented system is better able to provide information than a market-oriented system depends on its ability to cope with information asymmetry by screening and monitoring. Two lines of argument support the benefits of bank-based finance.

In Unit 2 you will examine a model of delegating monitoring developed by Diamond (1984), which suggests that banks benefit from economies of scale in the provision of information. In a world of asymmetric information, borrowers know the true returns achieved by their investment projects once the project has been completed; but lenders do not have this information unless they monitor the borrower. The moral hazard problem is that in the absence of monitoring, the borrower has an opportunity to understate the true return and default on repayment of the loan. If every lender monitors, there is duplication of monitoring effort. Each lender seeks to free-ride by relying on someone else to monitor. The end result is that no monitoring takes place. This problem can be avoided if lenders delegate monitoring responsibility to a financial intermediary.

Boot and Thakor (1997) examine three types of informational problems:

1. incomplete information about future projects that is of relevance for firm valuation and real investment decisions within firms
2. the moral hazard problem that arises when a borrower has an incentive to apply borrowed funds to a riskier project than was disclosed to the lender when the loan was granted
3. uncertainty about whether this form of moral hazard will be encountered.

Problem 1 in this list is most efficiently resolved in a market-oriented financial system in which individual lenders compete with each other. Problems 2 and 3 in the list are most efficiently resolved by coordination between lenders to form a bank.

A long-term client relationship between a bank and its customers facilitates screening and monitoring. For example, a bank with representation on a company's board is able to acquire a considerable amount of information about the company's investment projects. Financial intermediaries may be able to tackle the free-rider problem which arises when lenders or investors do not incur the costs of gathering information, but gain the benefits when information is gathered by others. Mishkin (1995) expresses the free-rider problem as follows.

> Suppose that you have just purchased information that tells you which firms are good and which are bad. You believe that this purchase is worthwhile because you make up the costs of acquiring this information, and then some, by purchasing the securities of good firms that are undervalued. However, when our savvy (free-riding) investor Irving sees you buying certain securities, he buys right along with you, even though he has not paid for any information. If many other investors act as Irving does, the increased demand for the undervalued good securities will cause their low price to be bid up immediately to reflect the securities' true value. As a result of all these free riders, you can no longer buy the securities for less than their true value. Now that you will not gain any extra profits from purchasing the information, you realize that you never should have paid for this information in the first place. If other investors come to the same realization, private firms and individuals may not be

> able to sell enough of this information to make it worth their while to gather and produce it. The weakened ability of private firms to profit from selling information will mean that less information is produced in the marketplace.
>
> Source: Mishkin (1995) p. 214.

How does a bank solve this free-rider problem? Banks make private loans, which are not traded in the open market. If the lending policy of a bank is not observable to outsiders, either because the bank does not disclose information about its customers, or because borrowers do not disclose their sources of funding, no one is able to free-ride on the bank's acquisition of information.

1.6.4 Debt restructuring and resolution

Markets and banks can also be distinguished on the basis of flexibility after the two parties have entered into a loan agreement. It is often argued that banks establish a long-term relationship with their borrowers, so it is easier for banks to renegotiate a loan. This should be compared to the cost of restructuring the corporate bonds that the borrower would have issued if it borrowed from financial markets. If a borrowing firm becomes financially distressed, the bank has the incentive to rescue the firm and restructure its finances in order to maintain the value of its private information, which would be destroyed if the borrower is liquidated. Investors in corporate bonds do not have the same incentive because they will not have invested in acquiring private information.

Some authors have argued that banks' ability to deal with their borrowers' financial restructuring is beneficial for the allocation of resources, and for the economy as a whole. If a distressed firm's finances can be restructured, as an alternative to liquidation, the firm's long-term projects may ultimately be successful. A *credible commitment* ensures that additional funds will be forthcoming when required. In a theoretical context, a debt contract does not cover every possible contingency, so renegotiation can represent an improvement in the sense that it can complement incomplete contracts.

However, the possibility of renegotiation can introduce a moral hazard problem: borrowers know that they will be provided with additional funds by the bank, which wishes to maintain the value of its investment in acquiring information, and the borrower may decide to undertake risky projects or reduce effort in controlling costs. Renegotiation may mean that banks end up financing unprofitable projects for a long time, in the mistaken belief that they will ultimately be profitable.

When firms are financed via capital markets, renegotiation of contracts becomes more complex. Transaction costs are higher because of the large number of contracting lenders (bondholders). There is also a free-rider problem: every bondholder hopes another bondholder will come to the rescue of the lender. Such difficulties suggest that markets may destroy good projects that would be successful if contracts could be renegotiated.

1.7 Conclusion

This unit sets the scene for the topics that you will study in the rest of this module. We have identified the key characteristics of the financial systems that have evolved in different countries, and drawn a crucial distinction between bank-oriented and market-oriented financial systems. In a bank-oriented financial system, indirect finance is the predominant channel for the flow of funds between surplus and deficit sectors of the economy: surplus households lend their funds to financial intermediaries in the form of deposits, and intermediaries provide finance to deficit firms in the form of loans. In market-oriented financial systems, direct finance is the predominant channel: firms issue equity and debt securities that are either purchased by households, or by institutional investors such as pension funds or mutual funds on the households' behalf. The increasing practice of securitisation, and the movement towards disintermediation more generally, indicate that the bank-orientation or market-orientation of a financial system is not fixed once and for all: instead, the boundaries and relationships between different parts of the financial system are subject to change over time.

In comparing the financial systems of different countries, the contrast between bank-oriented and market-oriented systems provides a useful starting point, but only as a description, and not as an explanation for the evolution of different systems in different countries. Among attempts to provide such an explanation, La Porta and colleagues emphasise the role of the legal system, and in particular the level of legal protection that is provided to investors. Rajan and Zingales stress the importance of historical and political influences, including the negative influence of rent-seeking industrial incumbents, on the development of financial systems. An evaluation of the effectiveness of bank-oriented and market-oriented systems in performing key tasks suggests that banks may enjoy several important advantages. Banks may be capable of managing risk more effectively; banks may be capable of playing a stronger role in corporate governance than dispersed individual shareholders; banks may be able to overcome the free-rider problem that may inhibit the collection of information needed to monitor borrowers in a market-oriented system; and banks may be capable of taking a longer-term view than market participants of the viability of a borrower's investment project, or of the solvency of the borrower.

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