CHAPTER 1

The value of the financial system

LEARNING OUTCOMES

This opening chapter provides an overview of the role of the financial system and briefly describes the main categories of markets, instruments and institutions. By the end of this chapter the reader should be able to:

- outline the character and importance of the main financial markets and instruments;
- explain the key roles played in a modern society by the financial products, markets and institutions;
- describe the relative standing of the major financial centres;
- discuss the changes that have taken place in the way financial services are provided;
- define and illustrate some key financial terms, such as primary market and over-the-counter.

When we switch on the evening news it is not long before there is a report about the financial markets or those institutions that provide financial services. Perhaps it is the Greek or UK governments straining to reduce public expenditure so that they do not have to borrow so much in the bond markets – politicians make pained pronouncements that they do not have any choice because the *markets* are putting so much pressure on them. Perhaps it is an announcement that workers are to receive much lower pensions than first promised because share prices have declined for years. Perhaps a rise in interest rates is hurting business borrowers and young families with mortgages. Or, perhaps, a few home owners in the US cannot repay their debt which, through a chain reaction, leads to the downfall of some mighty banks and threatens worldwide depression.

You do not need me to tell you that financial markets touch the lives of us all, each and every day, from the efficiency of the credit card system to the raising of finance to build a new high-speed rail line. But perhaps you *do* need me to explain how it is that movements in financial markets flow through the system to impact on you. What are the mechanisms at play? What are the different types of financial instruments that people put their money into? What do all the bankers and other financial services workers do with their time?

This chapter explains the importance of the modern financial system by outlining the role of the main markets and institutions. Financial markets and institutions have a major role to play in channelling funds from those with a surplus looking for a return on their money to those in need of investment funds to, say, grow their business or buy a family home. In a well-functioning financial system, funds can flow easily and at low cost from savers to those with a productive use for the money. The increases in wealth we have seen over the past 100 years in most parts of the globe are in no small part due to the development of highly effective financial markets and institutions. Indeed, we can go so far as to say that one of the major reasons that some countries have failed to grow out of poverty is that they have not yet created a properly functioning mechanism for mobilising the savings of their citizens so that they can be used for investment in productive assets such as factories within their country.

The impact of these markets on our lives

We will first look at a number of financial markets and illustrate the impact they have on ordinary people's lives. The markets are:

- the bond markets;
- the share markets;
- the money markets;
- the foreign exchange markets;
- the derivative and commodity markets.

We will also look at the impact of banking.

Bond markets

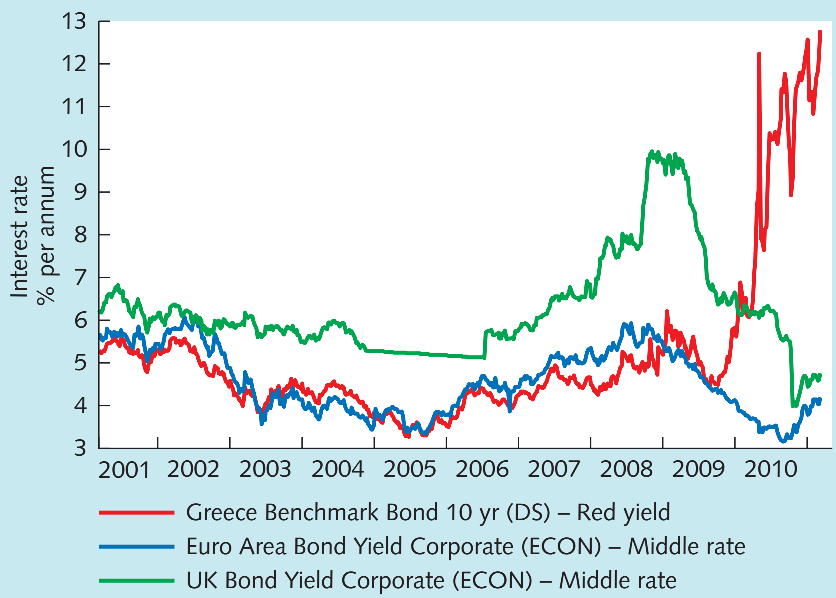
Companies often need to borrow money so that they can build useful things such as factories and research establishments, for instance stem cell or cancer drug laboratories. One way for them to borrow is to produce a legally binding document, a bond, that states that the company will pay interest for, say, ten years and a capital sum at the end to whoever buys the bond. This is an attractive way for people, pension funds and others to obtain a return on their savings. It is made even more attractive by the fact that the lender does not have to keep their money tied up in the bond for the full ten years, but can sell it to other investors in an active market for bonds. The buyer of the bond may be willing to pay the same as the sum paid by the original owner to obtain the promise of future interest, or they may be willing to pay more or less – much depends on current going rates of return for that type of bond given its risk and anticipated inflation.

Thus a **bond** is merely a document which sets out the borrower's promise to pay sums of money in the future – usually regular interest plus a capital amount upon the maturity of the bond. Many European bond markets are more than three centuries old and during that time they have developed very large and sophisticated sub-markets encompassing government bonds (UK government bonds are called **gilts**, for example), **corporate bonds** (issued by companies), local authority bonds and international bonds, among others.

Exhibit 1.1 shows the rates of interest typical, but relatively safe, corporate bond issuers had to pay over the period 2001–2011. It shows the interest rates payable if the promises to pay regular interest and the capital sum were in euros: the blue line. The green line shows the rate of return if the borrowing (and payments of interest and capital) was done in pounds. Notably, the sterling borrowers paid higher interest rates than the eurozone borrowers – this is mostly because of higher UK inflation expectations at the time of issue than for eurozone countries. The chart also shows the interest rates payable by the Greek government when it sold bonds denominated in euros (the red line). In most years it paid lower interest rates than the typical low-risk euro corporate borrower, but in 2011 we see a dramatic spike in interest rates demanded by lenders to induce them to place their hard-earned savings into Greek government debt. Most Greek companies had to pay more than the government to borrow because they were seen as even more of a risk. This meant that they could not afford to borrow to finance many of the investment projects that they would normally undertake, which contributed to a deep recession and rioting on the streets.

In the UK case, bond investors were very worried in 2008 and 2009 that a high proportion of borrowing companies were going to go bust and as a result they demanded interest rates as high as 10 per cent. Note that these are the rates for the most highly respected (relatively safe) companies; more risky borrowers had to pay much more. As a result of this high cost of finance many plans to build factories, offices, shops, etc. were shelved and thousands of people were made redundant.

Exhibit 1.1 Yields on corporate bonds issued in pounds and euros, and yields on Greek government debt, 2001–2011



Source: DATASTREAM

Source: *Financial Times*, 11 March 2011, p. 20. Reprinted with permission.

Equity markets

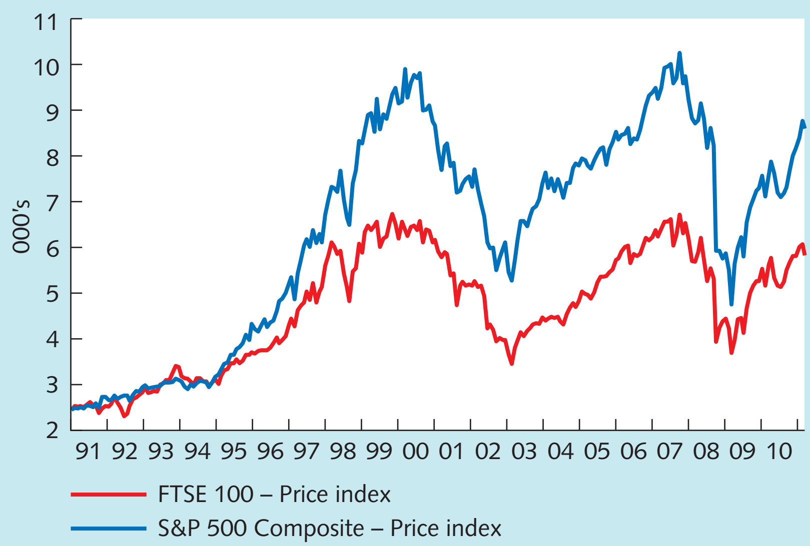
An important innovation that has allowed much faster growth in people's economic well-being has been the principle of **limited liability** for companies. This means that if you or I buy a share in a company and then the company runs into difficulty and its creditors are chasing after it for payment, those creditors cannot come to us as shareholders and demand what the company owes them. So, if the firm cannot pay, we are not forced into selling our houses, cars, etc. simply because we have supplied share capital to a business to allow it to grow. It is different with sole traders and partnerships where the individuals are liable for the debts of the business.

As a result of limited liability millions of us now own **shares** (also called **equity** and **stock**) in companies and are thereby entitled to receive dividends that might flow from the profits that the firm generates.[1] We are owners of the company and can vote directors on or off the board to try to appoint a team that will act in our best interests. These days most of these shares are not actually held directly by individuals but through various savings schemes, such as pension funds and insurance savings schemes (e.g. endowments linked to mortgages).

All major economies now have share markets, which encourages savers to put money into companies because once the shares have been sold by the company to raise the money it needs, they can then be sold on to other investors in the market should the original investor wish to raise some cash or invest elsewhere. Thus stock exchanges have been important sources of long-term capital for tens of thousands of companies.

Exhibit 1.2 shows that the market value of UK and US shares has been something of a roller-coaster ride over the past 20 years (UK shares are represented by the FTSE 100 index, comprising the largest 100 companies on the market; US shares by the S&P 500 index, representing the largest 500 companies). Market prices shot up in the late 1990s as investors became excited by the new economy shares of the dot.com revolution. When equity markets are booming it can have an effect on people's confidence. They go out and spend more. They invest more in factories, machinery, etc. Thus the economy can get a lift. Conversely, when people feel poorer because

Exhibit 1.2 UK and US share market price movements, 1990–2011 (with the US S&P 500 index rebased to the UK FTSE 100 in 1991)



Source: DATASTREAM

[1] Dividends are a share of the profits paid out to shareholders.

their investments are down and they are told that their pensions will not have enough value left in them to support them in their old age they become more cautious spenders and investors, resulting in declining demand – as was the case in 2008 and 2011. While stock market movements are not the only causes of economic fluctuations, they are contributors.

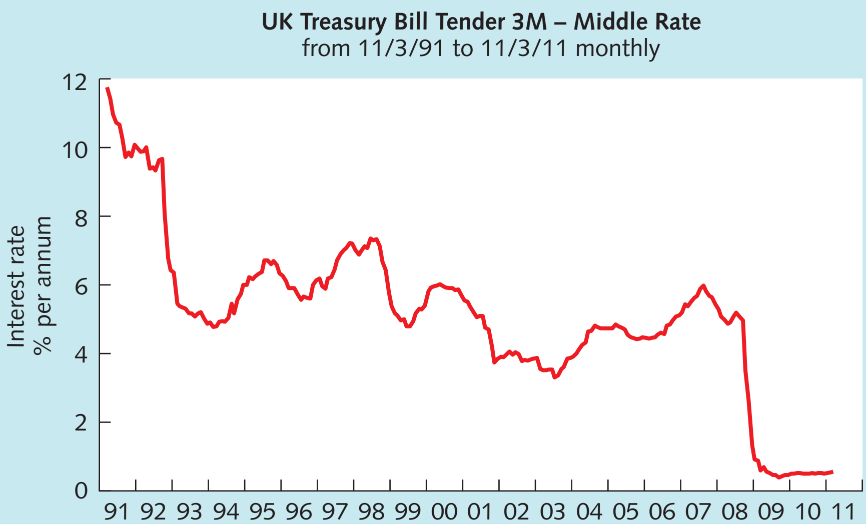
Money markets

You and I might, from time to time, need to borrow money for a short while, say on a credit card or via an overdraft. Similarly, large organisations such as companies, governments and banks often need to borrow money for a period of a few days or weeks. They tend not to borrow on credit cards and may find overdrafts inconvenient or relatively expensive. This is where the **money markets** come in – they allow companies, etc. to issue instruments that promise to pay a sum of money after, say, 30 days if the buyer pays an amount now for owning that right. Obviously the amount the lender puts down at the beginning of the 30 days is less than what they collect at the end, thus an effective interest rate is charged. We say that the money markets are **wholesale markets** because they involve large transactions each time – £500,000/€1,000,000 or more. They enable borrowing for less than one year. Banks are particularly active in this market – both as lenders and as borrowers. Large corporations, local government bodies and non-banking financial institutions also lend when they have surplus cash and borrow when short of money.

The largest borrowers in these markets are usually governments. They issue **Treasury bills**, which do not carry an explicit interest but merely promise to pay a sum of money after a period. The most popular length to maturity is three months. The UK government is the biggest issuer in Europe, with billions of pounds worth sold almost every week of the year. The US government also sells a tremendous volume of these instruments, much of which have been bought by the Chinese government as it invests its savings around the world – it is poorly diversified because it has put such a high proportion of its portfolio in US Treasuries.

Exhibit 1.3 shows the interest rates that the UK government had to offer investors to induce them to buy a 91-day promise – that is a promise that in 91 days a fixed amount of money will be paid to the holder of the security. These are rates the government paid for fresh issues in each of the months going back 20 years. Note that even though the bills last for a mere three months, the

Exhibit 1.3 The interest rate the UK government offered investors in its various three-month Treasury bills issued each month 1991–2011



Source: DATASTREAM

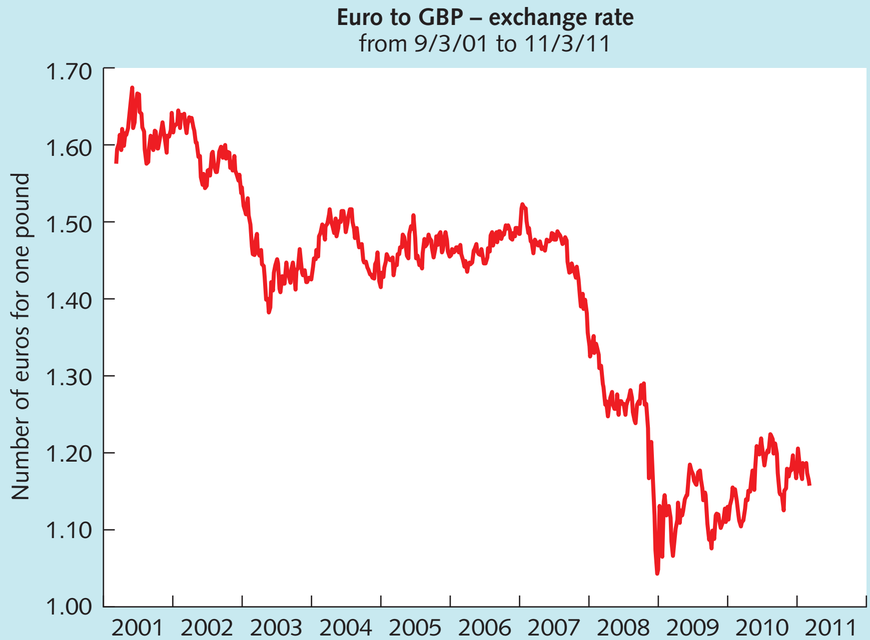
interest rates shown are annualised up. So, if an investor receives 0.2 per cent for lending for 91 days, the chart will show a figure of 0.8 per cent. You can see that normally the government pays around 4–6 per cent per year to borrow using three-month loans. In an economy where inflation is around 1.5–3 per cent this allows the lender to the UK government to obtain a real return (above inflation) of around 1–3 per cent. (In the early 1990s the UK had much higher inflation rates.) However, in the wake of the financial crisis the Bank of England significantly reduced interest rates for short-term borrowing for all sorts of instruments and this had a knock-on effect on the interest rate the government had to pay to borrow for three months – it has come all the way down to around 0.5 per cent (around 0.125 per cent for three months). This lowered the borrowing cost for the government, which is just as well given that it borrowed so much.

However, the extremely low interest rates throughout the financial system, including bank account savings rates, produced howls of complaint from savers, who received interest significantly less than inflation. Much of this saving is done through pension funds and so people's pension pots were made smaller.

Foreign exchange markets

Individuals and businesses often need to exchange foreign currency, sometimes purely for pleasure, a holiday say, but mostly for business. For example, a French company building a manufacturing plant in the US exchanges euros for dollars. Today the foreign exchange markets are enormous, with transactions worth $4,000 billion taking place every day. The movements of exchange rates can make a big difference to ordinary people and businesses alike. Consider Manuel, who borrowed €300,000 to buy an apartment in London early in 2006. At that time he could get £1 for every €1.50 – *see* **Exhibit 1.4** – and so he could buy a £200,000 apartment. Unfortunately, in 2009 he needed to sell his apartment to raise cash to support his Spanish business. Not only was Manuel hit by the UK recession, he was doubly unfortunate because at 2009 exchange rates (€1.10 to £1) he could obtain only €220,000, even if he sold the apartment for £200,000. He made an €80,000 loss simply

Exhibit 1.4 The exchange rate between euros and UK pounds, 2001–2011



Source: DATASTREAM

because currency rates shifted. As you can see from the chart, they do this quite a lot. The markets and institutions have devised various tools to help individuals like Manuel as well as large organisations such as Unilever reduce the impact of foreign exchange shifts.

Foreign exchange (forex, FX) markets are simply markets in which one currency is exchanged for another. They include the **spot market**, where currencies are bought and sold for 'immediate' delivery (in reality, one or two days later), and the **forward markets**, where the deal is agreed now to exchange currencies at some fixed point in the future. Also currency futures and options and other forex derivatives are employed to hedge (manage) risk and to speculate. Chapter 12 is devoted to the FX markets.

Derivative and commodity markets

Imagine you are a cocoa farmer in Ghana. You would like to have certainty on the price you will receive for your cocoa when you harvest it six months from now. An organisation such as Cadbury would also like to know the cost of its cocoa six months from now so that it, like the farmer, can plan ahead and avoid the risk of the spot price at that time being dramatically different from what it is now.

Fortunately financial markets have evolved to help both the farmer and the chocolate maker. Perhaps the farmer could sell a **future** in cocoa at, say, \$3,000 per tonne. A future is a contract to undertake a transaction (e.g. sell cocoa) at a point days, weeks or years from now, at a price agreed now. For example, a future is the right to buy something (e.g. currency, shares, bonds, cocoa, wheat) at some date in the future at an agreed price.

If the farmer sells a future, this guarantees to the farmer that if he delivers the cocoa in six months he will get the price agreed. Perhaps the chocolate maker could also enter the futures markets on one of the organised exchanges to give them certainty over the price that they will pay. Each side is legally obliged to go through with the deals they signed up to – and just to make sure, the exchange requires that each of them leaves money at the exchange so that if the futures price should move against them they will not be tempted to walk away from the deal because if they did they would lose this 'margin' they have at the exchange.

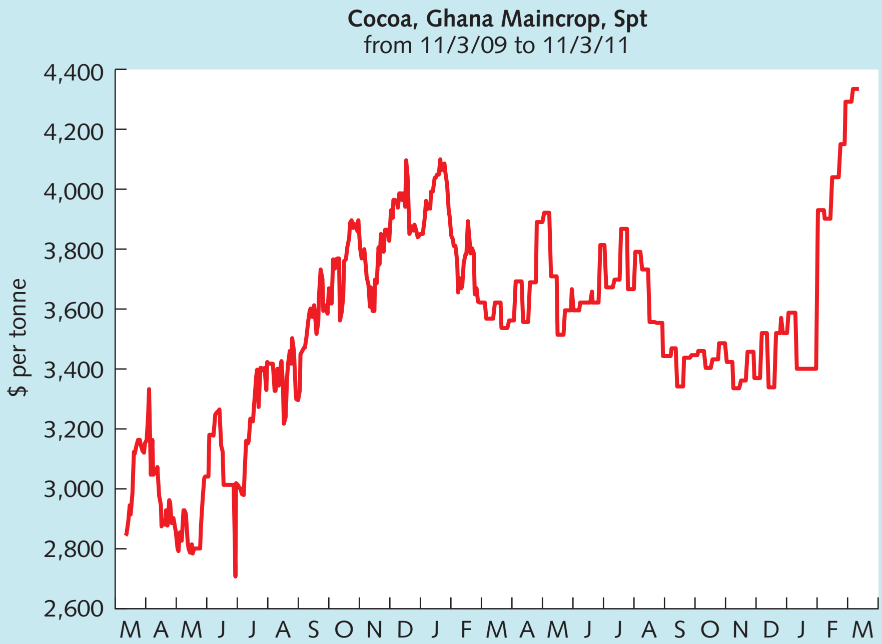
You can see from **Exhibit 1.5** that the futures price of cocoa fluctuates over time and therefore you can understand why buyers and sellers might be concerned about the price moving to an unprofitable level for them and thus why they lock in a futures price in one of the futures markets.

A **derivative** is a financial instrument whose value is derived from the value of other financial securities or some other underlying asset because it grants a right to undertake a transaction. This *right* becomes a saleable derived financial instrument. Futures have been illustrated, but there are other derivatives. For example, an option gives the purchaser the right, but not the obligation, to buy or sell something at some point in the future, at a price agreed now. The performance of the derivative depends on the behaviour of the underlying asset. Companies can use these markets for the management and transfer of risk. They can be used to reduce risk (hedging) or to speculate. We will look at these possibilities in Chapters 10 and 11.

Banking

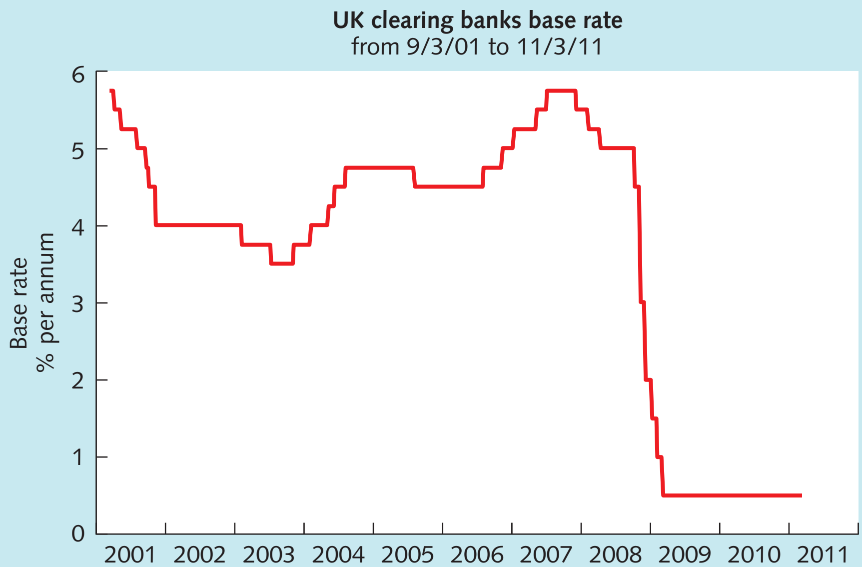
A major element in the fabric of the financial system we have not yet discussed is banking. Banks perform many functions, but the main ones are taking deposits, providing loans and allowing people and organisations to make payments to each other. The interest rates bank charge can have a profound effect on people's lives. The rate that the borrower pays is often linked to the bank base rate. Some borrowers may pose a low risk to the bank and so may be charged, say, 2 per cent over the base rate. More risky borrowers pay base rate plus, say, 7 per cent. **Exhibit 1.6** shows that the average base rate set by UK banks over the ten years to 2011 was subject to significant fluctuations. In 2009 the base rate fell to an all-time low rate of 0.5 per cent and so we had remarkably low interest rates charged by the banks. The actions by central banks around the world to lower interest rates had the desired effect, as many families with mortgages or businesses with loans were saved when base rates were pushed down. If base rates had remained at 5 per cent we would have seen much higher house repossession rates, widespread business failure and mass unemployment.

Exhibit 1.5 The futures price of cocoa, March 2009 to March 2011



Source: DATASTREAM

Exhibit 1.6 UK bank base rates, 2001–2011



Source: DATASTREAM

Importance of different financial centres

People and institutions involved in financial market activity tend to be concentrated in a few major centres around the world. Every six months the largest 75 financial centres are rated and ranked by drawing on both statistical data and assessments from finance service professionals in an online survey. The results are published in the *Global Financial Centres Report*, sponsored by Qatar Financial Centre Authority and produced by the think-tank Z/Yen Group.

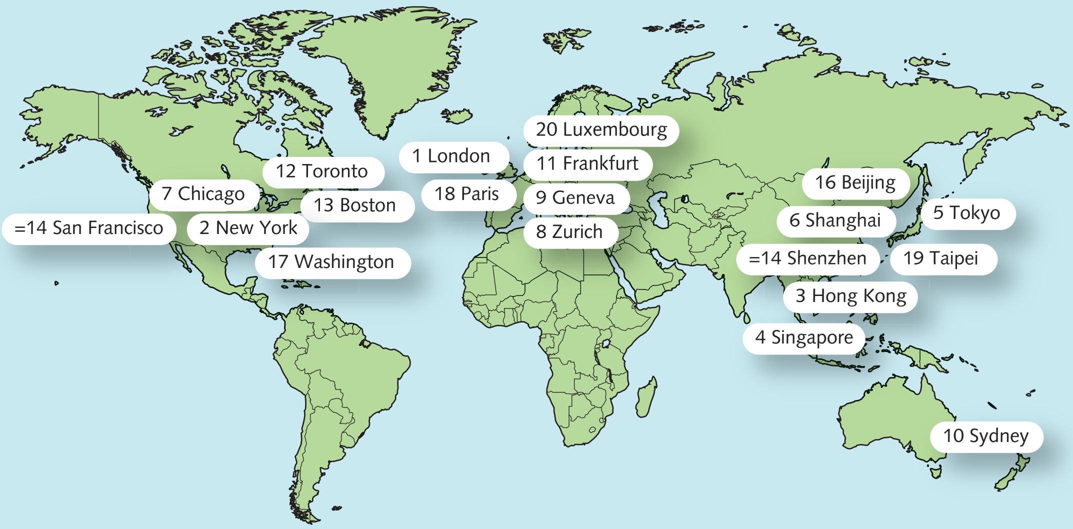
The five groups of factors considered are shown in **Exhibit 1.7**. As you can see, the centres are rated not simply by volume of business (such as share turnover) and other quantitative data but by a number of other factors too. So, for example, evidence about a fair and just business environment is drawn from a corruption perception index and an opacity index. In all, 75 indicators have been used, including office rental rates, airport satisfaction and transport. Around 33,000 financial services professionals (e.g. bankers, asset managers, insurers, lawyers) respond to the online questionnaire in which they are asked to rate on a number of factors those centres with which they are most familiar. To ensure that there is no bias towards their home base, the assessments given on their own centre are excluded from the calculations.

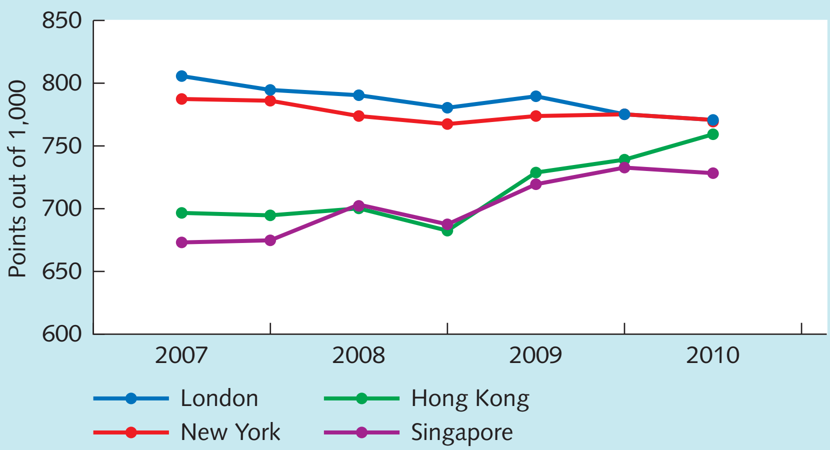
Exhibit 1.7 The five groups of instrumental factors for judging the quality of a financial centre

People	• The availability of skilled personnel, the flexibility of the labour market, business education and the development of 'human capital'.
Business environment	• This is regarded as the most important factor in judging the competitiveness of a financial centre. It covers regulation and tax rates, levels of corruption, economic freedom and the ease of doing business. Fair and just business environment. Government support for the finance sector. Transparency and predictability of regulation.
Market access	• Access to international financial markets. Volume and value of trading in equities and bonds as well as the clustering effect of having many firms involved in the financial services sector together in one centre.
Infrastructure	• IT and transport infrastructure. The cost and availability of buildings and office space. Access to suppliers of professional services such as legal services.
General competitiveness	• The concept that the whole is 'greater than the sum of the parts' considers overall competitiveness levels of cities and how cities are perceived as places to live. Culture and language.

The map in **Exhibit 1.8** shows the ranking of the top 20 financial centres. There is very little difference in the ratings for London and New York. The survey respondents believe that these two centres work together for mutual benefit; a gain for one does not mean a loss for the other. The position of Hong Kong has improved immensely in recent years so that it is now a mere ten points (out of 1,000) behind London. It is one of only a handful of genuine global financial centres. Singapore is expected to join this trio soon. Between them, for example, the top four centres account for 70 per cent of all equity trading.

Exhibit 1.8 **The top 20 global financial centres**





Source: www.atlapedia.com

Remarkably, Shanghai has now entered the top ten. When financial professionals were questioned about which financial centres are likely to become more significant in the next few years, the top five centres mentioned were all Asian – Shenzhen, Shanghai, Singapore, Seoul and Beijing.

Exhibit 1.9 describes the relative importance of Hong Kong and Shanghai as places for companies to raise money from shareholders by issuing shares on these stock markets for the first time. This is called an **initial public offering (IPO)**. The article illustrates the international trend in raising finance these days, with Mongolian, French and Italian companies listing alongside a great number of mainland Chinese firms.

Exhibit 1.9

HK eclipses rivals as the place to list

FT

Robert Cookson

The up-to-$20.5bn initial public offering of AIG's prized Asian business is the talk of the town in Hong Kong, but alongside that juggernaut there are dozens of other companies flocking to list in the city.

So great is the wave of listings that Hong Kong is on track for the second year in a row to eclipse its rivals Shanghai, London, and New York as the world's biggest centre for IPOs.

But as Hong Kong stock prices surge to within striking distance of their 2009 peak, sucking in more and more investors, there are concerns among some fund managers that the market is getting too hot.

So far this year some 53 companies have raised a combined $23.9bn from IPOs in Hong Kong, according to data from Dealogic. That figure dwarfs the $10.7bn raised in New York and $7bn in London.

With AIG alone set to raise at least $13.9bn from the listing of AIA, its Asian business, Hong Kong is now on track to trump its rivals Shanghai and Shenzhen in terms of deal volume in 2010.

"Hong Kong is now firmly established as a major global listing venue – it's the place any issuer has to seriously look at," Mr Lam says.

International companies are being attracted by the prospect of selling shares at higher prices than could be achieved in either their home markets or the traditional capital-raising centres of London or New York.

Prada, the Italian luxury goods company, is considering a possible listing in Hong Kong next year, following hard on the heels of French perfume house L'Occitane, which raised more than $700m there in April.

On Tuesday, the first Mongolian company to sell shares in Hong Kong completed a $650m offering, pricing its shares in the middle of the target range set by advisers JPMorgan and Citi.

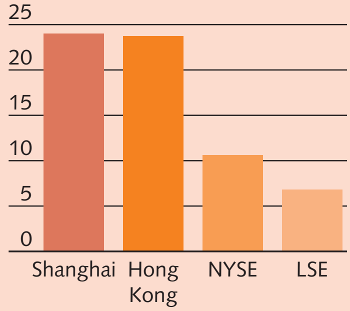
Yet Mongolian Mining Corp and other foreign issuers still make up only a fraction of the deals on the HK stock exchange. Mainland Chinese companies remain the dominant force and are attracting strong – and at times frenzied – demand from both international fund managers and Hong Kong retail investors.

"Investors are risk on," says David Chin, co-head of Asia investment banking at UBS. In particular, companies that would benefit from the rise of the Chinese consumer were "selling like hotcakes", he says.

Boshiwa, a children's clothing retailer likened to Mothercare of the UK, is a good example. The Chinese company, which raised $320m in Hong Kong in September, saw its shares rocket 41 per cent on their trading debut last week. On Wednesday, shares in Boshiwa were trading at a price of 72 times last year's earnings.

"China is clearly rebalancing the economy away from one that is predominantly export and manufacturing-driven towards a more domestic consumption-driven one," said Kester Ng, JPMorgan's co-head of equity capital and derivatives markets for Asia. "Companies that are linked to the Chinese consumption theme have done really well."

IPOs
Value of new listings, year to date ($bn)



Source: *Thomson Reuters Datastream; Dealogic*

This point has not been lost on Chinese companies themselves.

Last week, China Medical System, which makes pharmaceutical products, listed in Hong Kong having raised $129m in an IPO that priced at the top of the target range. On the same day as its Hong Kong debut, it de-listed its shares from London's junior Aim market.

The company is not alone. West China Cement, a cement producer that has long complained that its share were undervalued in London, made the same jump to Hong Kong from Aim in August. And in yet another case, Sihuan Pharmaceutical Holdings, a Chinese drugmaker that de-listed from the Singapore stock exchange last year, seeking to raise up to $700m in a Hong Kong IPO.

Source: *Financial Times*, 7 October 2010, p. 34. Reprinted with permission.

If we focus on Europe we find that while London dominates, Zurich and Frankfurt are also regarded as global leaders, with rich environments for different types of financial services. Geneva is a specialist in wealth and asset management (running funds invested in shares, etc. for individuals and institutions) but is not a fully diversified centre, lacking a number of financial services. Amsterdam, Dublin and Paris have strong international connections but lack the depth to be global leaders.

If we break down the overall results to specific aspects of financial services then the following are the top five financial centres:

- Asset management (e.g. mutual funds, unit trusts, pension funds):
  - First – London
  - Second – New York
  - Third – Hong Kong
  - Fourth – Singapore
- Banking:
  - First – New York
  - Second – Hong Kong
  - Third – London
  - Fourth – Singapore
- Professional services (e.g. legal, accounting):
  - First – London
  - Second – New York
  - Third – Hong Kong
  - Fourth – Singapore
- Wealth management (advice and investing for wealthy people):
  - First – London
  - Second – Geneva
  - Third – New York
  - Fourth – Toronto

Following the financial crisis of 2008/2009 – caused, as many believe, by the financial sector (especially the banks) – the UK chancellor in his April 2009 budget imposed a 50 per cent super tax on bank bonuses. Some feared that this might cause mass relocation of financial services providers to other centres, such as New York, Zurich, Hong Kong, etc., but many of the governments in these other centres also plan to crack down on bankers and so the UK has not seen an exodus.

In the US financial market activity is split between a number of centres, with New York dominant in equity and bond trading as well as investment banking, Chicago big in derivatives and commodities, and Boston and San Francisco enjoying high reputations for asset management. While the US centres are particularly strong on domestic security issuance – e.g. the largest corporate and government bond market in the world – the US is often outshone by London on international financial services. London, being the dominant centre in the European time-zone centre, has kept its position as a principal centre in international financial markets, as can be seen from **Exhibit 1.10**.

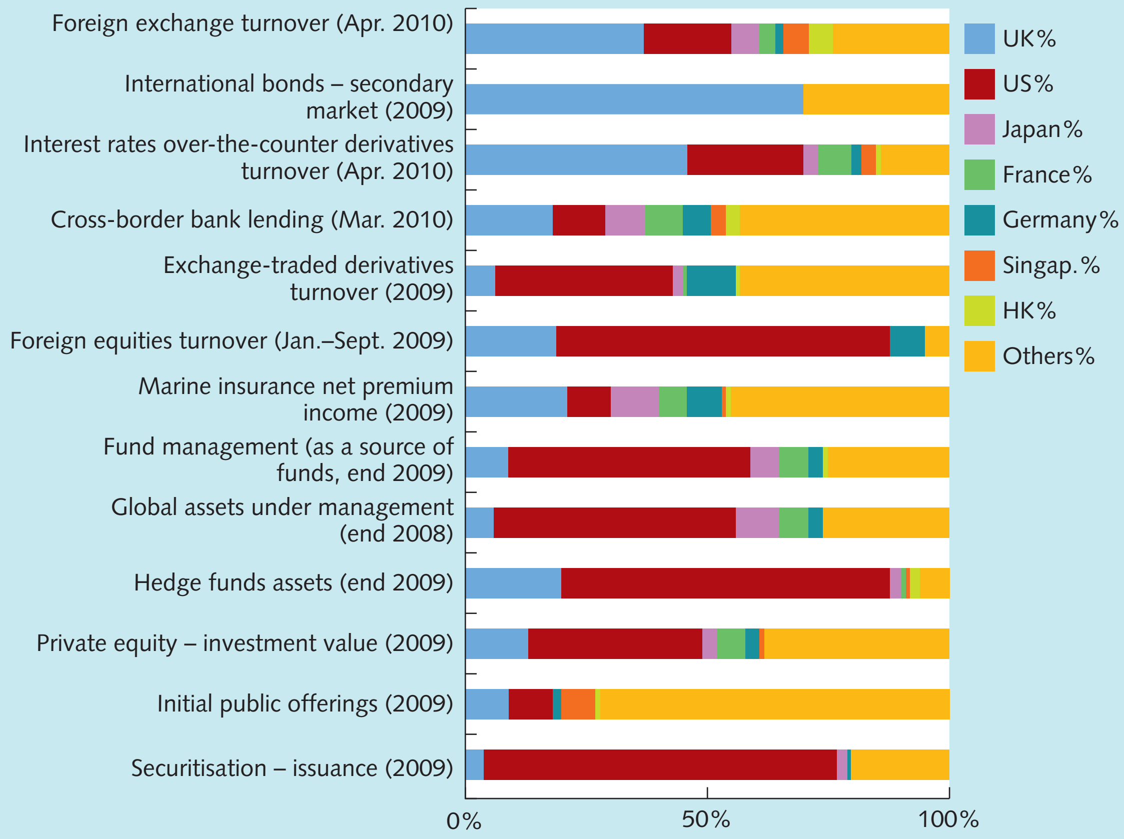
Note that while Hong Kong and Singapore are highly ranked in terms of having the right infrastructure and attractiveness for financial services to grow, as we saw in the Z/Yen survey, they still have a relatively small share of world activity in most categories. Japan, France and Germany have more activity than the Asian centres in a number of segments.

World without money or financial institutions

Let us imagine how financial transactions began in the distant past, when things were much simpler.

> Mr Carter needs materials to build his carts, and has a surplus of grain. Mr Carter asks his friend and neighbour Mr Woodcutter to let him have some timber in exchange for grain. Mr Woodcutter agrees and both men are happy.

Exhibit 1.10 **Share of world financial market activity**



Source: TheCityUK estimates.

Some years down the line, Mr Carter needs some more timber, but does not currently have anything to exchange. Mr Woodcutter says Mr Carter can have the timber now, but when the carts are traded he wants his timber (the principal) back plus some extra (the interest). The nucleus of a financial system is born.

As the world developed and people travelled and traded further afield, this simple barter-based system was insufficient. Money appeared on the scene and has enjoyed a major part in the world's evolution ever since. Money has great appeal because people need something into which all goods and services received can be converted. That something will have to be small and portable, it will have to hold its value over a long period of time and have general acceptability. This will enable people to take the commodities given in exchange for, say, labour and then avoid the necessity of, say, carrying bushels of wheat to market to exchange them for bricks. Instead, money could be paid in exchange for labour and taken to the market to buy bricks. Various things have been used as a **means of exchange**, ranging from cowry shells to cigarettes (in prisons particularly), but the most popular used to be a metal, usually gold or silver. Now it is credit, debit cards and other forms of electronic transfer as well as notes and coins.

However, the advent of money did not provide a total solution.

Take the case of Farmer Cattleman. He wants to build a shed to protect his cows in bad weather but cannot afford it. He gets together with his fellow farmers and they pool their money to build the shed. Each farmer then has the right to use the shed for a set number of cows in proportion to the amount of money put in (they own shares in the enterprise). Farmer

> Cattleman, whose idea it was, on whose land the shed is now built and who puts in time to manage the shed, has the right to put extra cows in the shed to compensate for this, or he is paid in cash. Everybody is happy.

People with more money than they needed for everyday life looked round for opportunities to invest it in something safe and profitable. Banks helped to fill this need and were able to put the money to good use; they developed a system enabling people and businesses to borrow money. Constant expansion in the fledgling financial system gradually turned it into the complex global colossus it is today.

> Some years down the line, Farmer Cattleman's great, great grandson, Mr Craftsman, a clever chap, invents a machine. He wants to build lots of machines but has no money. None of his friends or fellow farmers has enough money for the project. However, his friend, Mr Broker, has a distant relative, Mr Moneybags, the landowner, in a neighbouring village who has lots of money. Introductions and negotiations are made, and the machines are soon in production. Mr Moneybags lends the money and makes an agreement whereby Mr Craftsman pays him interest, and if the project fails, Mr Moneybags takes possession of all machines and tools. Mr Moneybags also buys shares entitling him to a share of the profits and a share of the votes to control the enterprise. Mr Broker receives a free machine for his help.

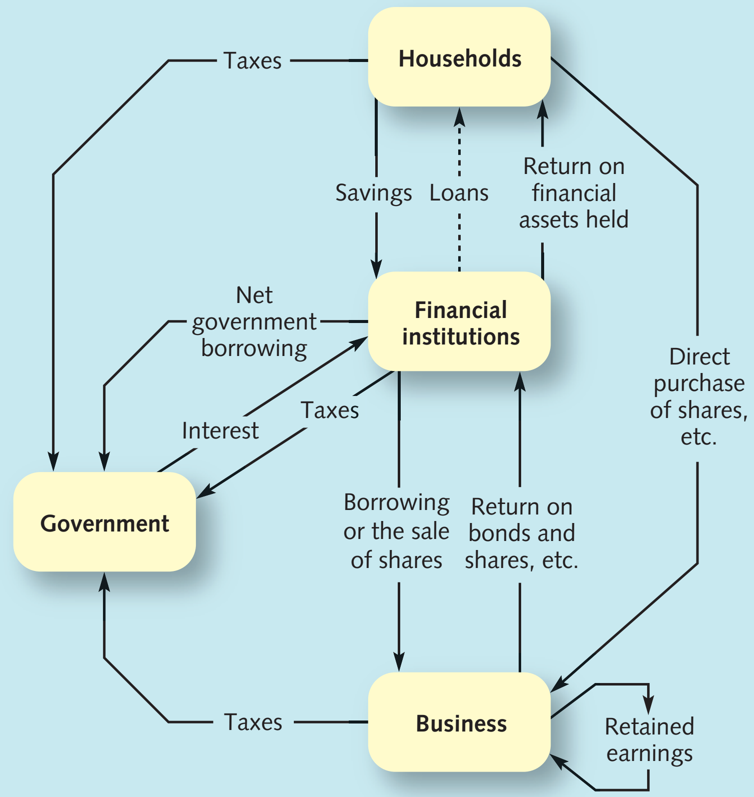
Financial intermediaries had arrived, and were able to put lenders and borrowers in touch with each other, for a 'consideration'. One man's surplus money could be put to use financing a local project, but as the industrial age appeared, it became obvious that no single person could provide the large amounts of finance needed; to build a railway, for example, requires vast sums of money accumulated from various lenders. The selling of shares, giving a right to a proportion of the profit and assets of the venture, was found to be a good solution – in addition to borrowing from banks and from bond markets.

A simple way to look at the way money flows between investors and companies is shown in **Exhibit 1.11**. Households generally place the largest proportion of their savings with financial institutions. These organisations then put that money to work. Some of it is lent back to members of the household sector in the form of, say, a mortgage to purchase a house, or as a personal loan. Some of the money is used to buy securities (e.g. bonds, shares) issued by the business sector. The institutions will expect a return on these loans and shares, which flows back in the form of interest and dividends. However, they are often prepared for businesses to retain profit within the firm for further investment in the hope of greater returns in the future. The government sector enters into the financial system in a number of ways. For example, taxes are taken from individuals and businesses; governments usually fail to match their revenues with their expenditure and therefore borrow significant sums from the financial institutions, with a need to return that money with interest. Exhibit 1.11 remains a gross simplification – it has not allowed for overseas financial transactions, for example – but it does demonstrate a crucial role for financial institutions in an advanced market economy.

Primary investors

Typically, the household sector is in financial surplus. This sector contains the savers of society. It is these individuals who become the main providers of funds used for investment in the business sector. **Primary investors** tend to prefer to exchange their cash for financial assets which (a) allow them to get back their money quickly should they need to, with low transaction costs, and (b) have a high degree of certainty over the amount they will receive back. In other words, primary investors like high liquidity and low risk. Lending directly to a firm with a project proposal to build a North Sea oil platform which will not be sold until five years have passed is not a high-liquidity and low-risk investment. However, putting money into a sock under the bed is (if we exclude the possibility of the risk of sock theft).

Exhibit 1.11 The flow of funds and financial intermediation



Ultimate borrowers

In our simplified model the **ultimate borrowers** are in the business sector. These firms are trying to maximise the wealth generated by their activities. To do this companies need to invest in capital equipment, in real plant and other assets, often for long periods of time. The firms, in order to serve their social function, need to attract funds for use over many years. Also these funds will be at risk, sometimes very high risk. (Here we are using the term 'borrower' broadly to include all forms of finance, even 'borrowing' by selling shares.)

Conflict of preferences

We have a **conflict of preference** between the primary investors wanting low-cost liquidity and certainty, and the ultimate borrowers wanting long-term risk-bearing capital. A further complicating factor is that savers usually save on a small scale, £100 here or €200 there, whereas businesses are likely to need large sums of money. Imagine some of the problems that would occur in a society which did not have any financial intermediaries. Here, lending and share buying will occur only as a result of direct contact and negotiation between two parties. If there were no organised market where financial securities could be sold on to other investors, the fund provider, once committed, would be trapped in an illiquid investment. Also, the costs that the two parties might incur in searching to find each other in the first place might be considerable. Following contact, a thorough agreement would need to be drawn up to safeguard the investor, and additional expense would be incurred obtaining information to monitor the firm and its progress. In sum, the obstacles to putting saved funds to productive use would lead many to give up and retain their cash. Those who do persevere will demand exceptionally high rates of return from the borrowers to compensate them for poor liquidity, risk, **search costs**, **agreement costs** and

monitoring costs. Thus few firms will be able to justify investments because they cannot obtain those high levels of return when the funds are invested in real assets. As a result, few investments take place and the wealth of society fails to grow. **Exhibit 1.12** shows (by the top arrow) little money flowing from saving into investment.

The introduction of financial intermediaries

The problem of under-investment can be alleviated greatly by the introduction of financial institutions (e.g. banks) and financial markets (e.g. a stock exchange). Their role is to facilitate the flow of funds from primary investors to ultimate borrowers at a low cost. They do this by solving the conflict of preferences.

There are two types of financial intermediation: the first is an agency or brokerage-type operation which brings together lenders and firms, the second is an asset-transforming type of intermediation, in which the conflict is resolved by the creation of intermediate securities which have the risk, liquidity and volume characteristics which investors prefer. The financial institution raises money by offering these securities for sale and then uses the acquired funds to purchase primary securities issued by firms.

Brokers

At its simplest an intermediary is a 'go-between', someone who matches up a provider of finance with a user of funds. This type of intermediary is particularly useful for reducing the search costs for both parties. Stockbrokers, for example, make it easy for investors wanting to buy shares in a newly floated company. Brokers may also have some skill at collecting information on a firm and monitoring its activities, saving the investor time. They also act as middlemen when an investor wishes to sell to another, thus enhancing the liquidity of the fund providers. Another example is the Post Office, which enables individuals to lend to the UK government in a convenient and cheap manner by buying National Savings certificates or premium bonds.

Asset transformers

Asset transformation is the creation of an intermediate security with characteristics appealing to the primary investor to attract funds, which are then made available to the ultimate borrower in a form appropriate to them. Intermediaries, by creating a completely new security, the **intermediate security**, increase the opportunities available to savers, encouraging them to invest and thus reducing the cost of finance for the productive sector. The transformation function can act in a number of ways.

- *Risk transformation* For example, instead of an individual lending directly to a business with a great idea, such as digging a tunnel under the English Channel, a bank creates a deposit or current account with relatively low risk for the investor's savings.

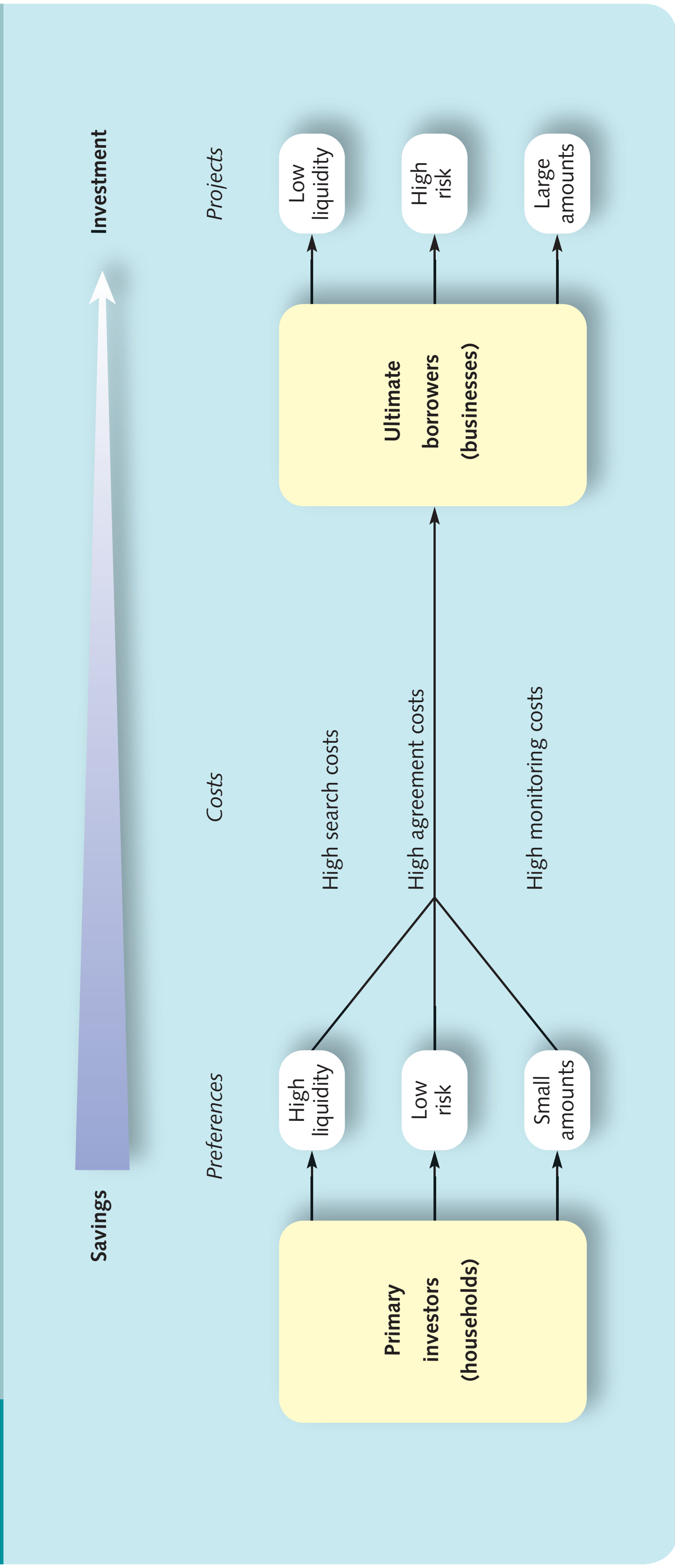
  Lending directly to the firm, the saver would demand compensation for the probability of default on the loan and therefore the business would have to pay a very high rate of interest which would inhibit investment.

  The bank acting as an intermediary creates a special kind of security called a bank account agreement. The bank intermediary then uses the funds attracted by the new financial asset to buy a security issued by the tunnel owner (the **primary security**), allowing the tunnel owner to obtain long-term debt capital.

  Because of the extra security that a lender has by holding a bank account as a financial asset rather than by making a loan direct to a firm, the lender is prepared to accept a lower rate of interest and the ultimate borrower obtains funds at a relatively low cost. The bank reduces its risk exposure to any one project by diversifying its loan portfolio among a number of firms. It can also reduce risk by building up expertise in assessing and monitoring firms and their associated risk.

  Another example of risk transformation is when unit or investment companies (see later in this chapter) take savers' funds and spread these over a wide range of company shares.

Exhibit 1.12 Savings into investment in an economy without financial intermediaries



- *Maturity (liquidity) transformation* The fact that a bank lends long term for a risky venture does not mean that the primary lender is subjected to illiquidity. Liquidity is not a problem because banks maintain sufficient liquid funds to meet their liabilities when they arise. You can walk into a bank and take the money from your account at short notice because the bank, given its size, exploits economies of scale and anticipates that only a small fraction of its customers will withdraw their money on any one day.

  Banks and building societies play an important role in borrowing 'short' and lending 'long'.
- *Volume transformation* Many institutions gather small amounts of money from numerous savers and repackage these sums into larger bundles for investment in the business sector.

  Apart from the banks and building societies, unit trusts are important here. It is uneconomic for an investor with, say, €50 per month, who wants to invest in shares, to buy small quantities periodically, due to the charges and commissions levied. Unit trusts gather together hundreds of individuals' monthly savings and invest them in a broad range of shares, thereby exploiting economies in transaction costs.

Intermediaries' economies of scale

An intermediary, such as a bank, is able to accept lending to (and investing in shares of) companies at a relatively low rate of return because of the economies of scale enjoyed compared with the primary investor. These economies of scale include:

- Efficiencies in gathering information on the riskiness of lending to a particular firm – individuals do not have access to the same data sources or expert analysis.
- Risk spreading – intermediaries are able to spread funds across a large number of borrowers and thereby reduce overall risk. Individual investors may be unable to do this.
- Transaction costs – they are able to reduce the search, agreement and monitoring costs that would be incurred by savers and borrowers in a direct transaction. Banks, for example, are convenient, safe locations with standardised types of securities. Savers do not have to spend time examining the contract they are entering upon when, say, they open a bank account. How many of us read the small print when we opened a bank account?

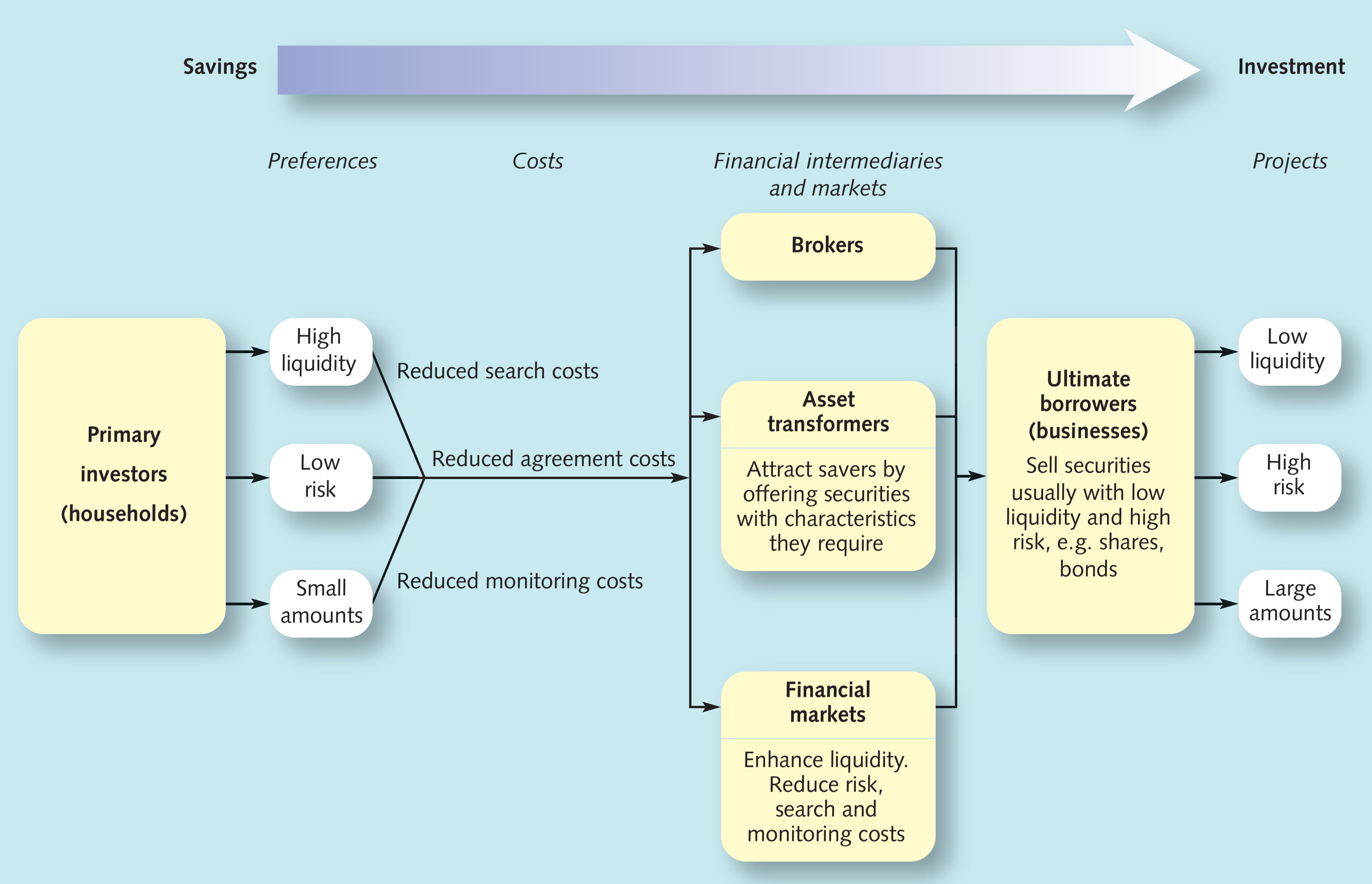
The reduced information costs, convenience and passed-on benefits from the economies of operating on a large scale mean that primary investors are motivated to place their savings with intermediaries. The effect of the financial intermediaries and markets are shown in **Exhibit 1.13**, where the flow of funds from savings to investment is increased.

Payment mechanisms

Another important role for financial intermediaries is to facilitate the transfer of money. Over time, money in the form of coins and notes has become a less useful means of transacting business. When larger sums are involved, it is simply not practical to use cash. During the twentieth century cheques became the most commonly used means of payment for individuals throughout the world, while companies used cheques, bills of exchange or bankers' acceptances to facilitate trade payments (*see* Chapter 5). Towards the end of the century, however, the electronic age brought innovation in the field of payments, so that now cheques are virtually redundant – in many countries, supermarkets and other stores no longer accept cheques as a form of payment, insisting on cash or debit or credit cards. In parts of Europe, including Germany, cheque usage has already been phased out and this was due to happen in the UK by 2018. However there is considerable resistance to this, as electronic payments are not always the best solution, especially for small traders and so there was a reprive for the UK cheque.

Many companies now pay employees and creditors, and receive payments, directly through their bank using the UK automated systems BACS (Bankers' Automated Clearing Services) or CHAPS (Clearing House Automated Payments System). After a slow start due to fears of fraud and lack of security, more and more people and companies use the telephone, the internet and smartphones for banking, which have the advantage of being quick and (hopefully) easy. In the financial world, paper transactions are becoming a thing of the past and corporate electronic banking is the norm.

Exhibit 1.13 Savings into investment in an economy with financial intermediaries and financial markets



Financial markets

Financial markets exert enormous influence over modern life – every country has some sort of financial market, from Afghanistan to Zimbabwe. A financial market such as a stock exchange has two aspects: there is the primary market, where funds are raised from investors by the firm, and there is the secondary market, in which investors buy and sell securities, such as shares and bonds, between each other. The securities sold into the primary market are generally done so on the understanding that repayment will not be made for many years, if ever, and so it is beneficial for the original buyer to be able to sell on to other investors in the secondary market. In this way the firm achieves its objective of raising finance that will stay in the firm for a lengthy period and the investor has retained the ability to liquidate (turn into cash) a holding by selling to another investor. In addition, a well-regulated exchange encourages investment by reducing search, agreement and monitoring costs – *see* **Exhibit 1.13**.

Growth in the financial services sector

The financial services sector has grown rapidly in the post-war period. It now represents a significant proportion of total economic activity, not just in the UK but across the world. Firms operating in the financial services sector have, arguably, been the most dynamic, innovative and adaptable companies globally over the past 40 years.

Some reasons for the growth of financial services in the UK

London has historically been the most important financial centre, ideally positioned at the heart of the British Empire and the industrialised world. London is open for business when the rest of Europe is active and when the Asian markets are still operating at the end of their trading day and the US is starting its working day. New York is London's biggest rival and overtakes London in many regards, e.g. size of the domestic bond and equity markets, but there is no doubt that London is the foremost financial centre in many areas. *See* **Exhibit 1.14** for some statistical highlights.

Exhibit 1.14 **City of London's position in international finance and business services**

- 70% of all eurobond turnover traded in London
- $450 billion of worldwide premium insurance income in the UK
- 112 million metal contracts per annum traded in London
- £3.7 trillion total funds under management in the UK
- $2.658 trillion pension fund assets under management
- £38 billion trade surplus generated by the UK financial services sector
- 43% global share in the 'over-the-counter' derivatives market
- 95% share of trading in the EU Emissions Trading Scheme
- 75% of Fortune 500 companies have London offices
- 249 foreign banks in London
- 606 foreign companies listed on the London Stock Exchange
- 18% of cross-border lending arranged in the UK, more than any other country
- 20% share of global hedge fund assets in the UK
- Leading western centre for Islamic finance, with 22 banks supplying Islamic financial services, five of which are fully Sharia compliant

Source: www.cityoflondon.gov.uk, 2010.

There are a number of reasons for the growth of the financial services sector in the UK. These include:

- *High income elasticity* As consumers have become increasingly wealthy the demand for financial services has grown by a disproportionate amount. Thus a larger share of national income is devoted to paying this sector fees, etc. to provide services because people desire the benefits offered. Firms have also bought an ever-widening range of financial services from the institutions which have been able to respond quickly to the needs of corporations.
- *International comparative advantage* One of the reasons that London maintains dominance in a number of areas is that it possesses a comparative advantage in providing global financial services. This advantage stems, not least, from the critical mass of collective expertise which it is difficult for rivals to emulate. In some industries, once a cluster of firms and personnel is established, their proximity allows them to be more efficient and learn from each other to improve their skills, deepen knowledge and specialise in tasks. This has happened in Silicon Valley with hi-tech and in the City with financial services. And, of course, London also has the prerequisites of a stable political and trustworthy legal system, no barriers to the flow of money and the English language.

Forty years of innovation

Since the 1970s there has been a remarkably proactive response by the financial sector to changes in the market environment. New financial instruments, techniques of intermediation and markets have been developed with impressive speed. Instruments, which even in the 1990s did not exist, have sprung to prominence to create multi- billion-pound markets, with thousands of employees serving those markets.

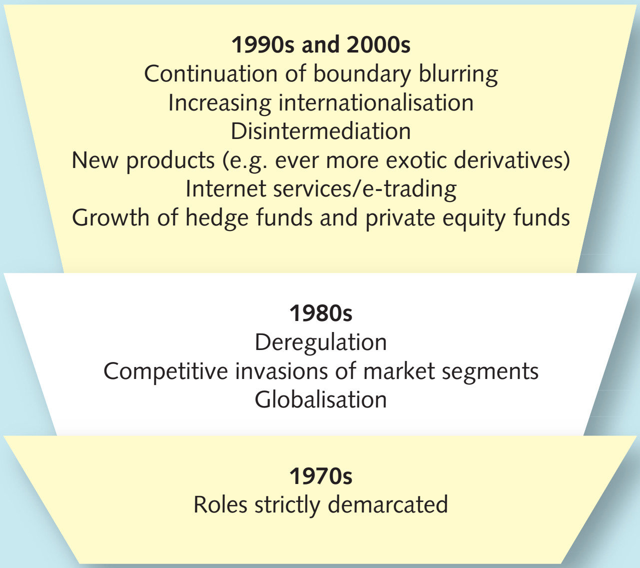
There has been a general trend towards deregulation and liberalisation for institutional investors, while recognising that individual investors need protection. Until the mid-1970s there were clearly delineated roles for different types of financial institutions. Banks did banking, insurance firms provided insurance, building societies granted mortgages and so on. There was little competition between the different sectors, and cartel-like arrangements meant that there was only limited competition within each sector. Some effort was made in the 1970s to increase the competitive pressures, particularly for banks. The arrival of large numbers of foreign banks in London helped the process of reform in the UK, but the system remained firmly bound by restrictions, particularly in defining the activities firms could undertake.

The real breakthrough came in the 1980s. The guiding political philosophy of achieving efficiency through competition led to large-scale deregulation of activities and pricing (*see* **Exhibit 1.15**). There was widespread competitive invasion of market segments. Banks became much more active in the mortgage market and set up insurance operations, stockbroking arms, unit trusts and many other services. Building societies, meanwhile, started to invade the banks' territory and offered personal loans, credit cards, cheque accounts. They even went into estate agency, stockbroking and insurance underwriting.

The London Stock Exchange was deregulated in 1986 (in what is known as the **Big Bang**) and this move enabled it to compete more effectively on a global scale and reduce the costs of dealing in shares, particularly for the large institutional investors. The City had become insular and comfortable in its ways, much like a gentlemen's club. Then, in 1986, in the face of serious competition from abroad, it became necessary to make the City more competitive and transparent if it was to continue to service the world's economy as it had done for many years. The introduction of electronic trading, along with the end of fixed-commission trading (an 'accepted rate' to charge rather than one competitively arrived at) and face-to-face dealing, and the sanctioning of foreign ownership of UK brokers successfully pushed the City into the modern era.

The 1970s and early 1980s were periods of volatile interest rates and exchange rates. This resulted in greater uncertainty for businesses. New financial instruments were developed to help manage risk, e.g. derivatives. Many derivatives are traded on LIFFE (the London International Financial Futures and Options Exchange), which has seen volumes rocket since it was opened in 1982. LIFFE, now called NYSE.Liffe, handles around €2 trillion worth of derivatives business every day. Likewise, the volume of swaps, options, futures, etc. traded in the informal over-the-counter market (i.e. not on a regulated exchange) – discussed later in the chapter – has grown exponentially.

Exhibit 1.15 Innovation in the financial sector

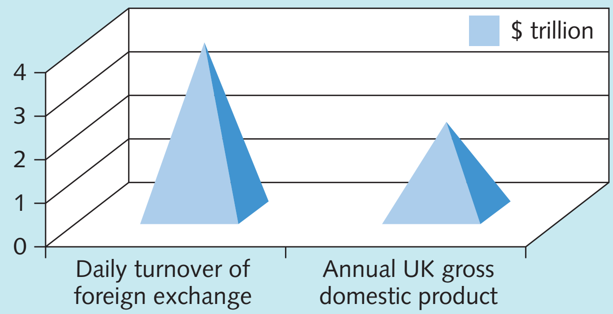


Through the 1980s the trend towards globalisation in financial product trading and services continued apace. Increasingly a worldwide market was established. It became unexceptional for a company to have its shares quoted in New York, London, Frankfurt and Tokyo as well as on its home exchange in Africa. Bond selling and trading became global and currencies were traded 24 hours a day. International banking took on an increasingly high profile, not least because the multinational corporations demanded that their banks provide multifaceted services across the globe, ranging from borrowing in a foreign currency to helping manage cash.

Vast investments have been made in computing and telecommunications systems to cut costs and provide improved services. Automated teller machines (ATMs), banking by telephone and internet, and payment by EFTPOS (electronic funds transfer at point of sale) are now commonplace. A more advanced use of technological innovation is in the global trading of the ever-expanding range of financial instruments. It became possible to sit on a beach in the Caribbean and trade pork belly futures in Chicago, interest rate options in London and shares in Singapore. In the 1990s there was a continuation of the blurring of the boundaries between different types of financial institutions to the point where organisations such as JPMorgan Chase and Barclays are referred to as *financial supermarkets* (or 'universal banks' or 'financial services companies') offering a wide range of services. The irony is that just as this title was being bandied about, the food supermarket giants such as Sainsbury's and Tesco set up banking services, following a path trodden by a number of other non-banking corporations. Marks & Spencer provides credit cards, personal loans and even pensions. Virgin Money sells life insurance, pensions and Individual Savings Accounts (ISAs) over the telephone. The internet has provided a new means of supplying financial services and lowered the barrier to entry into the industry. New banking, stockbroking and insurance services have sprung up. The internet allows people to trade millions of shares at the touch of a button from the comfort of their home, to transfer the proceeds between bank accounts and to search websites for data, company reports, newspaper reports, insurance quotations and so on – all much more cheaply than ever before.

The globalisation of business and investment decisions has continued making national economies increasingly interdependent. Borrowers use the international financial markets to seek the cheapest funds, and investors look in all parts of the globe for the highest returns. Some idea of the extent of global financial flows can be gained by contrasting the *daily* turnover of foreign exchange (approximately US$4 trillion) with the *annual* output of all the goods and services produced by the people in the UK (US$2.15 trillion) – *see* **Exhibit 1.16**. Another effect of tech-

Exhibit 1.16 Daily turnover of foreign exchange *v* UK GDP



Source: BIS and CIA World Factbook.

nological change is the increased mobility of activities within firms. For example, banks have transferred a high proportion of their operations to India, as have insurance companies and other financial firms.

Another feature of recent years has been the development of **disintermediation** – in other words, cutting out the middleman. So, for instance, firms wishing to borrow can bypass the banks and obtain debt finance directly by selling debt securities, such as bonds, in the market. The purchasers can be individuals but are more usually the large savings institutions, such as pension funds, insurance funds and hedge funds. Banks, having lost some interest income from lending to these large firms, have been raising the proportion of their income derived from fees gained by arranging the sale and distribution of these securities as well as *underwriting* their issue (guaranteeing to buy if no one else will). Hedge funds (free from most regulatory control) now account for a high proportion of financial market trading whereas they were barely heard of 15 years ago. Private equity funds, too, which invest in shares and other securities of companies outside a stock exchange, have grown tremendously over the last 20 years.

Debt and equity capital

Companies finance their businesses by raising capital in two main ways. First, they can borrow either by taking out loans or by issuing bonds. The rate of interest that they have to pay is decided by prevailing rates at the time, the standing of the company and the level of risk involved. For example, a stable, well-established firm with a good performance track record would be able to pay interest rates a fraction of a per cent higher than a bank's base rate or slightly above the rate at which very safe banks borrow money (this is the London Interbank Offered Rate (LIBOR), which is discussed in Chapter 5). A new company in a risky industry would have to pay a considerably higher rate. Debt has the advantage of the interest being a tax-deductible expense of running a business. Also, bonds can often be traded in an active secondary market and are therefore liquid investments for investors.

Second, they can raise capital by issuing *shares (equity)* in their company. By buying shares, shareholders own part of the company, and expect returns in the form of dividends paid out from the company's profits and from capital gains made when the shares rise in price. The same criteria apply as for debt: shareholders in well-established, well-performing companies will accept a lower rate of return than shareholders in a new risky venture who demand a higher return to compensate for the extra risk. The return must be commensurate with returns which could be obtained from other securities with the same level of risk. Historically, shares have offered a higher return to investors than government securities over the long run because all equities carry the risk of total loss, so the higher return is needed to encourage investment.

Primary and secondary markets

When shares, bonds or other financial instruments are issued for the first time and sold directly to investors (the primary market), the sales are managed by financial institutions such as investment banks which help decide the initial price and oversee the sale to the public. When a company sells its shares on a regulated exchange for the first time, this is known as the **new issue market** (**NIM**). The most common issue in the primary market is the **initial public offering**. When it is shares that are sold this is known as a **flotation**, where the shares are offered for sale to the public in new, young companies or well-established companies wishing to obtain funding for their company in the form of equity capital. Companies already listed on a stock exchange can also raise capital in this way through say, a **rights issue** – issuing further shares in their company to their current shareholders. The world's largest IPO was the 2010 floating on the Shanghai and Hong Kong stock markets of the Agricultural Bank of China, which raised $22.1 billion, despite its poor credit rating, and generated fees of nearly $250m for the coordinating group of banks, including Goldman Sachs, Morgan Stanley and Deutsche Bank.

Secondary trading enables the shareholder, bond holder, etc. to liquidate their shares (exchange them for cash) quickly, taking a profit (or loss), while the company's holdings of assets are not diminished because it is not forced to pay the security owners for their shares or bonds. Secondary markets include the stock markets of the world.

Exchange-traded and OTC markets

Exchange trading takes place on the myriad regulated share markets and other security exchanges round the world. There are regulated exchanges in bonds, derivatives, commodities, currencies and other securities. Stock exchanges publish accurate share prices for listed companies and make them available for wide dissemination. The exchanges are funded by a mixture of commission on trades (maybe 10p per deal), admission fees and annual charges for listings, and selling their information to interested parties. All companies listed on stock exchanges have to fulfil a number of statutory requirements and make public their financial reports. These rules are enforced by the exchange and other regulators to reassure investors about the quality of the issuer and the financial instrument.

The **over-the-counter (OTC)** market, also known as the *off-exchange market*, is trade in securities between two parties on a private basis, not on the recognised formal exchanges such as the London Stock Exchange, New York Stock Exchange, etc. The trades can be in shares, bonds, commodities or any other security. A major part of the derivatives market is traded off-exchange, where the flexibility of the OTC market allows the creation of tailor-made derivatives to suit a client's risk situation. Some shares, called unlisted stock, are traded OTC because the company is small and unable to meet stock exchange requirements. OTC trading can be a more risky activity than exchange trading, and there is little transparency in traded prices. For example, bond dealers, who stand ready to buy or sell company bonds in the secondary market, have the benefit of good knowledge about the trades taking place, but their customers (investors) usually do not know what deals were arranged with other customers and so do not know whether the prices they are paying or receiving are fair.

The financial institutions

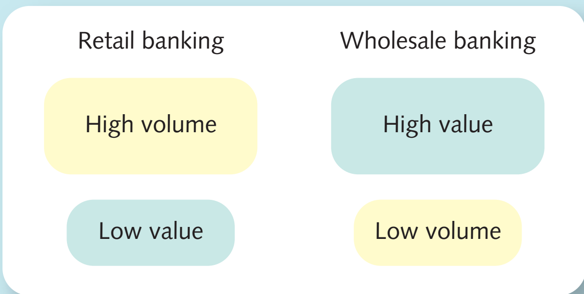
To help orientate the reader within the financial system and to carry out more jargon busting, a brief outline of the main financial service sectors and markets is given here. Entire chapters are devoted to them later in the book.

The banking sector

Retail and wholesale banking

Put at its simplest, the *retail banks* take (small) deposits from the public which are repackaged and lent to businesses and households. They also provide payment services. They are generally engaged in high-volume and low-value business, which contrasts with *wholesale* banking, which is low volume but each transaction is for a high value (*see* **Exhibit 1.17**). For example, wholesale banks obtain a great deal of the money they use from the sale of financial instruments in values of tens or hundreds of millions of pounds, euros, etc. The distinction between retail and wholesale banks has become blurred over recent years as the large institutions have diversified their operations. The retail banks operate nationwide branch networks and a subset of banks provides a cheque and electronic clearance system – transferring money from one account to another – these are the **clearing banks**. Loans, overdrafts and mortgages are the main forms of retail bank lending. The trend up until 2009 was for retail banks to reduce their reliance on retail deposits and raise more wholesale funds from the financial markets. But this has since been partially reversed as banks found wholesale funding less reliable than obtaining funds to lend from deposits in current or deposit accounts. Northern Rock is an example of a bank that became over-reliant on wholesale funding. When those short-term loans became due for payment in 2008 it found it could not obtain replacement funding. This caused its collapse.

Exhibit 1.17 Comparison between retail and wholesale banking



Investment banks

Investment banks concentrate on dealing with other large organisations, corporations, institutional investors and governments. While they undertake some lending, their main focus is on generating fee and commission income by providing advice and facilitating deals. This sphere is dominated by US, Swiss, UK and German banks – *see* **Exhibit 1.18**.

There are five main areas of activity:

- *Raising external finance for companies* These banks provide advice and arrange finance for corporate clients. Sometimes they provide loans themselves, but often they assist the setting up of a bank syndicate to make a joint loan or make arrangements with other institutions. They will advise and assist a firm issuing a bond. They have expertise in helping firms float their shares on stock exchanges and make rights issues. They may 'underwrite' a bond or share issue (this means that they will buy any part of the issue not taken up by other investors), thus assuring the corporation that it will receive the funds it needs for its investment programme.
- *Broking and dealing* They act as agents for the buying and selling of securities on the financial markets, including shares and bonds. Some also have market-making arms which quote prices at which they are willing to buy or sell from or to, say, a shareholder or a bond holder, thereby assisting the operation of secondary markets. They also trade in the markets on their own account and assist companies with export finance.

Exhibit 1.18 Top investment banks worldwide (2009)

Investment bank	Revenue (in $bn)	Net earnings (in $bn)	Assets under management (in $bn)
Goldman Sachs	45.2	13.4	871
JP Morgan Chase	100.4	11.8	1219
Morgan Stanley	24.74	1.7	779
Citigroup	80.3	–1.6	556
Bank of America	121	6.3	523
Barclays	31.8	10.3	1379
Lazard	1.53	–0.18	98
Credit Suisse	31.05	7.9	384
Deutche Bank	25.3	4.96	181
UBS	24.0	–1.9	159

Source: Balance sheet of respective banks.

- *Fund (asset) management* The investment banks offer services to rich individuals who lack the time or expertise to deal with their own investment strategies. They also manage unit and investment trusts (*see* below and Chapter 4) as well as the portfolios of some pension funds and insurance companies. In addition, corporations often have short-term cash flows which need managing efficiently (treasury management).
- *Assistance in corporate restructuring* Investment banks earn large fees from advising acquirers on mergers and assisting with the merger process. They also gain by helping target firms avoid being taken over too cheaply. Corporate disposal programmes, such as selling off a division, may also need the services of an investment bank.
- *Assisting risk management using derivatives* Risk can be reduced through hedging strategies using futures, options, swaps and the like. However, this is a complex area, with significant room for error and terrible penalties if a mistake is made. The banks may have specialist knowledge to offer in this area.

International banks

There are two main types of international banking:

- *Foreign banking* Transactions (lending/borrowing, etc.) carried out in the domestic currency (e.g. euros in France) with non-residents (e.g. a Japanese company raising money in France).
- *Eurocurrency banking* Transactions in a currency outside the jurisdiction of the country of that currency, e.g. Japanese yen transactions in Canada are outside the control of the Japanese authorities.

The major part of international banking these days is borrowing and lending in foreign currencies. There are about 250 non-UK banks operating in London, the most prominent of which are American, German and Japanese. Their initial function was mainly to provide services for their own nationals, for example for export and import transactions, but nowadays their main emphasis is in the Eurocurrency market and international securities (shares, bonds, etc.) trading. Often funds are held in the UK for the purpose of trading and speculation on the foreign exchange market.

The mutuals

Building societies are mutual organisations owned by their members. They collect funds from millions of savers by enticing them to put their money in interest-bearing accounts. The vast majority of that deposited money is then lent to people wishing to buy a home – in the form of a mortgage. Thus, they take in short-term deposits (although they also borrow on the wholesale financial markets) and they lend money for long periods, usually for 25 years. The number of building societies has declined with a trend to move away from mutual status by the biggest societies and convert to companies with shareholders, offering general banking services.

Many countries have **savings banks** that, like building societies, do not have outside shareholders but are 'mutually' owned by their members (which generally means customers). There are also **savings and loans** and **cooperative banks** constituted along similar lines. Some of these have grown very large and now offer a wide range of services beyond mortgages and the acceptance of deposits.

Finance houses[2]

Finance houses are responsible for the financing of hire purchase agreements and other instalment credit, for example leasing. If you buy a large durable good such as a car or a washing machine you often find that the sales assistant also tries to get you interested in taking the item on credit, so you pay for it over a period of, say, three years. It is usually not the retailer that provides the finance for the credit. The retailer generally works with a finance house which pays the retailer the full purchase price of the good and therefore becomes the owner. You, the customer, get to use the good, but in return you have to make regular payments to the finance house, including interest. Under a **hire purchase (HP)** agreement, when you have made enough payments you will become the owner. Under **leasing** the finance house retains ownership. Finance houses also provide **factoring** services – providing cash to firms in return for the right to receive income from the firms' debtors when they pay up. Most of the large finance houses are subsidiaries of the major conglomerate banks.

Long-term savings institutions

Pension funds

Pension funds are set up to provide pensions for members. For example, the University Superannuation Scheme (USS), to which university lecturers belong, takes 7.5 per cent of working members' salaries each month and puts it into the fund. In addition, the employing organisation pays money into the scheme. When a member retires the USS will pay a pension. Between the time of making a contribution and payment in retirement, which may be decades, the pension trustees oversee the management of the fund. They may place some or all of the fund with specialist investment managers. This is a particularly attractive form of saving because of the generous tax reliefs provided. The long time horizon of the pension business means that large sums are built up and available for investment – for example around £800 billion in the UK funds at the time of writing. Roughly half of this money is invested in UK and overseas shares, with some going to buy bonds and other assets such as money market instruments and property.

Insurance funds

Insurance companies engage in two types of activities:

- *General insurance* This is insurance against specific contingencies such as fire, theft, accident, generally for a one-year period. The money collected in premiums is mostly held in financial assets which are relatively short-term and liquid so that short-term commitments can be met.

[2] The term finance house is also used for broadly based financial-service companies carrying out a wide variety of financial activities from share dealing to corporate broking. However, we will confine the term to instalment credit and related services

- *Life assurance* With **term assurance**, your life is assured for a specified period. If you die your beneficiaries get a payout. If you live you get nothing at the end of the period. With **whole-of-life policies**, the insurance company pays a capital sum upon death whenever this occurs. **Endowment policies** are more interesting from a financial systems perspective because they act as a savings vehicle as well as cover against death. The premium will be larger but after a number of years have passed the insurance company pays a substantial sum of money even if you are still alive. The life company has to take the premiums paid over, say, 10 or 25 years and try to invest them wisely to satisfy its commitment to the policy holder. Millions of UK house buyers purchase with an endowment mortgage. They simply pay interest to the lender (e.g. a building society) while also placing premiums into an endowment fund. The hope is that after 25 years or so the value of the accumulated fund will equal or be greater than the inital value of the loan.

  Life assurance companies also provide annuities. Here a policy holder pays an initial lump sum and in return receives regular payments in subsequent years. They have also moved into personal pensions in the UK. Life assurance companies have more than £900 billion under management.

The risk spreaders

These institutions allow small savers a stake in a large diversified portfolio. Thus investors can contribute a small amount each month to an investment fund alongside thousands of other investors and then the pooled fund is professionally managed.

Unit trusts

Unit trusts are **'open-ended' funds**, which means that the size of the fund and the number of units depends on the amount of money investors put into the fund. If a fund of 1m units suddenly doubled in size because of an inflow of investor funds it would become a fund of two million units through the creation and selling of more units. The buying and selling prices of the units are determined by the value of the fund. So if a 2m unit fund is invested in £2m worth of shares in the UK stock market the value of each unit will be £1. If over a period the value of the shares rises to £3m, the units will be worth £1.50 each. Unit holders sell units back to the managers of the unit trust if they want to liquidate their holding. The manager would then either sell the units to another investor or sell some of the underlying investments to raise cash to pay the unit holder. The units are usually quoted at two prices depending on whether you are buying (higher) or selling (lower). There is also an ongoing management charge for running the fund.

There is a wide choice of unit trusts specialising in different types of investments ranging from Japanese equities to privatised European companies. Of the £500 billion or so invested in unit trusts and their cousins, open-ended investment companies (OEICs), 50–60 per cent is devoted to shares (one half of which are non-UK) with 20 per cent devoted to bonds. Instruments similar to unit trusts are often called mutual funds in other countries.

Mutual funds

Mutual funds comprise a major portion of the US and Canadian investment market, where the greater part of the population own some mutual fund shares. They are attractive to individual investors because they offer investment diversification and professional fund management. Not many people have the time or expertise to devote to poring over financial statistics in an attempt to pick a good (i.e. profitable) investment. For these people mutual funds provide a satisfactory solution, although they must be aware that past performance is no indicator of future performance and that just because a mutual fund manager has come top of the pile does not mean that he will do the same the following year, and that they will have to pay charges for investing in a fund. Investors can choose the type of investment they prefer, capital growth, income, etc. – and they have the security of knowing that their investment portfolios are safely stored with a custodian, usually a bank.

Investment trusts (investment companies)

Investment trusts differ from unit trusts – they are companies able to issue shares and other securities rather than units. Investors can purchase these securities when the investment company is first launched or purchase shares in the secondary market from other investors. These are known as **closed-end funds** because the company itself is closed to new investors – if you wished to invest your money you would go to an existing investor (via a broker) to buy shares and not buy from the company. Investment companies usually spread their funds across a range of other companies' shares. They are also more inclined to invest in a broader range of assets than unit trusts – even property, or shares not listed on a stock market. Approximately half of the money devoted to the 400 or so UK investment companies (£80 billion) is put into UK securities, with the remainder placed in overseas securities. The managers of these funds are able to borrow in order to invest. This has the effect of increasing returns to shareholders when things go well. Correspondingly, if the value of the underlying investments falls, the return to shareholders falls even more because of the obligation to meet interest charges.

Open-ended investment companies

Open-ended investment companies are hybrid risk-spreading instruments which allow an investment in an open-ended fund. Designed to be more flexible and transparent than either investment trusts or unit trusts, OEICs have just one price. However, as with unit trusts, OEICs can issue more shares, in line with demand from investors, and they can borrow. Investors may invest in one particular OEIC or in a variety of separate sub-funds under the same management structure.

The risk takers

Private equity funds

These are funds that invest in companies that do not have a stock market trading quote for their shares. The firms are often young and on a rapid growth trajectory, but private equity funds also supply finance to well-established companies. The funds usually buy shares in these companies and occasionally supply debt finance. Frequently the private equity funds are themselves funded by other financial institutions, such as a group of pension funds. Private equity has grown tremendously over the last 20 years to the point where now more than one-fifth of non-government UK workers are employed in a firm financed by private equity.

Hedge funds

Hedge funds gather together investors' money and invest it in a wide variety of financial strategies largely outside the control of the regulators, being created either outside the major financial centres or as private investment partnerships. The investors include wealthy individuals as well as institutions, such as pension funds, insurance funds and banks. Being outside normal regulatory control hedge funds are not confined to investing in particular types of securities or to using particular investment methods. For example, they have far more freedom than unit trusts in '**going short**', i.e. selling a security first and then buying it later, hopefully at a lower price. They can also borrow many times the size of the fund to punt on a small movement of currency rates, or share movements, orange juice futures, or whatever they judge will go up (or go down). If the punt (or rather, a series of punts over the year) goes well, the fund managers earn million-pound bonuses (often on the basis of 2 per cent of funds under management fee plus 20 per cent of the profit made for client investors).

Originally, the term 'hedge' made some sense when applied to these funds. They would, through a combination of investments, including derivatives, try to **hedge** (lower or eliminate) risk while seeking a high absolute return (rather than a return relative to an index). Today the word 'hedge' is misapplied to most of these funds because they generally take aggressive bets on the movements of currencies, equities, interest rates, bonds, etc. around the world. For example, in 2006 one fund, Amaranth, bet on the movement of the price of natural gas and lost US$6 billion in a matter of days. Their activities would not be a concern if they had remained a relatively small part of the investment scene. However, today they command enormous power and billions more are being placed in these funds every week. Already more than £1,300 billion is invested in these funds. Add to that the borrowed money – sometimes ten times the fund's base capital – and you can see why they are to be taken very seriously. Up to 50 per cent of the share trades on a typical day in London or New York is said to be due to hedge funds.

Concluding comments

Financial systems in all their various forms are vital. The growth in financial markets of all types has been exponential in the years following the Second World War. There has been a massive increase in the variety of new and innovative financial instruments available on the markets, as well as a huge increase in the number of markets, along with a trend towards deregulation and globalisation, especially in developing countries. The world of finance is of major importance to countries' economies. In the absence of an effective financial services industry a country will find it difficult or impossible to grow. In the UK, finance is even more important because it is a highly significant factor in exports.

There is an old joke about financial service firms: they just shovel money from one place to another, making sure that some of it sticks to the shovel. The implication is that they contribute little to the well-being of society. Extremists even go so far as to regard these firms as parasites on the 'really productive' parts of the economies. Yet very few people avoid extensive use of financial services. Most have bank accounts, pay insurance premiums and contribute to pension schemes. People do not put their money into a bank account unless they get something in return. Likewise, building societies, insurance companies, pension funds, unit trusts, investment banks and so on can survive only if they offer a service people find beneficial and are willing to pay for. Describing the mobilisation and employment of money in the service of productive investment as pointless or merely 'shovelling it around the system' is as logical as saying that the transport firms which bring goods to the high street do not provide a valuable service because of the absence of a tangible 'thing' created by their activities.

This chapter has tried to convey the importance of financial services to the people of a nation. These arguments are increasingly being accepted. For example, India has recently recognised the centrality of modern financial services to permit fast economic growth – *see* **Exhibit 1.19**.

Exhibit 1.19

Singh commits India to reform plan

FT

By James Lamont in New Delhi

Manmohan Singh, India's prime minister, yesterday sought to override divisions in his ruling coalition by pledging to fulfil a deep financial reform programme in Asia's third largest economy.

The reform agenda includes developing long-term debt markets, a corporate bond market, strong insurance and pension sectors and futures markets. Government disinvestment in state-owned companies would be accelerated.

"These issues will be addressed through gradual but steady progress in financial sector reforms to make the sector more competitive while ensuring an efficient regulatory and oversight system," Mr Singh told the World Economic Forum's meeting in New Delhi.

His comments seek to dispel investor anxiety over previously agreed financial reforms that have not yet been carried out.

"We need to ensure that the financial system can provide the finance needed for our development, and especially for infrastructure development. This opens up a broad agenda for reform," he said.

Some senior bankers consider India's largely state-owned banking system as severely underdeveloped. Kalpana Morparia, the chief executive of banking group JPMorgan in India, described the reach of India's financial system as "appalling", with low numbers of bank account holders and stunted credit extension. She said India has a "long way to go" to reach its goal of 9 per cent economic growth and that it had to take steps to expand its financial sector.

▶

Exhibit 1.19 continued

Mention of insurance and pension reforms was omitted in a budget statement shortly after the election, and senior cabinet ministers have said consensus within the ruling coalition is lacking over the immediate reform agenda.

Mr Singh, who is widely credited for opening up India's economy in 1991 while finance minister, assured foreign investors that he was undeterred from modernising India's economy and making it more welcome to foreign capital. He said the $121bn of foreign direct investment in India over the past eight years was "small", given the size of Asia's third largest economy.

Last week, the government made it mandatory for all profitmaking, listed, state-run firms to float at least a 10 per cent stake for sale to private investors.

Source: *Financial Times*, 9 November 2009, p. 12. Reprinted with permission.

This chapter has given an introduction to the world of the financial system. Subsequent chapters expand on each sector.

Key points and concepts

- **Money markets** deal in short-term debt securities – wholesale borrowing and lending for less than one year until they mature.
- **Bond markets** handle longer-term debt securities issued by corporations, governments, local authorities and so on. There is usually a secondary market.
- **Equity markets** trade in shares (equities) on a stock market. Firms raise finance by issuing shares. Usually investors can buy/sell in a secondary market.
- **Foreign exchange markets** exchange one currency for another 24 hours a day.
- **Derivatives** are securities derived from an underlying security (currency, shares, commodities, etc.). Their performance depends on the performance of the underlyings.
- **Banking** lies at the heart of the financial system. Its core functions are the taking of deposits, lending and managing payments mechanisms.
- **Financial centres** – London and New York are top. The centres are ranked not just by turnover but by many qualitative factors.
- **Financial institutions and markets** encourage growth and progress by **mobilising savings** and encouraging investment.
- Financial institutions encourage the flow of saving into investment by acting as **brokers** and **asset transformers**, thus alleviating the **conflict of preferences** between the **primary investors** (households) and the **ultimate borrowers** (firms). **Primary investors** are looking for high liquidity and low risk. **Ultimate borrowers** need to attract funds to invest in capital spending, but the funds will be at risk.
- **Asset transformation** is the creation of an intermediate security with characteristics appealing to the primary investor to attract funds, which are then made available to the ultimate borrower in a form appropriate to them. Types of asset transformation are:
  - risk transformation;
  - maturity transformation;
  - volume transformation.
- Intermediaries are able to transform assets and encourage the flow of funds because of their **economies of scale** vis-à-vis the individual investor:
  - efficiencies in gathering information;
  - risk spreading;
  - transaction costs.

- The **secondary markets** in financial securities encourage investment by enabling investor liquidity (being able to sell quickly and cheaply to another investor) while providing the firm with long-term funds.
- The **financial services sector** has grown to be of great economic significance in the UK. Reasons include:
  - high income elasticity;
  - international comparative advantage.
- The financial sector has shown remarkable **dynamism**, **innovation and adaptability** over the last four decades. Deregulation, new technology, globalisation and the rapid development of new financial products have characterised this sector.
- **Exchange trading** takes place on stock markets, subject to strict regulation.
- **Over-the-counter trading** takes place between two individual parties outside a regulated exchange. Investment can be suited to clients' risk situation.
- **Banking sector:**
  - **retail banks** – high-volume and low-value business;
  - **wholesale banks** – low-volume and high-value business. Mostly fee based;
  - **investment banks** – mostly fee and commission based;
  - **international banks** – mostly Eurocurrency transactions;
  - **building societies** – mutuals, still primarily small deposits aggregated for mortgage lending;
  - **savings banks and cooperative banks** – mutuals run for their members;
  - **finance houses** – hire purchase, leasing, factoring.
- **Long-term savings institutions:**
  - **pension funds** – major investors in financial assets;
  - **insurance funds** – life assurance and endowment policies provide large investment funds.
- **The risk spreaders:**
  - **unit trusts** – trusts which are open-ended investment vehicles issuing units. Allow small investors to invest in diverse range of investments. Size of fund depends on amount invested;
  - **investment trusts** – companies which invest in other companies' financial securities, particularly shares;
  - **mutual funds** – important investment vehicles in the US, offering diversification and professional management;
  - **open-ended investment companies** – a hybrid between unit and investment trusts.
- **The risk takers:**
  - **private equity funds** – invest in companies not quoted on a stock exchange;
  - **hedge funds** – wide variety of investment or speculative strategies largely outside regulators' control.

References and further reading

To keep up to date and reinforce knowledge gained by reading this chapter, I recommend the *Financial Times* and *The Economist.*

Arnold, G. (2012) *Corporate Financial Management*, 5th edn. London: FT Prentice Hall.
Contains more on many of these markets and instruments from a corporate finance perspective.

Arnold, G. (2010) *The Financial Times Guide to Investing,* 2nd edn. London: FT Prentice Hall.
Financial markets and instruments explained from an investor's perspective

Global Financial Centres Index (every six months), Z/Yen Group, available at www.zyen.com.
Provides a summary of professional opinion of leading financial centres.

Vaitilingam, R. (2010) *The Financial Times Guide to using the Financial Pages*, 6th edn. London: Financial Times Prentice Hall.
Good introductory source of information. Clear and concise.

Websites

Websites for statistics

Association of British Insurers www.abi.org.uk
Association for Financial Markets in Europe www.afme.eu
Bank for International Settlements www.bis.org
Building Societies Association www.bsa.org.uk
CIA World Factbook www.cia.gov
Financial and business information on City of London www.cityoflondon.gov.uk
Chicago Mercantile Exchange www.cmegroup.com
International Monetary Fund www.imf.org
London Stock Exchange www.londonstockexchange.com
Organisation for Economic Co-operation and Development www.oecd.org
World Federation of Exchanges www.world-exchanges.org
World Trade Organization www.wto.org

Websites for information

Alternative Investment Management Association: the hedge fund industry's global, not-for-profit trade association www.aima.org
British Private Equity & Venture Capital Association (BVCA) www.bvca.co.uk
European Central Bank www.ecb.int
The Finance & Leasing Association www.fla.org.uk
Financial Times www.ft.com
Financial Reporting Council: UK accounting regulator www.frc.org.uk
Institute of Financial Services www.ifslearning.ac.uk
Investment Management Association www.investmentfunds.org.uk
National Association of Pension Funds www.napf.co.uk
Securities Industry and Financial Markets Association www.sifma.org
The Banker: provides global financial information www.thebanker.com

Video presentations

Financial services company chief executives and other senior people describe and discuss policy and other aspects of their businesses in interviews, documentaries and webcasts at Cantos.com. (www.cantos.com) – these are free to view.

Case study recommendations

See www.pearsoned.co.uk/arnold for case study synopses.
Also see Harvard University: http://hbsp.harvard.edu/product/cases

- Goldman Sachs: A Bank for All Seasons (A) (2010) Authors: Lena Genello Goldberg and Tiffany Obenchain. Harvard Business School.
- Financial Networks and Informal Banking in China: From Pawnshops to Private Equity (2009) Author: Elizabeth Köll. Harvard Business School.
- Rural Credit Cooperatives in India (2007) Authors: Bidhan Parmar and Wei Li. Darden, University of Virginia. Available from Harvard Business School website.
- The Japanese Financial System: From Postwar to the New Millennium (2001) Author: Ulrike Schaede. Harvard Business School.
- YES BANK: Mainstreaming Development into Indian Banking (2010) Authors: Michael Chu and Namrata Arora. Harvard Business School.
- China's Financial Markets: 2007 (2009) Authors: Li Jin and Bingxing Huo. Harvard Business School.

Self-review questions

1 What is the difference between money markets and bond markets?

2 What are equities and where are they traded?

3 What happens on forex markets?

4 Describe briefly the development of money.

5 Who are primary investors and ultimate borrowers and explain their conflict of preferences.

6 Name some financial intermediaries and explain how they channel household savings into financial investment.

7 What are the types of asset transformation?

8 Explain intermediaries' economies of scale.

9 Distinguish between a primary market and a secondary market.

10 What are the differences between exchange and OTC trading?

11 Briefly distinguish between retail and investment banking.

12 When pension funds and insurance funds invest money, where does the money come from?

13 Distinguish between risk spreading and risk taking, giving examples.

14 What are unit trusts?

15 What are investment trusts?

16 Distinguish between an open-ended scheme and a closed-ended scheme.

17 What are hedge funds?

Questions and problems

1 Describe some of the ways by which financial centres are judged and explain London's position as a leading financial centre.

2 The company you work for needs to raise financing for a big expansion. Describe some of the markets it could make use of to raise finance.

3 Discuss the relationship between economic growth and the development of a financial sector.

4 Why has an increasing share of household savings been channelled through financial intermediaries?

5 Briefly describe the main types of financial institutions and explain their function.

6 You have £30,000 to put into savings. Discuss, with examples, some of the different risk-spreading investment schemes you could invest in.

Assignments

1 Review all the financial services you or your firm purchase. Try to establish a rough estimate of the cost of using each financial intermediary and write a balanced report considering whether you or your firm should continue to pay for that service.

2 Examine the annual report and accounts of three banks and three stockbrokers. Write a report explaining the services they provide to customers and the differences between them.

Web-based exercises

1 Go to the London Stock Exchange website and download statistics on the number of new share issues over the last five years. Write a report, with graphics including a chart showing the amounts of money that were raised for companies, both UK based and overseas.

2 Go to the European Central Bank website to obtain data to allow you to show the volume of bank lending over the last five years. Write a report linking the lending volumes to the pattern of economic growth and other factors impinging on the appetite for borrowing/lending.