Introduction
Readers of this book will, no doubt, have different backgrounds and varying levels of understanding of global financial markets. The first part of this chapter, therefore, is intended primarily for readers who are new to the world of financial markets. It explores these markets through the lens of different products and services offered in them, the different types of financial institutions that deliver such products and services, and the types of markets in which they are delivered. The chapter then examines the securities trading function within a financial institution to illustrate how records relate to the activities and processes undertaken by such institutions.

This type of ‘business systems analysis’ is typical of the work required to build records management tools such as business classification schemes and retention schedules. Inevitably, this chapter introduces many technical terms, but wherever possible such terms are explained on first use.

Products and services
Financial markets exist to transfer capital efficiently from those who have it to those who want it for whatever purpose (e.g. for Capital broadly refers to wealth: both material things such as land, buildings or commodities and social things such as money, stocks or bonds. Essentially, capital represents the invested savings of individuals, corporations and other types of organizations. These invested savings can be used directly by individuals buying a home, a company expanding its business or a government building new transport infrastructure, or indirectly through savers buying stocks and bonds issued by companies and governments.)
buying raw materials for production). They also transform capital from one form into another for the purposes of global trade (e.g. by exchanging one currency for another type of currency or by transforming debt to a tradable security through a process known as securitization). Financial services generally are divided into those offered to individuals – ‘retail’ financial services – and those offered to companies or governments. One example of a financial service to companies is corporate finance, the activity of raising capital for companies to use, generally in the most tax-efficient manner.

Financial services are achieved through different types of financial instruments or products. Wire transfers, for example, allow global transfers of payments between parties involved in financial transactions. A syndicated loan is a financial product in which a financial institution will structure a special loan for a client when the magnitude of the loan, or its complexity, is beyond the institution’s own credit policy or risk tolerance. In such cases, the institution will act as an agent for a syndicate of banks who are willing to share risk participation, either pro rata or at different levels of risk.

The transfer of capital from a saver to a person or organization that requires capital is often achieved through the issuance of financial products called ‘securities’. Securities include equities, bonds and derivatives (products derived from other instruments such as stocks or bonds). Securities are traded in financial markets and the instruments that document them are formal, legal records that set out the rights and obligations of the buyers and sellers. The following sections take a more detailed look at each of these classes of financial products.

A company may raise capital through borrowing money. Debt instruments such as bonds, debentures, mortgages, treasury bills and commercial paper (also collectively referred to as fixed income instruments) formalize a transaction where the issuer of the instrument receives an amount of capital for a period of time (‘term to maturity’) and at the end of that time agrees to pay back the loan amount plus interest payments to the lender. Bonds and debentures are the most common types of fixed income instruments and are issued by all levels of government, many companies and some educational and religious organizations. A bond is secured by specific assets, such as a house or other real property; a debenture is secured only by the good credit of the issuer.

Alternatively, a company may raise capital through selling part of itself, i.e. part
Equity has several different meanings, depending on the context of its use. When used in reference to the ownership of a company, it refers to a stock or any other security representing an ownership interest. In the context of real estate, it means the difference between the current market value of the property and the amount the owner still owes on the mortgage. It is the amount that the owner would receive after selling a property and paying off the mortgage. In terms of investment strategies, equity (stocks) is one of the principal asset classes. The others are fixed income (bonds) and cash or cash-equivalents. These are used in asset allocation planning to structure a desired risk and return profile for an investor’s portfolio.

of its equity. Equity instruments are usually referred to as stocks or shares. Thus, in purchasing shares, a purchaser gains a stake in the ownership of the company and becomes a shareholder. This is not the case with debt instruments, which only involve the granting of a loan. Common shares give shareholders the right to vote in the company’s annual general meeting, while preferred shares provide shareholders with a fixed dividend that is paid out of any earnings before a dividend is paid to common shareholders.

Derivatives represent arguably the largest area of capital markets product growth over the last 15 years. They are so called because they depend on creating risk-mitigating structures based on or derived from an underlying instrument, such as a stock or a bond. One example is the mortgage-backed derivatives now closely associated with the financial crisis of 2007–8. The mathematical complexity of the formulae used for their computation means that it is critical to ensure that derivatives are correctly sold and that evidence of that fact is captured and preserved in records that cannot be altered.

There are thousands of different types of financial products. Through a process known as ‘financial engineering’, new products emerge with increasing frequency, whilst old products are re-invented nearly every day. As it is impossible to examine all of the many products and services offered in global financial markets, this chapter is only able to touch upon a few of them.

Markets

Financial markets are of many different types. There are stock markets, bond markets, money markets, foreign exchange markets and commodities markets, for example. Traditionally, there have been different markets for different classes of financial products, although with new financial products that combine characteristics of older types of products (e.g. convertible bonds that can be converted to shares after a certain trigger event occurs) the dividing line between different products and markets increasingly is blurred. In many financial markets, participants do not meet face to face. Some markets are physical locations where trading takes place (e.g. the London Metals Exchange
and the New York Stock Exchange), but today most are not and ‘the market’ is simply the collective name for the traders at all financial institutions that participate in the market. This is possible because securities are intangible, often represented only by digital data.

Figure 1.1 illustrates the interrelationships that exist in capital markets. The public invests money with investment fund managers (e.g. when saving for retirement). This money is invested in companies through financial institutions. These companies use this capital to create goods and services that the public needs, and also to create jobs employing members of the public in that process. The companies pay interest and profits back to the fund managers and their shareholders, and these funds in turn are passed on to the public in profits, interest and wages. A well organized market provides speedy transactions and low transaction costs. It also provides a high degree of liquidity and effective regulation that promotes stability of financial systems.

Within capital markets, the ‘primary market’ refers to the market where a security is sold by a company to investors for the first time: its initial public offering (IPO). A financial institution arranges these capital-raising activities for its clients and, in exchange for the fees it receives, it guarantees or ‘underwrites’ the issue (i.e. it promises that, if the shares or bonds do not sell, the institution itself will buy them). The buyers or investors of such securities typically would be pension funds, investment funds, insurance companies and ultimately the public. Rather than having to own equity in perpetuity or wait 30 years until a bond matures, the buyers of these investments can trade them. Subsequent trading of the security takes place in the ‘secondary market’, where investors trade the security amongst themselves.

Markets can also be divided into auction and dealer markets. In an auction
market, buyers’ bids for a security are channelled through a central market and compete against each other. The bid is the highest price that a buyer is willing to pay for the security being quoted, while the offer (or ‘ask’) is the lowest price that a seller is willing to accept. The prices of all transactions on an auction market are publicly visible as, for example, in stock exchanges around the world. Dealer markets (or Over the Counter [OTC] markets) are the second type of market on which securities trade. They consist of networks of dealers who trade with each other, by telephone or, more often now, using a computer network. Unlike auction markets, a dealer market is a negotiated market where individual dealers enter their bid onto a system and ask quotations. Such dealers are known as ‘market makers’ because they determine the market price for the securities in which they trade. Almost all bonds and debentures are sold on dealer markets. Derivatives also trade on these types of markets.

The past several years have seen an exponential growth in many countries in alternative trading systems that offer privately owned computerized networks for placing trades outside the recognized exchanges. These are sometimes also referred to as proprietary electronic trading systems. As discussed in Chapter 8 ‘The digital revolution and its impact’, the shift from physical markets to electronic exchanges has had a profound effect upon the form of records. Most are now in digital form; the transformation to digital record-keeping has brought new challenges associated with identifying, capturing and managing records.

Many exchanges are also merging (at the time of writing, for instance, the Singapore Stock Exchange had negotiated an acquisition of the Australian Securities Exchange; the London Stock Exchange and the Toronto Stock Exchange had agreed to merge; and the Deutsche Börse was arranging a merger with the New York Stock Exchange). Mergers, alliances, partnerships and links are the order of the day and foster global trading and systemic interconnectedness. Today, most exchanges around the world operate as for-profit corporations just as the companies whose securities they trade.

Financial markets are increasingly heavily regulated. The regulators of financial markets include governments and self-regulating organizations (e.g. the New York Stock Exchange or the International Swaps and Derivatives Association). The requirements stipulated in financial regulations and the challenges of compliance with these requirements are addressed in Chapters 2 to 6 of this book.

Capital is attracted to locations where the government is stable, economic activity is not over-regulated and the investment climate is hospitable. When the local environment becomes less hospitable, there is often a ‘flight of capital’ to another location that is perceived to be more favourable. Financial institutions often seek to set up global operations in locations where the regulatory environment is most favourable (a practice known as ‘regulatory arbitrage’).
Financial institutions

Numerous participants engage in the operation of a financial market: not just individual investors, companies and exchanges, but also brokers (who act on behalf of those interested in buying securities) and dealers (who sell securities in both the primary and the secondary markets). Financial intermediaries facilitate the trading or movement of financial instruments (and the capital they represent) between suppliers and users, and are central to the functioning of the markets.

Banks are a particular type of financial intermediary. There are several types of bank:

1. A **retail bank** has the public as its customers. It keeps its customers’ cash secure and provides them with a means to access it and with facilities to pay bills and obtain loans.

2. A **commercial bank** has businesses as its customers. It provides safe custody of assets such as cash and securities, and the means to access them and pass them on to others.

3. An **investment bank** acts as an underwriter or agent for corporations and governments issuing securities. Most investment banks also provide broker–dealer operations (operations to buy and sell securities), maintain markets for previously issued securities and offer advisory services to investors. Investment banks also have a large role in facilitating mergers and acquisitions, private equity placements and corporate restructuring. Unlike retail banks, they do not usually accept deposits from or provide loans to individuals, although some may incorporate private banking functions that provide these services to wealthy individuals. Customers of investment banks usually comprise those that need money (capital) and those with money to invest.

4. A **merchant bank** also has businesses

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Mergers and acquisitions refer to the process of consolidating companies. A merger is a combination of two companies to form a new company, while an acquisition is the purchase of one company by another where no new company is formed. Chapter 9 covers this topic in detail.

Private equity placements refer to the sale of securities to a small number of select investors as a way of raising capital. Investors involved in private placements are usually large banks, mutual funds, insurance companies and pension funds. Private placement is the opposite of a public issue, in which securities are made available for sale on the open market.

Corporate restructuring usually means the reorganization of a company’s outstanding obligations, often achieved by reducing the burden of its debts by decreasing the rates paid and increasing the time it has to pay back the obligation. This allows a company to increase its ability to meet the obligations. Some of the debt may be forgiven by creditors in exchange for an equity position in the company.
as its customers. Historically, merchant banks facilitated trade between businesses. For example, they would allow a business to buy goods from an overseas business by guaranteeing the payments. Nowadays there is no distinction between merchant and investment banks and most institutions previously called merchant banks are now known by the American-style description of investment bank.

Aside from banks, many other types of institutions participate in financial markets. These include asset management companies, pension funds, hedge funds, private equity firms and trust companies, to name but a few. There are also clearing and settlement agencies that facilitate the settlement of millions of transactions between market participants on a daily basis so that the parties do not have to settle trades bilaterally. Such agencies help to make markets more efficient and less risky.

The operational structure of financial institutions varies widely, depending upon such factors as business mix, number of employees and jurisdictions of operation. Some financial institutions have integrated the functions of banking and securities broker–dealer operations. A typical structure divides an institution into wealth management (retail clients, small business banking and securities services) and global capital markets (including trading, investment banking and institutional sales). Global institutions that encompass retail, investment and commercial banking activities are now common.

A financial institution may be divided up into a number of legal entities and operating structures. For example, it may have several different legal entities associated with its administrative or back office functions (those that provide administrative and support services such as settlements, clearances, records management, regulatory compliance and accounting), even though it may organize these functions into one operating structure known by a name such as ‘corporate services’. Generally speaking, financial institutions create legal entities and operating structures that are aligned to their business strategies in order to optimize efficiencies in light of the laws and regulations in the various jurisdictions in which they operate.

**Functions and activities of financial institutions, and the records they produce**

This chapter now turns to an analysis of the functions and activities of financial institutions and how they relate to the records created, received and held by these institutions. This type of business systems analysis is a task typically performed as a preliminary step in establishing a records management programme or at the start of a major records management project, such as the development of a
<table>
<thead>
<tr>
<th>High Level Function</th>
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<th>Level 2 Sub-function</th>
<th>Activities</th>
<th>Sample Record Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment banking</td>
<td>Corporate finance</td>
<td>Corporate finance</td>
<td>Raising capital through debt (government, corporate bonds), equity – including underwriting, privatizations, securitization, syndications, initial public offerings (IPO), secondary private placements. Providing advice to businesses during mergers and acquisitions, corporate restructuring and tax planning. Providing research.</td>
<td>Deal files; legal contracts; research reports; prospectuses; cash flow and other financial projections and models (in spreadsheets); reports.</td>
</tr>
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<td></td>
<td>Municipal government finance</td>
<td>Municipal government finance</td>
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<tr>
<td></td>
<td>Merchant banking</td>
<td>Advisory services</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Advisory services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trading &amp; sales</td>
<td>Sales</td>
<td></td>
<td>Trading (for clients and on behalf of the institution) and making markets in bonds (fixed income), equities/securities, derivatives, futures, foreign exchanges, commodities, credit. Developing/selling financial products/instruments: exchange traded and over the counter (OTC). Brokerage, prime brokerage.</td>
<td>Product valuations and trade models (in spreadsheets); market reference data; customer reference data; trade order; records; trade tickets, blotters; derivatives; contracts; repurchase agreements (repos), confirmations; trade matching &amp; settlement records; risk reports, research reports; product marketing records (e.g. prospectuses).</td>
</tr>
<tr>
<td></td>
<td>Market making</td>
<td>Proprietary trading</td>
<td></td>
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<td></td>
<td>Treasury</td>
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<td></td>
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<tr>
<td>Banking</td>
<td>Retail banking</td>
<td>Retail banking</td>
<td>Providing loans and managing cash deposits and banking services. Providing trust and estates services.</td>
<td>Deposit/withdrawal transaction records; client bank account statements; account reconciliations; research reports; marketing documentation (e.g. product prospectuses); change of terms notifications; client consent records (i.e. for the movement of records between jurisdictions); wills; mortgages; property deeds; insurance agreements; voice recordings of interactions with clients.</td>
</tr>
<tr>
<td></td>
<td>Private banking</td>
<td></td>
<td>For high net worth customers, providing loans, managing cash deposits and investment and banking services. Providing investment and tax planning advice. Providing trust and estates services.</td>
<td></td>
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<tr>
<td></td>
<td>Card services</td>
<td></td>
<td>Providing credit cards (own brand and for third parties). Transmitting/processing cash transactions. Providing loans.</td>
<td>Cash transfer records; card transaction records; client card statements; product prospectuses; change of terms notifications.</td>
</tr>
<tr>
<td></td>
<td>Commercial banking</td>
<td>Commercial banking</td>
<td>Providing project finance, real estate and other loans, export finance, trade finance, factoring, leasing, providing loan guarantees.</td>
<td>Bills of exchange, cash flow and other financial projections (in spreadsheets); reports; leases; loan records; bank guarantees.</td>
</tr>
<tr>
<td></td>
<td>Payment &amp; settlements</td>
<td>External clients</td>
<td>Transmitting/processing cash payments and collections, transferring funds, clearing and settlement.</td>
<td>Payment records; records of transaction matching &amp; settlements; records of funds transfers; reconciliations.</td>
</tr>
<tr>
<td></td>
<td>Agency services</td>
<td>Custody</td>
<td>Providing escrow service, depository receipts, securities lending.</td>
<td>Escrow agreements; depository receipts.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Corporate agency</td>
<td>Acting as issuer and paying agents.</td>
<td>Payment records.</td>
</tr>
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<td></td>
<td></td>
<td>Corporate trust</td>
<td>Holding and managing funds in trust for clients.</td>
<td>Trust agreements; client account statements.</td>
</tr>
</tbody>
</table>
business classification scheme. As noted in the Australian DIRKS (Designing and Implementing Recordkeeping Systems) manual, which sets out a recognized methodology for business systems analysis, an analysis of functions and activities provides a foundation for the development of record-keeping tools and will contribute to decisions regarding the creation, capture, control, storage, disposal and accessibility of records (National Archives of Australia, 2007; State Records Authority of New South Wales, 2007).

Business systems analysis may be of two types. Hierarchical analysis involves a top-down approach: it identifies what an organization does and breaks it down into a series of logical parts and sub-parts. Process analysis is a bottom-up approach of examining in more detail how an organization does its business. Table 1.1 draws on the Basel Committee on Banking Supervision’s mapping of core functions (‘business lines’), sub-functions and activities of financial institutions to provide an example of hierarchical analysis. The following section uses the trading function to illustrate the results of a business systems analysis that combines both approaches.

**Securities trading as an example of a record-producing activity**

A deep analysis of every function, activity and type of transaction that financial institutions perform is not possible in the scope of a single chapter, but a detailed review of a single activity comprising several supporting processes serves as an exemplar of the type of analysis that underpins the development of

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</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td>Asset management</td>
<td>Discretionary fund management</td>
<td>Managing investments: in unit trusts, pension funds, mutual funds, hedge funds.</td>
<td>Client mandates; portfolio financial and risk analyses; minutes of client consultation meetings.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Non-discretionary fund management</td>
<td></td>
<td>Portfolio financial and risk analyses; reports; client account statements.</td>
</tr>
<tr>
<td></td>
<td>Retail brokerage</td>
<td>Retail brokerage</td>
<td>Buying and selling equities/securities, bonds etc. for retail clients.</td>
<td>Client account statements; transaction records.</td>
</tr>
<tr>
<td>Insurance</td>
<td>Life insurance and benefit plans</td>
<td>Creating and selling life insurance and benefit plans.</td>
<td>Life insurance policies; claim records.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health insurance</td>
<td>Creating and selling health insurance plans.</td>
<td>Health insurance policies; claim records.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Re-insurance</td>
<td>Selling of insurance to other insurance companies.</td>
<td>Re-insurance agreements.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Brokerage and advisory</td>
<td>Selling and advising retail clients on insurance products.</td>
<td>Client files; policy files; correspondence with clients and insurers.</td>
<td></td>
</tr>
</tbody>
</table>
records management tools. It also illustrates the complexity of financial institutions’ records and their related functions, activities and transactions. The following section takes a closer look at how financial institutions acting as broker–dealers handle trading of company shares in the secondary markets on behalf of clients and how the records generated from such trades support – in fact, are critical to – risk management and accounting.

The trading activity in a financial institution usually consists of the following processes:

- trade request and initiation
- trade pricing
- order placement
- trade execution
- payment matching
- confirmation
- settlement.

Trading is an activity undertaken by several roles and business units in a large financial institution. Traditionally, when a client wishes to execute a trade in shares of a company, the client contacts their broker.

Execution of the trade can take place in one of two ways. Open outcry trading is the more traditional form. In this form of trading, brokers are employed by brokerage firms to execute buying and selling orders for off-the-floor clients and may also trade for themselves with their employer’s money (referred to as ‘proprietary trading’). The trade may commence with a phone clerk within the exchange taking orders from a financial institution’s trading desk over a hoot-n-holler telecommunications system. The orders are time-stamped and delivered by couriers to brokers in the trading pits (areas on the floor of exchanges where traders conduct business). Brokers are identified by the colour of their jackets and the acronyms they wear. In the trading pit, traders shout and use hand signals to relay information and the price at which they are willing to trade. Trades are executed when the traders agree on a price and the number of shares, either through verbal communication or simply by some sort of motion such as a nod. At some exchanges, brokers remember the trades they have made A hoot-n-holler telecommunications system (also known as a ‘squawk box system’, ‘holler down/shout down circuit’ and ‘junkyard circuit’) is a type of telecommunications system in which a permanent open circuit exists between two or more parties. Anyone can speak over a distance at any time without having to pick up a phone or press a button. Hoot-n-holler capability provides a channel of communication that can support thousands of users around the globe and is an integral part of voice trading systems.
by keeping trading cards. These have carbon copies and are made from a cardboard-like material so that each broker can write down orders easily. An exchange employee then takes the filled orders, time-stamps them and submits them to the data entry room, where clerks input the details into the exchange computers to execute the trades. On completion of a transaction the customer is notified and the trade is printed on the consolidated ticker tape, which is displayed electronically.

This form of trading has increasingly been replaced by electronic trading, in which customers send buy or sell orders directly from their computers to an electronic marketplace offered by the relevant exchange. The London Stock Exchange, for example, moved to electronic trading in 1986 and the Paris Stock Exchange (now part of Euronext) was computerized in 1998. In this type of market arrangement, traders sit on trade floors within a financial institution. The trading pit becomes the trading screen situated on the trading floor of the institution. The trade floors comprise various desks. Traders sitting at these desks see various bids and offers on their computer screens, along with communications from other market participants (i.e. dealing conversations) and market information (news feeds, historic price information, etc.).

To determine the best price for a trade, traders may develop and use pricing models, usually calculated on spreadsheets. These become the record of how a trader set the price for the trade. Once traders have determined the price at which they are willing to buy or sell, they may inform a salesperson who relays the information to the customer. The customer has usually asked several institutions for a price and will execute the trade with the institution that provides the best price and ability to execute the size of transaction. If the customer wishes to trade at the price given, the salesperson informs the trader and the trader then selects from three choices:

- to cover the position instantly with the market (i.e. to buy or sell the shares from another bank)
- to hold the position in anticipation of the price becoming more favourable (i.e. buy or sell the shares later)
- to hold the position because it suits the trader to cover existing positions currently in their trading book.

Trades are executed by the traders lifting bids or hitting offers on their computer screens.

In some cases, electronic market participants replace the traders standing in the pit or sitting at their desks. Computers handle all trading activity; software automatically matches bids and offers and fills orders on a first-in, first-out basis according to a trading algorithm.
Each trade transaction is captured in a computerized trading system (also sometimes referred to as a ‘trading blotter’, in reference to its historical physical form). This system contains all the details of the trade (e.g. name of the stock, whether bought or sold, settlement date, amount, rate, customer name). The purpose of a trading blotter is to record the trades so that they can be reviewed and later confirmed. Typically, records of trade transactions take the form of deal tickets, which are similar to trading receipts. Deal tickets track the price, volume, names and dates of each transaction, along with all other significant information about the trade. They can be retained as records in either electronic or physical form.

Some of the details captured draw upon other records that the institution already maintains. For example, if a pension fund has sold some ‘Start-up Ltd.’ shares, the pension fund will have been identified as a customer prior to the transaction and its details will have been recorded in a ‘Customer Reference Data’ system. In addition, information about Start-up Ltd. shares will exist on the institution’s ‘Securities Reference Data’ system. In this way, all staff in the institution who need information about the customer (e.g. their trading limits) or about the share can view the various ‘Reference Data’ systems to access fuller details than those held on the trade record itself. Reference data is often linked to other systems through executable spreadsheet interfaces.

After execution of the trade, the trade record may be passed manually or electronically to a back office unit of the financial institution (e.g. an operations department) in order to match and confirm the deal with the counterparty. Matching and confirmation are accomplished when the department sends out a message containing relevant deal details. If the trade is with a customer, the department will usually request that customers review the deal terms and confirm their agreement. If the deal is with a market counterparty (e.g. another financial institution), the department will receive an incoming message from the counterparty and will attempt to match the payment details with its records. These matching and confirmation processes are predominantly electronic and details are matched automatically, with staff handling only the exceptions. These exceptions are
known as ‘FOBO breaks’, referring to inconsistencies between front office and back office details of the trade.

Once the trade is matched and confirmed with the counterparty, the next stage of the process – trade settlement – is commenced. When the trade was dealt, a **trade settlement date** will have been agreed. This date is usually implicit, following market practice, but an explicit date may have been agreed if the parties needed to vary the standard settlement date for some reason. At the appropriate time before the settlement date, the department arranges settlement, which involves receiving payment from the purchaser. Depending on the product that was traded, the settlement can be performed in a number of different ways. Proper settlement of trades is critical to ensure that the financial institution’s accounting records are accurate.

There are many functions and activities performed by financial institutions that rely on accurate trade records. These include risk management, the process by which an institution identifies, analyses and manages its risks. For example, in order to calculate market risk (the potential for a financial institution to experience losses from fluctuations in securities prices), an institution’s risk team typically builds a set of scenarios indicating the sensitivity of its trade **positions** against changes in various market conditions, such as changes in interest rates. This is often calculated in a time series reference database and may be written to a market data server through a spreadsheet interface. Once the scenarios are defined in the risk-management system, the sensitivities may be calculated overnight and sent to a risk team, often in flat files using File Transfer Protocol (FTP). If the institution does not have access to accurate and timely records of all its trades, that is, if it does not know its positions, it will be unable to identify its precise exposure to market risks or to take prompt action to address these risks.

Accounting for a financial institution’s profit and loss is another activity that relies on access to accurate trade records. Calculating profit and loss is typically undertaken in an institution’s accounting systems and specifications of input for all the profit and loss figures often come exclusively from an institution’s product control team. One of the core functions of this team is price testing to establish the robustness of the valuations assigned to each security that has been traded. This is necessary because trades are generally accounted for in an institution’s accounting records based on their market value, not based on their sale price as in the case of fixed assets. Accurate product valuation and cash information relies on capturing accurate records of each trade. Garbage into the

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**Trade settlement date** refers to the date by which an executed security trade must be settled. It is the date by which a buyer must pay for the securities delivered by the seller.

**Position**, in the context of trading, refers to the amount of a security owned (a ‘long’ position) or borrowed (a ‘short’ position) by a financial institution.
front office trading systems will lead to garbage out in the back office accounting systems, which in turn can lead to inaccuracies in the institution’s accounting records, such as its statement of profit and loss.

Conclusion

This brief outline of some of the main features of financial markets sets the stage for the following chapters, which provide greater detail on risk management, standards for record-keeping and records management policies and procedures. As the analysis of trading has shown, there is a close link between financial institutions’ business functions and activities, their records and the risks they face. This theme recurs throughout this book. Careful analysis of these relationships along the lines of the example given in this chapter, together with use of the procedures outlined in manuals such as DIRKS, will provide a good foundation for records management and, ultimately, for legal and regulatory compliance and the management of risk.

References and suggested further reading