

An Introduction to Global Financial Markets

By Victoria L. Lemieux, David Long and David Kemp

Introduction

Due to its complexity, one of the sternest challenges to effective records management policy, structure and implementation is the world of the financial markets..

Readers of this book will, no doubt, come with different backgrounds and varying levels of understanding about global financial markets. The first part of this chapter, therefore, is intended primarily for readers who are new to the world of global financial markets. It explores these markets through the lens of different products and services offered in them, the different types of financial institutions which 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 in more detail 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. Throughout this chapter, technical terms will be italicized on first use and will be defined either in the text itself or in separate text boxes.

Products and Services

Global financial markets exist to transfer capital efficiently from those who have it to those who want it for whatever purpose (e.g. buying raw materials – commodities - for production) or its

Capital broadly refers to wealth, both real, material things such as land, buildings or commodities and social things such as money, stocks and bonds. Essentially, capital represents the invested savings of individuals, corporations and many 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.

transformation from one form into another for the purposes of global trade (e.g. exchanging one currency for another type of currency or 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 for global transfers of payments between parties involved in financial transactions. Loan syndication is a financial product in which a financial institution will structure a special loan for a client when the financial magnitude of the loan, or its complexity, is beyond the financial institution’s own credit policy or risk tolerance. In such cases, the financial 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. Such syndicated loans generate considerable transactional records compared to a bilateral arrangement between lender and borrower. Furthermore, there is an increased need to refer to such records as issues affecting the loan

Securitization is the process by which a financial institution creates a financial instrument (e.g. a tradable security) by combining other financial assets and then marketing the repackaged instruments to investors. The process can encompass any type of financial asset and promotes liquidity in the marketplace. Mortgage-backed securities are one example of securitization. By combining mortgages into one large pool, a financial institution can divide the large pool into smaller pieces based on each individual mortgage's inherent risk of default and then sell those smaller pieces to investors.

during its life need to be voted on by the syndicate.

There is also the reality of syndicated transactions failing, heightening complexity and risk, especially where litigation is involved.

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 equities or bonds). Securities are traded in financial markets and the instruments which document such securities are formal, legal records which set out the rights and obligations of the buyers and sellers.

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.

Equity has several different meanings depending on the context of its use. When used in reference to a 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 other two 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.

Alternatively, a company may raise capital through selling part of itself, i.e. part of its *equity*. *Equity instruments* are usually referred to as stocks and 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 notoriously associated with the global financial crisis of 2008-2009. The mathematical complexity of the formulae used for their computation (referred to as the *Greeks*) 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 the many financial products and

services offered in global financial markets, this chapter is only able to touch upon a few of them.

Markets

In many financial markets, participants do not usually 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 other financial institutions. This is possible because securities are intangible – often just pieces of paper or bits of data.

Financial markets are of many different types. There are stock markets, bond markets, money markets, foreign exchange markets and commodities markets, for example. Figure 1 illustrates the mutually beneficial, circular relationship which exists in capital markets. The public invests money with investment fund managers (e.g. when saving for retirement). This money is invested in companies via financial institutions. These companies use this capital to create goods and services which the public needs, and also to create jobs employing 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.

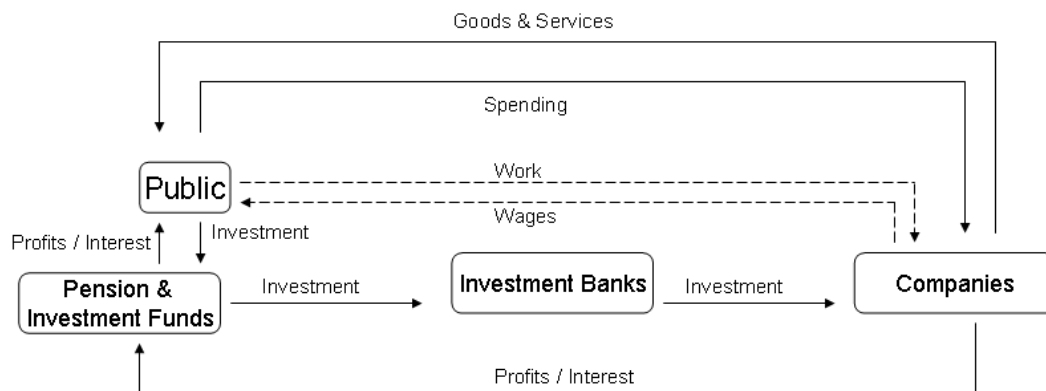


Figure 1: Mutual Benefits and the Capital Markets

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*. Financial institutions arrange these capital raising activities for their clients and in exchange for the fees the bank receives, it guarantees or *underwrites* the issue (i.e. promising that if the shares or bonds do not sell the financial 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.

Liquidity refers to the degree to which an asset or a security can be bought or sold in the market without affecting the asset's price. Liquidity is characterized by a high level of trading activity. Assets that can be easily bought or sold are known as liquid assets. It also refers to the ability to convert an asset to cash quickly. Cash is very liquid, whereas real property is relatively illiquid because it can take a long time to sell.

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 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 a network of dealers who trade with each other, usually over the phone or a computer network. Unlike auction markets, a dealer market is a negotiated market where individual dealers enter onto a system their bid 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 has 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 will be discussed in chapter XXX, the shift from physical markets to electronic exchanges has had a profound effect upon the form of records arising from the operation of global financial markets. Most are now in digital form; the transformation to digital recordkeeping has brought new challenges associated with identifying, capturing and managing these types of records.

Many exchanges are also merging (at the time of writing, for instance, the Singapore stock exchange was negotiating an acquisition of the Australian 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 *self-regulating organizations* (e.g. the New York Stock Exchange or the International Swaps and Derivatives Association) and governments. The requirements stipulated in financial regulations and the challenges of compliance with these requirements are addressed in chapters XXX 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, such as in the USA after the introduction of the Sarbanes-Oxley Act following the collapse of the energy company Enron, there is often a “flight of capital” out of one location to another that is perceived to be more favourable. For financial institutions, this also often means setting up certain global operations in locations where the regulatory environment is most favourable (a practice known as *regulatory arbitrage*).

Financial Institutions

A number of 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 are sell securities in both the primary and 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.

Private equity placements refers to The sale of securities to a relatively 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.

Banks are a particular type of financial intermediary.

There are several types of banks:

1. Retail bank – its customers are the public. It keeps its customers' cash safe and secure and provides a means to access it, and provides facilities to pay bills and makes loans.
2. Commercial bank – its customers are businesses. It provides safe custody of assets such as cash and securities, and the means to access the assets and pass them on to others.
3. Investment bank – An institution which acts as an underwriter or agent for corporations and governments issuing securities. Most also maintain *broker-dealer operations* (i.e. 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, investment banks do not usually accept deposits from and provide loans to individuals, though some may incorporate private banking functions that provide these financial services to wealthy individuals. Customers of investment banks usually fall into two categories:
 - a) Customers that need (i.e. capital).

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 in which no new company is formed. Chapter XXX covers this topic in detail.

b) Customers that have money to invest.

4. Merchant bank – its customer are businesses too.

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 financial institutions participate in global 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 these 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 a financial institution into wealth management – retail clients

Corporate restructuring usually means the reorganization of a company's outstanding obligations, often achieved by reducing the burden of the debts on the company by decreasing the rates paid and increasing the time the company has to pay the obligation back. This allows a company to increase its ability to meet the obligations. Also, some of the debt may be forgiven by creditors in exchange for an equity position in the company.

and small business banking and securities services – and global capital markets which includes

trading, investment banking and institutional sales. Global financial 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 functions that provide administrative and support services such as settlements, clearances, records maintenance, regulatory compliance, and accounting - even though it may organize these functions into one operating structure (e.g., “corporate services”). Generally speaking, financial institutions will create legal entities and operating structures that are aligned to their business strategies in order to optimize operating efficiencies in light of the laws and regulations in various jurisdictions.

Functions and activities of financial institutions, and the records they produce [Level 1 heading]

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 business classification scheme. As noted in the Australian DIRKS manual, which sets out a recognized methodology for conducting business systems analysis, an analysis of an organization’s functions and activities provides a foundation for the development of recordkeeping tools and will contribute to the decisions made regarding the creation, capture,

control, storage, disposal and access of records. This is particularly important in an electronic business environment where the connection between an organisation and its records is logical, rather than physical, in nature.

According to the DIRKS manual, a business systems analysis may be of two types. *Hierarchical analysis* involves a top-down approach of identifying what an organization does and breaking 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 organisation does its business. Figure 2 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 a hierarchical analysis. The following section uses the trading function to illustrate how the results of a business systems analysis that combines both approaches might be described.

High Level Function	Level 1 Sub-Function	Level 2 Sub-function	Activities	Sample Record Types
Investment Banking	Corporate Finance	Corporate Finance	Mergers and Acquisitions	Deal files; legal contracts; research reports; prospectuses; cash flow and other financial projections and models in spreadsheet form; reports
		Municipal Government Finance	Underwriting, Privatisations, Securitisation, Research, Debt (Government, High Yield) Equity,	
		Merchant Banking	Syndications, IPO, Secondary	
		Advisory Services	Private Placements	
	Trading & Sales	Sales	Fixed Income, equity, foreign exchanges, commodities, credit, funding, own position securities, lending and repos, brokerage, debt, prime brokerage	Product valuations in spreadsheet form; trade models in spreadsheet form; market reference data; customer reference data; trade order records; trade; derivatives contracts; confirmations; trade matching & settlement records; risk reports; research reports; product marketing records (e.g., prospectuses)
		Market Making		
Proprietary Positions				
Treasury				
Banking	Retail Banking	Retail Banking	Retail lending and deposits,	deposit/withdrawal transaction records; client bank account statements; account reconciliations; research; marketing documentation (e.g., product prospectuses; change of terms notifications); client consent records (i.e., for transborder storage of data); wills; mortgages; property deeds; insurance agreements; voice recordings of interactions with clients
		Private Banking	Private lending and deposits, banking services, trust and Retail Banking estates, investment advice	
		Card Services	Merchant/Commercial/Corporate cards, private labels and retail	
	Commercial Banking	Commercial Banking	Project finance, real estate, export finance, trade finance, factoring, leasing, lends, guarantees, bills of exchange	Bills of exchange; cash flow and other financial projections in spreadsheet form; reports; leases; loan records; bank guarantees

Figure 2: Functions and Activities of Global Financial Institutions and related Records

Securities trading as an example of a record producing activity [Level 2 heading]

A deep analysis of every function, activity and type of transaction a financial institution performs is not possible in the scope of a single chapter, but a detailed review of a single activity

Hoot-n-Holler telecommunications systems (also known as a Squawk Box System, Holler Down/Shout Down Circuit and Junkyard Circuit) are a type of telecommunications system in which a permanent open circuit between two or more parties exists. Anyone can speak at any time over a distance without having to pick up a phone or press a button. Hoot-n-Holler capability provides a channel of communication which can support thousands of users around the globe and is an integral part of voice trading systems.

comprised of several supporting processes serves as an exemplar of the type of analysis that underpins the development of records management tools and of the complexity of financial institutions' records and their related functions, activities and transactions. . The following section will take a closer look at how financial institutions handle securities trading and how

the records generated from such trades support, in fact are critical to, risk management and accounting within financial institutions.

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

1. Trade request
2. Trade pricing
3. Order placement
4. Trade execution
5. Payment matching
6. Confirmation
7. Settlement

Trading is an activity undertaken by several roles and business units in a large financial institution. The role of salespeople is to own the relationship with the client. They need to

understand the client's requirements and to deliver to the client the service they need such as execution capability (the ability to rapidly buy and sell) and research. When a client wants to execute a trade, the salesperson will contact their trader in order to obtain a price for the security that the client wants to trade.

The Trader's job is to "make a market" for the financial institutions' customers - to always be available to buy or sell from or to the customer for those securities they have agreed to cover. Traders will set the price at which the securities can be bought or sold in the market, adjusted for their desire to win the trade. To determine the best price for the trade, traders develop and use pricing models, usually calculated on spreadsheets. These become the record of how the trader set the price for the trade. Once the trader has determined the price at which they are willing to buy or sell, they inform the 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 which 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 must decide either to:

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

Execution of the trade can take place in one of two ways. *Open outcry trading* is the more traditional form of trading. In this form of trading, a phone clerk within an exchange may take orders from traders over hoot-n-holler telecommunications systems. The orders are time stamped and given to runners, who take the orders to their brokers in the pits. The pits are areas on the floor of the exchange where traders conduct business. Alternately, a broker on the floor of an exchange may receive an order via teletype machine from the financial institution's trading department and then proceed to his station in the pit. Each broker is identified by the color of his or her jacket and acronyms they wear. In the trading pit, traders shout and use various 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 contracts either through verbal communication or simply some sort of motion such as a nod. Brokers can remember trades they make because they keep trading cards. These trading cards have carbon copies and are made out of a cardboard-like material so that each broker can write down his or her 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 trades into the exchange computers to execute the trade. On completion of the transaction the customer is notified and the trade is printed on the consolidated ticker tape which is displayed electronically.

A newer, increasingly common way to trade is electronic trading. In electronic trading, customers send buy or sell orders directly from their computers to an electronic marketplace offered by the relevant exchange. There are no brokers involved in the process. Traders see the various bids and offers on their computers. The trade is executed by the traders lifting bids or hitting offers on their computer screens. The trading pit becomes the trading screen situated on

the trading floor of the financial institution. Electronic market participants replace the brokers standing in the pit. Computers handle all trading activity - the software automatically matches bids and offers and fills orders according to a first-in, first-out process.

Each trade transaction will be captured in a computerized trading system (also sometimes referred to as the *trading blotter* in reference to its historical physical form). This system contains all the details of the trade (e.g. name of bond, whether bought or sold, settlement date, amount, rate, customer name). The purpose of a trade 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 a trading receipt. Deal tickets track the price, volume, names and dates of a transaction, along with all other significant information about the trade. Financial institutions use deal tickets as part of their recordkeeping systems. They can be retained in either electronic or physical form.

Some of the details captured draw upon records the institution already maintains. For example, a pension fund may have sold some “Start-up Ltd.” bonds. The pension fund will have been identified as a customer prior to the transaction and its details will have been captured in a ‘Customer Reference Data’ system. In addition, the information about Start-up Ltd. bonds will exist on the institution’s ‘Securities Reference Data’ system. In this way, all the staff in the financial institution who need to know information about the customer (e.g. their trading limits) or about the bond (e.g. exactly which Start-up Ltd. bond it was, since Start-up may have issued bonds with different maturities and interest rates) can view the various ‘Reference Data Systems’ to access fuller details than held on the trade record itself. Reference data may be viewed

manually or, as is often the case, information from reference data systems will be linked to other systems via executable spreadsheet interfaces.

After execution of the trade, the trade record may be passed either manually or electronically to the financial institution's operations department in order to match and confirm the deal with the counterparty. The operations department performs *Back Office* functions and thus the systems used in activities performed by such departments are known as Back Office systems. Matching and confirmation are accomplished when the operations department sends out a message containing relevant deal details. If the trade is with a customer, the operations department will usually request that the customer 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 them and will attempt to match the payment details with its records. These matching and confirmation processes are predominantly electronic and matched automatically, with staff only handling the exceptions. Exceptions are known as *FOBO breaks*, referring to inconsistencies between Front Office and Back Office details of the trade. Once the

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

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* would have been agreed. This would usually have been implicit, via market practice, or an explicit date agreed if the parties needed to vary the standard settlement date for some reason. At the appropriate time before the settlement date the operations department will arrange settlement which involves (1) the purchaser in paying for

the asset purchased and (2) receiving it. Depending on the product that was traded, the settlement is performed in a number of different ways. Proper settlement of trades is critical to ensure that a

Market risk is potential for a financial institution to experience losses from fluctuations in securities prices in the market.

financial institution's other books and records (e.g.its accounting records) are accurate.

There are many functions and activities performed by financial institutions that rely on accurate trade records.

Position, in the context of trading, refers to the amount of a security either owned (which constitutes a long position) or borrowed (which constitutes a short position) by a financial institution.

One such activity is risk management, the process by which a financial institution identifies, analyses and manages its risks. For example, in order to calculate

market risk, a financial institution's risk team typically builds a set of scenarios indicating the sensitivity of its *positions* against changes in various market conditions (e.g. 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 via File Transfer Protocol in flat files to a risk team. If the financial institution does not have access to accurate, timely records of all its trades, it will be unable to accurately identify its exposure to market risk and will be unable to address these risks on a timely basis.

Accounting for a financial institution's profit and loss is another activity that is reliant upon access to accurate trade records. Calculating profit and loss is typically done in a financial institution's accounting systems and specifications of input for all of the profit and loss figures often come exclusively from a financial institution's Product Control team. One of the core functions of Product Control is price testing to establish the robustness of the valuations assigned

to each security that has been traded. This activity is necessary because trades are generally accounted for in a firm's accounting records on the basis of their market value, not on the basis of their sale price as in the case of fixed assets. Accurate product valuation and cash information per trade relies on capturing accurate records of each trade. Garbage into the Front Office trading systems will lead to garbage out in the back office accounting systems, which can lead to inaccuracies in a financial institution's accounting records, such as its statement of profits and loss.

Conclusion

This outline of some of the main features of global 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. It has also outlined the main functions and activities of global financial institutions, looking in detail at the activity of trading and the records produced as trades are transacted. As shown by a detailed analysis of trading, and a theme throughout this book, there is a close link between financial institutions' business functions and activities, their records and the risks they face. Careful analysis of these relationships along the lines of the example in this chapter using the procedures outlined in such manuals as DIRKS will provide a good foundation for records management and, ultimately, for legal and regulatory compliance and the management of risk.

Suggested Further Reading

National Archives of Australia and State Records Office of New South Wales. *DIRKS: A strategic approach to managing business information* (also known as the DIRKS Manual).

Sydney, Australia: National Archives of Australia, 2003.

Clarke, William M. *How the City of London Works: An Introduction to its Financial Markets*, 6th Ed. London: Sweet & Maxwell, 2006.

Mishkin, F. and S. Eakins. *Financial Markets and Institutions*, 6th Edition. Reading, Mass.: Addison Wesley, 2009.

Valdez, Stephen. *An Introduction to Global Financial Markets*, 6th Edition. London, England: Palgrave MacMillan, 2010.