THE MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION
Federal State Autonomous Educational Institution of Higher Education
Lobachevsky State University of Nizhni Novgorod
National Research University

M.E. Shashkina

INTERNATIONAL BANKING

TUTORIAL

Recommended by the Institute of Economics and Entrepreneurship methodical commission for international students studying in the master program 38.04.02. Management

Nizhni Novgorod

2017

МИНИСТЕРСТВО ОБРАЗОВАНИЯ И НАУКИ РОССИЙСКОЙ ФЕДЕРАЦИИ

Федеральное государственное автономное образовательное учреждение высшего образования
«Национальный исследовательский Нижегородский государственный университет им. Н.И. Лобачевского»

М.Е.Шашкина

МЕЖДУНАРОДНОЕ БАНКОВСКОЕ ДЕЛО

Учебно-методическое пособие
по дисциплине «МЕЖДУНАРОДНОЕ БАНКОВСКОЕ ДЕЛО»

Рекомендовано методической комиссией Института экономики и предпринимательства ННГУ для иностранных студентов, обучающихся по направлению подготовки 38.04.02 «Менеджмент» (магистратура) на английском языке

Нижний Новгород
2017

УДК 336
ББК 65.05
Ш-32

Ш-32 Шашкина М. Е. Международное банковское дело: Учебно-методическое пособие. – Нижний Новгород: Нижегородский госуниверситет, 2017. − 48 с.

Рецензент: д.э.н., проф. М.Л.Горбунова

В настоящем пособии изложены учебно-методические материалы по курсу “Международное банковское дело” для иностранных студентов, обучающихся в ННГУ по направлению подготовки **38.04.02. “Менеджмент”** (магистратура).

Учебно-методическое пособие предназначено для студентов факультета иностранных студентов, обучающихся по направлению подготовки **38.04.02. “Менеджмент”,** и может быть использовано студентами, обучающимися по иным направлениям подготовки.

Ответственный за выпуск:
председатель методической комиссии ИЭП ННГУ,
к.э.н., доцент Летягина Е.Н.

УДК 330
ББК 65.05

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Unit 1. Introduction to international banking

The growth in foreign bank activity and international banking in general has been a major factor of financial system development. The first part of the course defines what we mean by international banking, provides a brief history and then discusses the range of products and services offered by international banks.

The nature of financial intermediation

To understand how banks work, it is necessary to understand the role of financial intermediaries in an economy. Financial intermediaries and financial markets' main role is to provide a mechanism by which funds are transferred and allocated to their most productive opportunities. A bank is a financial intermediary whose core activity is to provide loans to borrowers and to collect deposits from savers. In doing so, they channel funds from savers to borrowers thereby increasing economic efficiency by promoting a better allocation of resources.

Arguably, savers and borrowers do not need banks to intermediate their funds: in direct finance borrowers obtain funds directly from lenders in financial markets. A financial claim is a claim to the payment of a future sum of money and/or a periodic payment of money. More generally, a financial claim carries an obligation on the issuer to pay interest periodically and to redeem the claim at a stated value in one of three ways:

1) on demand;

2) after giving a stated period of notice;

3) on a definite date or within a range of dates.

Financial claims are generated whenever an act of borrowing takes place. Borrowing occurs whenever an economic unit's (individuals, households, companies, government bodies, etc.) total expenditure exceeds its total receipts. Financial claims can take the form of any financial asset, such as money, bank deposit accounts, bonds, shares, loans, life insurance policies, etc. The lender of funds holds the borrower's financial claim and is said to hold a financial asset. The issuer of the claim (borrower) is said to have a financial liability. However, two types of barriers can be identified to the direct financing process:

1) the difficulty and expense of matching the complex needs of individual borrowers and lenders;

2) the incompatibility of the financial needs of borrowers and lenders.

Lenders' requirements:

• The minimization of risk. This includes the minimization of the risk of default (the borrower not meeting its repayment obligations) and the risk of the assets dropping in value.

• The minimization of cost. Lenders aim to minimize their costs.

• Liquidity. Lenders value the ease of converting a financial claim into cash without loss of capital value; therefore they prefer holding assets that are more easily converted into cash. One

reason for this is the lack of knowledge of future events, which results in lenders preferring short-term lending to long-term.

Borrowers' requirements:

• Funds at a particular specified date.

• Funds for a specific period of time; preferably long-term (think of the case of a company borrowing to purchase capital equipment which will only achieve positive returns in the longer term or of an individual borrowing to purchase a house).

• Funds at the lowest possible cost.

Deposits typically have the characteristics of being small-size, low-risk and high-liquidity. Loans are of larger-size, higher-risk and illiquid. Financial intermediaries can bridge the gap between borrowers and lenders and reconcile their often incompatible needs and objectives by performing a transformation function to help minimize the costs associated with direct lending - particularly transactions costs and those derived from information asymmetries.

Size transformation

Generally, savers/depositors are willing to lend smaller amounts of money than the amounts required by borrowers. For example, think about the difference between your savings account and the money you would need to buy a house! Banks collect funds from savers in the form of small-size deposits and repackage them into larger size loans. Banks perform this size transformation function exploiting economies of scale associated with the lending/borrowing function, because they have access to a larger number of depositors than any individual borrower.

Maturity transformation

Banks transform funds lent for a short period of time into medium- and long-term loans. For example, they convert demand deposits (i.e. funds deposited that can be withdrawn on demand) into 25-year residential mortgages. Banks' liabilities (i.e., the funds collected from savers) are mainly repayable on demand or at relatively short notice. On the other hand, banks' assets (funds lent to borrowers) are normally repayable in the medium to long term. Banks are said to be 'borrowing short and lending long' and in this process they are said to 'mismatch' their assets and liabilities. This mismatch can create problems in terms of liquidity risk, which is the risk of not having enough liquid funds to meet one's liabilities.

Risk transformation

Individual borrowers carry a risk of default (known as credit risk) that is the risk that they might not be able to repay the amount of money they borrowed. Savers, on the other hand, wish to minimize risk and prefer their money to be safe. Banks are able to minimize the risk of individual loans by diversifying their investments, pooling risks, screening and monitoring borrowers and holding capital and reserves as a buffer for unexpected losses.

Definition of international banking

International banking refers to business undertaken by banks across national borders and/or activities that involve the use of different currencies. Traditional foreign banking involves transactions with non-residents in domestic currency that facilitates trade finance and other international transactions. Eurocurrency banking involves banks undertaking wholesale (large-scale) foreign exchange transactions (loans and deposits) with both residents and non-residents.

Multinational banking refers to banks having some element of ownership and control of banking operations outside their home market. The main feature of multinational banking is that it requires some form of foreign direct investment (FDI) by banks in overseas markets reflecting a physical presence.

A brief history of international banking

The first bankers were offering their services more than 2000 year ago. They were money changers, situated usually at a table in the commercial district, aiding travelers by exchanging foreign coins for local money or discounting commercial notes for a fee. The earliest bankers pledged a lot of their own money to support these early ventures. However, it was not long before the idea of attracting deposits and loaning out those same funds emerged. Loans were granted to shippers, landowners, and others at interest rates as low as 6 percent to as high as 48 percent a month for the riskiest ventures. The first banks were located principally in global trading centers around the Mediterranean, including Athens, Cairo, Jerusalem, and Rome. The history of banks having a physical presence outside their home country started in the fifteenth century when Florentine bankers established subsidiaries in other jurisdictions. From the fourteenth to the sixteenth centuries, Florence was regarded as the scientific and culture capital of the Western world. Perhaps the most famous Italian bank was the Medici bank, established by Giovanni Medici in 1397. The oldest bank still in existence is Monte dei Paschi di Siena, headquartered in Siena, Italy, which has been operating continuously since 1472.

The modern era of international banking can be viewed as occurring in two distinct phases. The first phase commenced with the rise of colonialism during the nineteenth century and continued into the twentieth century. The second phase of international bank expansion was linked to the growth of US multinational firms and the changing financial regulatory landscape from the late 1950s and early 1960s onwards.

The modern era began with Colonial bankers – was linked to the rise of colonialism during the nineteen century and continued into the twentieth century. British banks opened branches in their Australian, Caribbean, North American, South Africa, Latin America, India colonies in the beginning of 1830s and by the end of nineteenth century.

During the 19th century the United Kingdom was the leading country in the industrial revolution. This was not only a period of innovations in technical and mechanical processes. There were also innovations in services, especially in the banking industry.

British overseas banks began to establish in the 1830s. Between 1830 and 1914, 70 British overseas banks were founded. The most important were the Standard Bank of British South Africa, now part of Standard Chartered Bank, and the London and River Plate Bank both established in 1862 and the Hong Kong and Shanghai Banking Corporation established in 1865. By 1890 there were 32 British owned and registered overseas banks with 711 foreign branches. There were 55 British overseas banks with 4,990 branches in 1985. Most of these overseas banks were involved in trade finance and in domestic banking in the locations where they were established.

Other European banks created overseas business, either alone or as part of a consortium. In the early 20th century Société Générale de Belgiue, now part of Fortis Bank, established the Banque Sino-Belge for business with China and the Banque Brésilienne Italo-Belge for business in Latin America. A consortium of banks consisting of among others Deutsche Bank and Basler Bankverein, later becoming Swiss Bank Corporation through mergers, founded Banca

Commerciale in Milan in 1894. Of course, many banks also had shareholding in foreign banks and some were represented on the board. The French government established five overseas banks in the 1850s each designated to specific colonial regions. American banks were only allowed to establish abroad following the Federal Reserve Act in 1913. Citibank opened a branch in Buenos Aires in 1914 and in the 1920s it and other banks began to expand in Latin America as British banks began to divest from there in the post-World War I period and also due to the large increase in trade between that region and the United States and to follow the increased investment there by American firms. By 1930 Citibank, now part of Citigroup, had 97 foreign branches with about two-thirds in Latin America. One noticeable difference between the British banks and their European counterparts was that the former established 'colonial banks', otherwise known as 'British overseas banks' or 'Anglo foreign banks' that only provided services outside Britain. In contrast the European banks undertook both domestic and foreign activity, often via the acquisition of banks or through the establishment of subsidiaries. In other words, European bank expansion overseas was more similar to the type of activity conducted nowadays - domestic banks acquiring foreign operations or setting up subsidiaries through which business could be undertaken whereas British banks were specifically set up to do banking only in the colonies. It should be noted that various Japanese and Canadian banks also developed international activities in the latter part of the nineteenth and early twentieth centuries.

Modern International banking The expansion of banks overseas during the first half of the twentieth century was somewhat limited due to the decline of the British and other colonial empires, economic uncertainty brought about by the world wars, and the changing political landscape in many countries that sought to establish their own banking systems by restricting (even nationalizing) foreign banks. It was not until the emergence of the United States as a major economic power and the growth of their multinational companies that the second wave of international banking activity took place. This occurred from the late 1950s and early 1960s onwards, when US banks began to expand overseas to meet the financial requirements of multinational firms, as well as to take advantage of cheaper financing outside the home market. US banks were subject to limits on how much interest they could pay on deposits (known as Regulation Q) and also had to maintain onerous reserve requirements. They found that by establishing subsidiaries outside the United States (typically in London) these operations were not subject to home regulations - so US banks could pay more interest on dollar deposits and could do more dollar lending at finer terms via their overseas subsidiaries as these were not subject to the home regulations. US banks were attracted to London because substantial dollar deposits were located there - some say that this was because the anticommunist sentiment in the United States (characterized by the so-called 'McCarthy witch hunts' from 1947 to 1954) encouraged the Russian, Chinese and other governments to move large-scale dollar funds out of New York to London as they thought these might be frozen. In any event, US banks flocked to London and, to a lesser extent, other major financial centers (e.g., Paris) during the 1960s. This was the birth of the Eurocurrency markets - markets where wholesale foreign currency deposits and lending takes place.

There were eight Federal Reserve System banks in 1960 that had foreign offices. Citibank and Chase Manhattan Bank, later acquired by Chemical Bank in 1996 though retaining the Chase brand and now part of JPMorgan Chase, dominated with wholly owned offices in 20 and 11 countries respectively. American banks focused in particular on American firms in Europe and they were also approaching European firms with better terms and the most active of these were Citibank, Morgan Guaranty Trust, Bank of America and Chase Manhattan Bank.

US banks continued to dominate international banking during the 1970s, although from the late 1970s and throughout the 1980s Japanese banks replaced them as the major international lenders (reflecting the growth of Japanese multinational companies over the period). The 1990s witnessed a decline in the relative importance of Japanese banks on the international scene due to problems in their home market, and their position was replaced by European banks that have expanded their international operations as a result of various factors (including the creation of the European Union's single market).

Key URLs: Further insight to role of bank can be provided at www.money.howstuffworks.com/bank1.html, www.law.freeadvice.com/financial_law/banking_law/bank.htm, www.pacb.org/banks_and_banking

Unit 2. Motives for overseas expansion.

Factor prices and trade barrier theories

Vertical FDI, suggests that overseas activity occurs so that firms can take advantage of international factor price differences. Companies become multinational when they establish production in lower manual labor cost countries. The alternative motivation for the existence of multinationals relates to trade barriers that make exporting costly. Where trade costs are high the firm establishes in countries to access markets and this is referred to as horizontal FDI. This means that in many areas of business (and particularly in banking) it may be difficult to undertake cross-border activity without a physical presence within a country. For example, differences in tax treatments, consumer protection legislation, marketing rules, definition of products and so on, mean that the cross-border selling of many financial services products and services is problematic unless the bank has a physical presence in the market in which it wishes to sell its products.

Bringing together informational advantages associated with having a market presence plus the barriers brought about by domestic financial services regulation means that cross-border activity in banking can mainly be characterized by horizontal FDI.

Arbitrage and the cost of capital

The cost of capital argument focuses on the cost of raising finance. At any one time, some currencies are relatively strong whereas others are weak. Investors require a lower return or interest rate for securities issued in the stronger currency. As such, firms that issue securities in strong currencies require a lower cost of capital (it is cheaper for them to borrow via the issue of equity or debt instruments). Subsequently, these firms can acquire overseas assets at higher prices than local firms who issue securities in local currencies, and still appear to be buying foreign firms relatively cheaply. While cost of capital arguments have been put forward as the main reason for the acquisition of US banks by their UK and European counterparts from the late 1990s to 2005, this theory cannot really explain the following:

- why some firms invest overseas in markets which have the same currency;
- why there is cross-investment between firms from the same currency, for instance, why UK firms invest in the United States and why US firms invest in the United Kingdom;

- why firms incur substantial costs in setting up new operations overseas instead of just making an acquisition.

Ownership advantages

Typically, the main disadvantages for foreign banks entering overseas markets can be identified as:

• Indigenous banks are likely to be better informed regarding the demand features of the local markets as well as the legal and institutional framework under which business is conducted.

• Foreign banks have to incur costs associated with operating at a distance and these include such things as management, regulatory and other costs.

Given that these disadvantages are likely to be evident, the argument goes that banks that locate overseas must have some type of compensating advantages that enable them to compete with indigenous firms on equal terms - these are in general referred to as ownership advantages. These so-called 'ownership advantages', which may be related to technological expertise, marketing know-how, production efficiency, managerial expertise, innovative product capability, and so on, must be easily transferable within the bank and the skills and other 'ownership advantages' diffused effectively throughout the organization.

Diversification of earnings

Diversification of bank earnings and risk reduction can be brought about by expansion into foreign markets and risk will be reduced the less correlated earnings in the foreign country are to those in the home market. Finance theory tells us that investors wish to construct diversified portfolios of shares so that all their investments are not exposed to the same adverse shocks - hence they construct portfolios by choosing an array of investments looking for low correlations between the price movements of the stock in order to maximize diversification benefits to yield a given expected return and risk. Banks can diversify by doing similar business activity in different countries and also by expanding into new areas (such as insurance, mutual funds, investment management, investment banking, and so on) both at home and abroad.

Theory of excess managerial capacity

Another theory of foreign investment relates to the desire of companies to use up excess managerial capacity. A bank may require the use of certain managerial and other resources that can be only fully utilized when they achieve a certain size. For instance, if a firm has a highly specialized management team it may not get the best use of this team if it only focuses on business in one particular geographical market. Companies can extend their scale of operations by expanding overseas and into new markets and these managerial resources will be more efficiently utilized.

Location and the product lifecycle

The innovative (or new product) stage is when a good or service is produced to meet a new consumer demand or when a new technology enables the creation of innovative goods. Typically, these new demands are first met by banks located in mature and well-established markets. As the bank gains from 'learning by doing' and the most efficient forms of production, distribution and selling are identified, the product becomes more standardized. Customers are more aware of the product's features and also are likely to become more price-sensitive (demand

for the product in the home market becomes more elastic). When the product or service reaches maturity and foreign customers become aware of the new good then demand is likely to grow.

This pattern of production diffusion whereby innovative products are first produced and sold in prosperous economies then trickle down to (relatively) less wealthy markets characterizes overseas expansion in the mature product stage. The final stage of the product lifecycle is that of the standardized product where the product is uniform and undifferentiated and competition between producers is based solely on price. In this case knowledge about foreign markets is not important and the main issue for the producer is to find the lowest cost of production. In this stage of the product lifecycle, production is transferred to the lowest cost country so the firm can maintain competitive advantage.

Other theories on the rationale for international banking

Firm-specific advantages. Some banks have advantages (whether financial, based on distribution and production expertise, selling experience, etc.) that make foreign expansion more amenable. Size often confers such advantages as large banks typically have a wide array of financing sources, may benefit from scale and scope economies and have more expert management and systems that make foreign expansion easier. They also are more likely to have the relevant financial resources to undertake large-scale overseas activity.

Location advantages. There may be a variety of attractions associated with overseas location that the aforementioned theories do not cover. We mentioned a couple of location advantages when we talked about the product lifecycle above, but other location benefits relate to a variety of production, distribution and selling attributes of the product or service in question. For instance, banks like to group together in financial centers to benefit from the close proximity of the foreign exchange market and other Eurocurrency activities.

Practice of bank expansion in foreign markets

Customer-seeking strategies.

Banks seek to undertake overseas expansion in order to obtain new customers or to follow established clients. The reason banks are more likely to seek new customers through foreign establishment (either through M&A activity or establishing new operations themselves) relates to the barriers associated with the cross-border selling of products and services without a physical presence.

Obtaining a foothold strategy.

Foreign expansion can be motivated by the desire to establish a presence in order to test the market. Information can be obtained by making experimental foreign investment and over time banks can decide on whether to expand or contract their activities.

Follow the leader strategy.

When a large bank undertakes investment in a foreign market it may well encourage others to follow. There is anecdotal evidence that various multinational firms (including large banks) emulate their competitors' cross-border strategies regarding investment decisions in major markets.

Customer-following strategies.

It has been argued that banks in their home markets have information advantages associated with their on-going client relationships. The nature of these relationships put these firms in a

privileged position to follow their customers abroad. The capital markets, of course, can meet certain financing requirements of large firms - especially when markets are buoyant. When capital markets become less accommodating then companies turn to their banks. In other words, when companies become larger and industries more concentrated, the banking industry will follow suit.

Performance and efficiency advantages.

The most obvious reason justifying foreign expansion is that it adds to overall firm performance and shareholder value. That is, returns generated from cross-border operations will add to group returns, boosting profits and ultimately increasing the bank stock price for its shareholders. Given that a major strategic objective of banks is to generate sufficient risk-adjusted returns to their owners, one would expect that there is evidence to suggest that foreign operations add value in some way. Cross-border expansion can therefore be expected to add value to the bank by improving operating costs and/or increasing market power in setting prices.

Managerial motives.

International banking activity may, of course, be motivated by managerial motives rather than the objective of maximizing profits and shareholder value. Entrenched managers may make international investment decisions based on their own preferences for pay, power, job security, risk aversion, and so on. In general, international expansion may either strengthen or weaken the hands of entrenched managers directly by affecting the market for corporate control or governance, or indirectly by changing the market power of the firm. Put simply, managers may seek to expand internationally so they control larger firms - salaries and benefits being higher in bigger firms/banks.

Government motives.

It could be argued that a major factor that has motivated the growth of international banking activity has been deregulation aimed at fostering more competitive, innovative and open markets. The deregulation of many over-protected banking markets has had the effect of encouraging foreign bank entry and this, in theory at least, should boost competition and encourage domestic banks to become more efficient.

Key URL: For a discussion of merger trends and how they are reshaping the financial-services business, see www.innercitypress.org/bankbeat.html

Unit 3. Types of bank entry into foreign markets. Regulation of international banking.

Correspondent banking

The lowest level of exposure to the foreign market can be achieved through a correspondent banking relationship. This simply involves using a bank located in the overseas market to provide services to a foreign bank. Typically banks will use correspondent banks to do business in markets where they have no physical presence and as such these types of services are widely used by smaller banks.

Representative office

Banks can obtain slightly greater exposure to a foreign market via a representative office. Representative offices are usually small and they cannot provide banking business - that is they cannot take deposits or make loans. Representative offices are used to prospect for new business and they usually only act as marketing offices for parent banks.

Branch office

A branch is a key part of the parent bank and acts as a legal and functional part of the parent's head office. Branches can perform all the functions that are allowed by the banking authorities of the host country namely taking loans and making deposits, as well as selling other types of products and services. Branches are the most common form of foreign bank expansion as the costs are less than establishing a wholly owned subsidiary and they enable banks to conduct a full range of business activity.

Agency

Agencies are similar to branches in that they form an integral part of the parent bank. They lie somewhere between branches and representative offices as they can do less than the former and more than the latter. For example, in the United States a foreign bank agency cannot take deposits but is allowed to lend.

Subsidiary

A subsidiary is a separate legal entity from the parent bank, has its own capital and is organized and regulated according to the laws of the host country. Where branches and agencies expose the whole capital of the parent bank to risk from overseas activity, the risk exposure of a subsidiary is limited by its own capital exposure. Subsidiaries may be the result of acquisition or organic start-ups - they also tend to be costly as the business has to be capitalized separately from the parent. One main advantage of having a subsidiary is that it generally signals a stronger commitment to do business in a country compared with other forms of entry and reflects the foreign companies' more positive assessment of future prospects for the market. In addition, subsidiaries are usually allowed to undertake a broad range of banking business subject to the rules and regulations of the host country.

Joint Ventures

A bank that is concerned about risk exposure in entering the new foreign market, lacks the necessary expertise and customer contracts abroad, or wishes to offer services prohibited to banks alone may choose to enter into a joint venture with a foreign financial firm, sharing both profits and expenses.

Edge Acts

Edge Acts are domestic US companies owned by a US or foreign bank, but located outside the home state of the bank that owns them. These subsidiary corporations are limited primarily to international business transactions. Federal legislation passed at the end of World War I permitted banks large enough to post the required capital to apply for Edge Act charters from the Federal Reserve Board.

Agreement Corporations

These business corporations are subsidiaries of a bank organized under Section 25 of the Federal Reserve Act. Agreement Corporations must devote the bulk of their activities to serving international customers, similar to Edge Act corporations.

IBFs

An international banking facility (IBF) is a creation of US banking regulations, first authorized by the Federal Reserve Board in 1981. IBFs are computerized account records that are not part of the domestic US accounts of the bank that operates them. They must be domiciled inside US territory and focus upon international commerce. Deposits placed in an IBF are exempt from US deposit reserve requirements and deposit insurance fees. IBFs may be operated by either US chartered banks or by banks foreign to the United States.

Shell Branches

In order to escape the burden of regulation, many international banks have established special offices that merely record the receipt of deposits and other international transactions. These shell branches may contain little more than a desk, a telephone, fax machine, and computer where deposits from the worldwide Eurocurrency markets are booked to avoid deposit insurance assessments, reserve requirements, and other costs incurred when a domestic bank accepts deposits.

Export Trading Companies (ETCs)

In 1982, the US Congress passed the Export Trading Act (ETCA), which allowed US banking firms and Edge Act corporations to create export trading companies (ETCs). According to Federal Reserve regulations, these specialized firms must receive over half their income from activities associated with exporting goods and services from the United States. An ETC can offer such services as export insurance coverage, transportation and warehousing of salable products, trade financing, and research into markets abroad.

Key URLs: For further information on the changing organization and structure of banking around the world see the Institute of International Bankers at www.iib.org and the World Bank and International Monetary Fund at http://jolis.worldbankimflib.org/external.htm

Regulation of international banking

The increased international activity of financial firms means that foreign institutions play an increasing role in many domestic financial sectors. The main issue relates to who is ultimately responsible if a foreign bank faces difficulties in an overseas market - should it be the host or home country regulator? Generally for large complex banks the host regulator will supervise foreign subsidiary activity but it is the home country that is ultimately responsible if the bank faces difficulties. In addition to the issue of regulatory responsibility, the internationalization trend has also encouraged much greater debate about convergence of rules - in order to ensure that banks operate under similar regulations in different jurisdictions. In Europe, for instance, there is an ongoing debate under the EU Financial Services Action Plan (FSAP) concerning the most effective regulatory framework. It has been argued that minimal harmonization (regulation based on minimum standards) allows for greater flexibility in implementing legislation and is likely to result in (or sustain) more uneven competitive playing fields than if one chooses maximum harmonization. Harmonization should always result in some form of convergence in national rules and at the same time should increase actual and potential competition (as well as the safety of the system) if it is to be effective. There is clear consensus that a strong commitment to on-going harmonization of supervisory standards across the EU financial services industry is needed; many commentators recognize the need for greater co-operation between supervisory authorities and improved relations between supervisory authorities, market participants and consumers.

Another factor affecting regulatory reform - and closely linked to the internationalization trend - is the globalization phenomenon. As a result, banks are increasingly exposed to risks originating from abroad, and risks to financial stability are less and less confined to national borders. This calls, at the minimum, for greater regulatory oversight and coordination between national regulators. Further, consolidation in the global banking industry has resulted in the emergence of financial conglomerates that conduct an extensive range of businesses with a group structure.

In addition to the aforementioned factors various other forces can have a marked impact on the regulatory environment. Major financial crises can have a big impact on regulatory changes, mainly because the occurrence of a crisis is an indication that regulation in place prior to the difficulties was not sufficient. Another factor that can change regulations is financial innovation. As new financial products and services emerge and gain in market significance, there are often calls for new regulation. Firms innovate to get around regulations and the regulators are always one step behind the market - this is known as the regulatory dialectic.

EU financial sector legislation

In January 1993 the Second Banking Co-ordination Directive came into force. This legislation had crucial implications for banking activities within the European Union because it introduced:

- A single European banking license which ensures that EU-incorporated banks which are authorized within their own country's regulations are automatically recognized as banks in any part of the European Union by virtue of their home country recognition; and

- Home country supervisors which are now responsible for the supervision of all operations within the European Union of banks incorporated in the home country. However, the local monetary authorities retain exclusive responsibility for measures imposed upon banks in respect of monetary policy. In addition, host countries have primary responsibility for the supervision of liquidity and risk.

Consequently, a bank that is authorized within the United Kingdom by the Financial Services Authority is now able to set up branches in any other EU Member State. Also, it is allowed to provide a wide range of cross-border banking services without the need for separate authorization by the authorities of the host country.

Clearly, it is necessary for harmonized banking authorization regulations to exist in the various EU countries if there is to be mutual recognition of each other's banks. Therefore, the Second Banking Co-ordination Directive sets out:

- Minimum levels of capital required before authorization can be granted.

- Supervisory requirements in relation to major shareholders and banks' participation in the non-banking sector.

- Accounting and internal control requirements.

In addition to the abovementioned directives, which are of direct relevance to banking activities, there are several other directives relevant to the broader context of banks' business operations. Examples are the:

- Capital Liberalization Directive - aims to make illegal the imposition of exchange controls on movements of capital within the European Union.

- Admissions Directive - harmonizes requirements for a company to have its shares listed on any EU Stock Exchange.

- UCITS Directive (Undertaking for Collective Investment in Transferable Securities) - relates to investments such as mutual funds (in the United Kingdom open-ended mutual funds are known as unit trusts, whereas closed end funds are known as investment trusts).

- Investment Services Directive, which provides a single EU 'passport' for investment firms. Authorized firms in each EU country are given appropriate access to the markets of other EU countries, upon the basis of mutual recognition of authorization Conglomerates Directive - harmonizes rules and regulations for the supervision of financial conglomerates (typically firms that combine banking, insurance, pensions, securities and other financial activities).

- Pensions Directive - harmonizes rules and regulations for the supervision of pensions business.

Key URLs: To explore more fully what is happening to banking in Europe, see, for example, the Centre for Economic Policy Research at www.cerp.org and the European Banking Industry Committee at www.eubic.org

The Lamfalussy procedure

In July 2000 the French Presidency of the EU initiated the appointment of a Committee of Wise Men chaired by Alexandre Lamfalussy, with the task of drafting proposals for improving the effectiveness of the EU's securities market regulatory process. In February 2001, the Wise Men's report proposed a new four- level legislative process, where significant powers are delegated to implementing committees. The procedure, now known as the Lamfalussy procedure, aims to simplify and speed up the complex and lengthy regular EU legislative process by means of a four-level approach. It was extended to the entire EU financial sector in December 2002.

According to the Lamfalussy procedure, the EU institutions adopt framework legislation under the auspices of the Commission (level one). The Commission then prepares the detailed technical implementing measures with the help of four specialist committees (level two). These are the European Banking Committee (EBC), the European Securities Committee (ESC), the European Insurance and Occupational Pensions Committee (EIOPC) and the Financial Conglomerates Committee (FCC) for supervisory issues relating to cross-sector groups. They decide on implementing measures put forward by the Commission. In developing the implementing measures, the Commission is again advised by committees of experts at the third level of the Lamfalussy procedure. These are the Committee of European Banking Supervisors (CEBS), the Committee of European Securities Regulators (CESR) and the Committee of European Insurance and Occupational Pensions Supervisors (CEIOPS). The Banking Supervision committee also includes representatives from the national central banks. Apart from advising and assisting the Commission in the development of technical implementing measures, the committees of experts also deal with the exchange of supervisory information, the consistent implementation of European legal acts and the harmonization of supervisory practices in the European market for financial services. At the final level, the Commission - in close co-operation with the member states, the regulatory authorities involved in level three and the private sector - checks that Community law is applied consistently.

Key URL:http://ec.europa.eu/internal_market/securities/lamfalussy/report/index_en.htm

Expansion and regulation of foreign bank activity in the United States

The International Banking Act of 1978

The expansion of foreign banking activity inside America's borders led to strong pressure on the U.S. Congress by domestic banking groups and, eventually, to passage of the International Banking Act (IBA) of 1978—the first major federal law regulating foreign bank activity in the United States. The IBA's key components included:

- It required branches and agency offices of foreign banks to secure federal licenses for their U.S. operations.
- It restricted foreign branching within the United States, requiring each bank to designate a home state and follow that state's branching rules just as American banks had to do.
- It stipulated that deposits accepted at the U.S. branch or agency offices of foreign banks holding $1 billion or more in consolidated assets are subject to legal reserve requirements determined by the Federal Reserve Board.
- It made U.S. branches of foreign banks eligible for deposit insurance under stipulated conditions and granted them access to certain Federal Reserve services, such as the ability to borrow from the Federal Reserve banks.

The Foreign Bank Supervision Enhancement Act of 1991

Key URL: To learn more about the activities of foreign banks in the United States see, for example, the Institute of International Bankers at www.iib.org.

On December 19, 1991, Congress amended the IBA with passage of the Foreign Bank Supervision Enhancement Act. This law placed tighter controls on foreign bank operations in the United States. Applications from foreign banks to expand their U.S. banking activities must be approved by the Federal Reserve Board. Service offerings of foreign banks are basically limited to the same list of banking services that U.S. national banks are permitted to offer. Moreover, no foreign bank can accept retail deposit accounts of less than $100,000 from the public unless it first obtains insurance coverage from the FDIC. Any foreign bank desiring to acquire more than 5 percent of the voting shares of a U.S. bank company must first seek Federal Reserve Board approval.

The Federal Reserve must also review how thoroughly foreign banks are supervised by their home countries. If the Fed determines that regulation of a foreign bank by that bank's home nation is inadequate, it can deny that foreign bank permission to establish a branch, agency, or representative office inside United States territory or to start or acquire any U.S. subsidiary firms. Moreover, the Fed can terminate the operations of a foreign bank if it finds that bank has violated U.S. laws, engaged in unsafe or unsound banking practices, or is not being operated in a manner consistent with the public interest. The 1991 law empowered the Fed to examine the U.S. offices and affiliates of any foreign bank and stipulated that the Fed must be notified a minimum of 30 days in advance if a foreign bank wishes to close any of its U.S. offices.

Expansion and Regulation of Foreign Bank Activity in the United States

Key URLs: Two of the chief sources of international banking statistics today are the Bank for International Settlements at www.bis.org/publ and the Federal Reserve System at www.federalreserve. gov.

In recent years foreign bank expansion inside the United States has been about as extensive as American banks reaching abroad. Foreign banking entities have sought solid footholds inside

U.S. territory for decades, attracted by the huge size of the common market formed by the 50 states, the economic and political stability inside the United States, and the migration of foreign banks' own customers toward the Americas (e.g., foreign- owned auto and electronics firms setting up manufacturing plants on American soil).

By year-end 2005 183 foreign banks headquartered in 54 different countries operated close to 300 agency, branch, and representative offices as well as other financial-service facilities inside the United States. In addition, foreign banks held an ownership (equity) interest of at least 25 percent in about 70 U.S. commercial banks. The U.S. offices of foreign banks accounted for 18 percent (or about one-fifth) of the total assets held by all U.S. banks combined.

Foreign banks operating in the United States are controlled by more than 200 corporate families, led by such international giants as Barclays and FISBC of Great Britain, Credit Lyonnais from France, and Germany's Deutsche Bank. Most of these foreign-owned facilities are based in New York with substantial additional units centered in San Francisco, Los Angeles, Chicago, and Atlanta. These facilities are examined at least once every 18 months by U.S. federal and state regulators to determine if they pose substantial risks to the American banking system.

Recently foreign bank expansion in the United States has slowed somewhat, especially in the years following the 9/11 terrorist tragedy. Some of the slowdown has been traceable to slower growth in the world economy, particularly in Europe. Then, too, government deregulation of domestic U.S. banking has permitted American financial firms to be more aggressive competitors and recapture some of the market share they had previously lost to foreign financial firms.

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Key URL: To learn more about law and regulation in the banking sector, see, for example, www.library.findlaw.com/finance-and-banking/index.html

Russian experience.

The banking system of the Russian Federation includes Bank of Russia, the credit organizations and representations of foreign banks. The bank is considered "foreign" if it is recognized as such by the legislation of a foreign state in which territory it is registered. Banking operations carried out according to the license granted by Bank of Russia. Government of the Russian Federation in conjunction with Bank of Russia determines the amount of foreign capital in banking system (50% at the time of writing). This quota is calculated as the relation of the total nonresidents'

capital in banks with foreign participation to cumulative authorized capital of all credit organizations registered in the territory of the Russian Federation. As the quota is reached, the Bank of Russia has to stop issuing licenses to banks with foreign investments.

The bank of Russia has the right to set restrictions for the credit organizations with foreign investments on implementation of the bank operations similar to the restrictions applied to the Russian banks in the corresponding foreign states. The Bank of Russia is entitled to establish additional requirements for credit institutions with foreign investment regarding reporting procedures approval of the list of banking operations and management composition. In 2013, the share of foreign capital in the Russian banking system amounted to 26.5%.

Key URL: To learn more about the Russian banking system see the Web site of the Russian Federation's Central Bank at www.cbr.ru/eng

Unit 4. The Basel Agreement on international bank capital standards

The Basel Committee on Banking Supervision (BCBS) is a committee of banking supervisory authorities that was established by the central bank governors of the Group of Ten countries in 1974 after the breakdown of the Bretton Woods system of managed exchange rates. It provides a forum for regular cooperation on banking supervisory matters.

Basel I (also known as the 1988 Basel Accord) is primarily focused on credit risk and appropriate risk-weighting of assets. Assets of banks were classified and grouped in five categories according to credit risk, carrying risk weights of 0%, 20%, 50%, 100%, and some assets given No rating. Banks with an international presence are required to hold capital equal to 8% of their risk-weighted assets (RWA).

The tier 1 capital ratio = tier 1 capital / all RWA

The total capital ratio = (tier 1 + tier 2 + tier 3 capital) / all RWA

Leverage ratio = total capital/average total assets

Banks are also required to report off-balance-sheet items such as letters of credit, unused commitments, and derivatives.

Key URLs: For a summary of the contents of the original Basel Agreement of 1988 see the Bank for International Settlements at www.bis.org.

Basel II, initially published in June 2004, was intended to create an international standard for banking regulators to control how much capital banks need to put aside to guard against the types of financial and operational risks banks (and the whole economy) face. The final version aims at:

- Ensuring that capital allocation is more risk sensitive;
- Enhance disclosure requirements which would allow market participants to assess the capital adequacy of an institution;
- Ensuring that credit risk, operational risk and market risk are quantified based on data and formal techniques;

- Attempting to align economic and regulatory capital more closely to reduce the scope for regulatory arbitrage.

Basel II uses a "three pillars" concept – minimum capital requirements (addressing risk), supervisory review and market discipline.

The first pillar deals with maintenance of regulatory capital calculated for three major components of risk that a bank faces: credit risk, operational risk, and market risk.

The second pillar is a regulatory response to the first pillar, giving regulators better 'tools' over those previously available. It also provides a framework for dealing with systemic risk, pension risk, concentration risk, strategic risk, reputational risk, liquidity risk and legal risk, which the accord combines under the title of residual risk. Banks can review their risk management system.

The third pillar aims to complement the minimum capital requirements and supervisory review process by developing a set of disclosure requirements which will allow the market participants to gauge the capital adequacy of an institution.

Market discipline supplements regulation as sharing of information facilitates assessment of the bank by others, including investors, analysts, customers, other banks, and rating agencies, which leads to good corporate governance. The aim of Pillar 3 is to allow market discipline to operate by requiring institutions to disclose details on the scope of application, capital, risk exposures, risk assessment processes, and the capital adequacy of the institution.

Key URLs: To gather more information about the development of Basel II capital rules consult such sources as www.bundesbank.de/index and www.bis.org

Basel III was developed in response to the deficiencies in financial regulation revealed by the late-2000s financial crisis and scheduled to be introduced from 2013 until 2019.

Capital requirements. The original Basel III rule from 2010 was supposed to require banks to hold 4.5% of common equity (up from 2% in Basel II) and 6% of Tier I capital (including common equity and up from 4% in Basel II) of "risk-weighted assets" (RWA). Basel III introduced "additional capital buffers", a "mandatory capital conservation buffer" of 2.5% and a "discretionary counter-cyclical buffer", which would allow national regulators to require up to another 2.5% of capital during periods of high credit growth.

Basel III introduced a minimum "leverage ratio". The leverage ratio was calculated by dividing Tier 1 capital by the bank's average total consolidated assets; the banks were expected to maintain a leverage ratio in excess of 3% under Basel III. In July 2013, the US Federal Reserve Bank announced that the minimum Basel III leverage ratio would be 6% for 8 systemically important financial institution (SIFI) banks and 5% for their insured bank holding companies.

Basel III introduced two required liquidity ratios. The "Liquidity Coverage Ratio" was supposed to require a bank to hold sufficient high-quality liquid assets to cover its total net cash outflows over 30 days; the Net Stable Funding Ratio was to require the available amount of stable funding to exceed the required amount of stable funding over a one-year period of extended stress.

Key URL: To gather more information about the development of Basel III consult www.bis.org/bcbs/basel3.htm

US Version of the Basel Liquidity Coverage Ratio Requirements

The LCR consists of two parts: the numerator is the value of HQLA, and the denominator consists of the total net cash outflows over a specified stress period (total expected cash outflows minus total expected cash inflows).

The Liquidity Coverage Ratio applies to US banking operations with assets of more than 10 billion. The proposal would require:

- Large Bank Holding Companies (BHC) – those with over $250 billion in consolidated assets, or more in on-balance sheet foreign exposure, and to systemically important, non-bank financial institutions; to hold enough HQLA to cover 30 days of net cash outflow. That amount would be determined based on the peak cumulative amount within the 30 day period.

- Regional firms (those with between $50 and $250 billion in assets) would be subject to a "modified" LCR at the (BHC) level only. The modified LCR requires the regional firms to hold enough HQLA to cover 21 days of net cash outflow. The net cash outflow parameters are 70% of those applicable to the larger institutions and do not include the requirement to calculate the peak cumulative outflows

- Smaller BHCs, those under $50 billion, would remain subject to the prevailing qualitative supervisory framework.

The US proposal divides qualifying High Quality Liquid Assets into three specific categories (Level 1, Level 2A, and Level 2B). Across the categories the combination of Level 2A and 2B assets cannot exceed 40% HQLA with 2B assets limited to a maximum of 15% of HQLA.

- Level 1 represents assets that are highly liquid (generally those risk-weighted at 0% under the Basel III standardized approach for capital) and receive no haircut. Notably, the Fed chose not to include GSE-issued securities in Level 1, despite industry lobbying, on the basis that they are not guaranteed by the full faith and credit of the US government.

- Level 2A assets generally include assets that would be subject to a 20% risk-weighting under Basel III and includes assets such as GSE-issued and -guaranteed securities. These assets would be subject to a 15% haircut which is similar to the treatment of such securities under the BCBS version.

- Level 2B assets include corporate debt and equity securities and are subject to a 50% haircut. The BCBS and US version treats equities in a similar manner, but corporate debt under the BCBS version is split between 2A and 2B based on public credit ratings, unlike the US proposal. This treatment of corporate debt securities is the direct impact of DFA's Section 939 (i.e., the removal of references to credit ratings) and further evidences the conservative bias of US regulators' approach to the LCR.

The proposal requires that the LCR be at least equal to or greater than 1.0 and includes a multiyear transition period that would require: 80% compliance starting 1 January 2015, 90% compliance starting 1 January 2016, and 100% compliance starting 1 January 2017.

Lastly, the proposal requires both sets of firms (large bank holding companies and regional firms) subject to the LCR requirements to submit remediation plans to U.S. regulators to address what actions would be taken if the LCR falls below 100% for three consecutive days or longer.

Key URLs: To learn more about the capital requirements of U.S. depository institutions see www.fdic.gov, www.occ.treas.gov, www.federalreserve.gov/regulations/default.htm

Unit 5. International banking services

Traditionally the role of banks in providing services to multinational companies has been emphasized as the main feature of international banking, but as many banks have expanded overseas, their customer provision now spans the full spectrum of services ranging from niche retail banking products to wholesale investment and commercial banking activity.

Cash management services include:

1. Controlled disbursement accounts. These current (or chequing) accounts are debited early each day so that firms get an up-to-date insight into their net cash positions.

2. Account reconciliation services. A current account feature that provides a record of the firm's cheques that have been paid by the bank.

3. Wholesale lockbox facilities whereby a centralized collection service for corporate payments is used to reduce the delay in cheque payment and receipt (i.e., clearing).

4. Funds concentration. Redirects funds from accounts in a large number of different banks or branches to a few centralized accounts at one bank.

5. Electronic funds transfer. Includes overnight wholesale payments via a variety of different mechanisms depending on the country in which the bank is based. International banks conduct automated transmission of payments messages by the Society for Worldwide Interbank Financial Telecommunication (SWIFT), an international electronic message service owned and operated by US and European banks that instructs banks to make various wholesale payments.

6. Cheque deposit services. Encoding, endorsing, microfilming and handling cheques for customers.

7. Electronic sending of letters of credit. Allows corporate clients to access bank computers to initiate letters of credit.

8. Treasury management software. Allows efficient management of multiple currency portfolios for trading and investment services.

9. Computerized pension fund services.

10. Online corporate advisory and risk management services.

11. Electronic data interchange (EDI). An advanced application of electronic messaging that allows businesses to transfer and transact invoices, purchase orders, shipping notices and so on automatically, using banks as clearinghouses.

Credit facilities. Large companies often have to decide whether they are going to raise funds in the domestic or foreign currency. The main point to emphasize is that both short- and longer-term borrowings, whether they relate to standard loan facilities or the issue of short- or longer-term debt instruments, can be denominated in either local or foreign currency.

Short-term financing. Large firms can also raise short-term funds in the capital markets by issuing various types of short-term paper.

The US commercial paper market the largest in the world and is the main way (outside bank credit) that large firms raise short-term finance. *Commercial paper* issues denominated in currency outside the country of issue (such as a Yen or Eurocommercial paper issue made London) are known as Eurocommercial paper. Commercial paper issues are often preferred to bank cred

especially when large firms have better credit ratings than banks and this mean that the former can borrow on cheaper terms. As only a handful of international banks have the highest credit rating his means that many large firms - such as General Moto and Coca-Cola - are perceived as being more creditworthy than the banks will which they do business.

Euronotes are another type of instrument that large firms can issue to raise short term funds. They are unsecured debt securities with interest rates based on interbank rates (mainly LIBOR - the London Inter Bank Offered Rate is the rate banks charge for lending wholesale funds to one another). These instruments typically have one-, three- or six-month maturities although they are often rolled-over as a form of medium-term financing. In the case of Euronotes, commercial ban usually underwrite the issue of these instruments guaranteeing an issue price Banks and other companies purchase these as part of their investment portfolios

In addition to the aforementioned types of short-term financing there are numerous other types of financing techniques that companies can use to raise short-ten finance. Recently, many large firms have developed their repo (repurchase agreement) activities. A repo deal involves pledging collateral (usually government bonds or some low-risk instrument) in return for short-term wholesale funds. At set date, the funds will be repaid and the collateral 'released'.

Long-term financing. Companies also have to raise long-term finance (for over one year) in order to finance long-term investments. Large companies have access to a broad array c credit facilities including overdraft and both secured and unsecured lending facilities. For large lending requirements companies can borrow via the syndicate lending market. In addition, the largest companies can also issue bonds

Firms of all sizes have a broad array of credit facilities available for use in financing their operations. These range from standard loan facilities that may be fixed or floating rate, secured or unsecured, and can have short- to long-term maturities. In many respects these types of loan facilities are not really any different from consumer loans apart from their size. Companies also, of course, have access to on-going overdraft facilities to meet short-term financing needs. In addition to these standard products, larger companies will have access to Eurocurrency markets. The Eurocurrency market is essentially a high-volume, low- risk borrowing and depositing market. The main segment of the market is the interbank market where a relatively small number of large commercial banks undertake deposit and lending activities. Other important participants include companies and governments who use the market to fund short-term deficits and invest short-term surpluses. Various other financial institutions, such as investment banks, also use the market to fund large-scale holdings of securities through pledging these in repurchase (repo) agreements.

Commitments relate to services where a bank commits to provide funds to a company at a later date for which it receives a fee. Such services include unused overdraft facilities and the provision of credit lines. Banks also provide facilities that enable companies to raise funds by issuing marketable short-term instruments such as commercial paper, Euronotes and (for longer maturities) medium-term notes. In the United States many large companies issue commercial paper to raise short-term funds and these facilities are almost always backed-up by a line of credit from a bank. In other words, the bank has a commitment to provide credit in case the issuance of commercial paper is not successful.

Guarantees relate to where a bank has underwritten the obligations of a third party and currently stands behind the risk of the transaction. Default by a counterparty on whose behalf a guarantee has been written may cause an immediate loss to the bank. Examples include such things as a

standby letter of credit. This is an obligation on behalf of the bank to provide credit if needed under certain legally pre-arranged circumstances. Commercial letters of credit are widely used in financing international trade. This is a letter of credit guaranteeing payment by a bank in favor of an exporter against presentation of shipping and other trade documents. In other words it is a guarantee from the importers' bank ensuring that payment for the goods can be made.

Syndicated loans are a special category of loans in which an arranger, or group of arrangers, forms a group of creditors on the basis of a mandate to finance the company (or government) borrower. Large firms typically chose this type of loan primarily because the required loan size is too great to be obtained from one bank. Every syndicate member has a separate claim on the borrower, although there is only a single loan agreement contract.

Debt finance via bond issuance. Large companies can also raise funds in the capital markets by issuing debt instruments known as bonds. Bonds are simply contracts between a lender and borrower by which the borrower promises to repay a loan with interest. Typically, bonds are traded in the market after issue so their price and yields vary.

Eurobonds are defined as securities that are issued, and largely sold, outside the domestic market of the currency in which they are denominated. Eurobonds are similar in many respects to domestic corporate bonds consisting of largely fixed- rate, floating-rate and equity-related debt (convertibles) with maturities usually around 10-15 years. Unlike domestic corporate bonds (that are denominated in the home currency and issued in the home market), the Eurobond market is subject to lower regulation and is instead effectively self-regulated by the Association of International Bond Dealers. *Foreign bonds* - denominated in the currency of the country into which a foreign entity issues the bond. For instance a yen-denominated bond issued in Japan by a US firm is (a foreign bond) known as a Samurai bond. Similarly, a UK firm issuing a dollar bond in the US is known as a Yankee bond, and a French firm issuing a sterling bond in the UK is known as a Bulldog bond. *Global bond* is similar to a Eurobond but it can be offered within the country whose currency is used to denominate the bond.

The traditional (or plain vanilla) bond just pays a fixed rate semi-annual coupon over the life of the bond and the last payment will include both the final coupon payment and the repayment of principal (which is the par value of the bond). In addition, the coupon can be set at a floating rate, usually relating to LIBOR or some other variable market rate. Both bond investors and issuers are exposed to interest rate risk since they are locked into either receiving or paying a set coupon rate over a specified period of time. For this reason, various types of bonds offer additional redemption features in order to minimize these risks. For example, there are callable bonds that give the issuer the right but not the obligation to redeem their issue of bonds before the bond's maturity date. In this case the issuer of the bond has to pay the bondholders a premium to compensate the holder for the fact that the bond may be redeemed before maturity. Typically, an issuer will redeem its bonds when current interest rates are lower than that being paid on its bonds - so the firm could redeem its bonds and make a new issue at a lower coupon rate. There are also puttable bonds that give holders the right to sell back the bonds to the issuer at a predetermined price and date. Another type of bond is the convertible bond that gives holders the right but not the obligation to convert their bonds into a predetermined number of shares at a set date before maturity.

Asset-based finance encompasses both *leasing* and *hire purchase* and the main difference between them is that in the former the asset remains the property of the leasing company at the end of the contract, where in the case of hire purchase the firm making payments obtains

ownership. Hire purchase agreements result in the purchaser of the goods building up ownership over a pre-determined period. On final payment the goods belong to the individual or firm making the payments. Leasing products are similar, but the legal ownership of the goods remain with the lessor. More formally, a lease is an agreement where the owner conveys to the user the right to use equipment and (say) vehicles in return for a number of specified payments over an agreed period of time.

Capital or lease finance - a standard finance lease is defined as one which transfers substantially all the risks and rewards inherent in the ownership of the asset to the lessee (the lessee is the user of the leased asset). The risks include any loss in value of the asset value through such things as obsolescence, unsatisfactory performance, wear and tear, and so on. Under the terms of a finance lease, the lessor (the person who rents land or property to a lessee) usually receives lease payments amounting to the full cost of the leased asset, together with a return on the finance that has been provided. This means that the lessor is not exposed to any financial risks associated with the residual value of the asset. Under a finance lease there is no statutory obligation to have a purchase option over the leased asset.

Operating lease - is any lease other than a finance lease. As such operating leases embrace a broad range of different types of lease in which a substantial proportion of risks and rewards associated with ownership of the asset remain with the lessor. Operating leases have two main features. First, they have a non- cancellable lease period that is much shorter than the life of the asset. Second, the lessee has little or no interest in the residual value of the asset at the end of the lease. The residual guarantees from the proceeds of the sale of the asset - which is a hallmark of many finance leases (think about car finance leases) – are absent in the case of standard operating leases. Again there is no statutory obligation to have a purchase option over the leased asset.

Hire purchase differs from lease contracts in that customers pay for the cost of the asset, together with the financing charges, over the hire period and take legal title on the equipment at the time of final payment (or there may be a nominal purchase option fee at the end of the payment period). For tax and accounting purposes the customer in a hire purchase agreement is treated as the owner from the outset and this allows them to claim capital allowances for taxation purposes and they can also report the asset on the company's balance sheet.

Foreign exchange transactions and trade finance. Banks can offer their corporate clients a variety of tools to manage their foreign exchange and interest rate risk. *Forward foreign exchange transactions* - which are contracts to pay and receive specified amounts of one currency for another at a future date at a pre-determined exchange rate. Default by one party before maturity exposes the other to an exchange risk. *Currency futures* - these are contracts traded on exchanges for the delivery of a standardized amount of foreign currency at some future date. The price for the contract is agreed on the purchase or selling date. As with forward contracts, gains or losses are incurred as a result of subsequent currency fluctuations. *Currency options* - these allow the holder of the contract to exchange (or equally to choose not to exchange) a specific amount of one currency for another at a predetermined rate during some period in the future. For a company buying an option the risk lies in the ability of the counterparty not to default on the agreement (credit risk). For the bank writing the option the risk lies in its exposure to movements in the exchange rate between the two currencies (a market risk). *Interest rate options* - these are similar to currency options. The buyer has the right (but not the obligation) to lock into a pre-determined interest rate during some period in the future. The writer of the option (typically a bank) is exposed to interest rate movements, the buyer to counterparty default. *Interest rate caps and collars* - a bank (or other lender) guarantees the maximum rate (cap) or maximum and minimum

rate (collar) on variable rate loans. *Interest rate and currency swaps* - in a currency swap two parties contract to exchange cash flows (of equal net present value) of specific assets or liabilities that are expressed in different currencies. In the so-called 'plain vanilla' interest rate swap two parties contract to exchange interest service payments (and sometimes principal service payments) on the same amount of indebtedness of the same maturity and with the same payment dates. One party provides fixed interest rate payments in return for variable rate payments from the other, and vice versa.

Key URL: To view the services offered and the recent financial history of the Bank of America, one of the best known and largest banks in the US, see www.bankofamerica.com

A letter of credit is a legal banking agreement that allows importers to offer secure terms to exporters. The letter of credit from a bank guarantees to the seller that if various documents are presented, the bank will pay the seller the amount due. It is simply an undertaking given by the issuing bank on behalf of the buyer to pay a seller a specific amount of money on presentation of specified documents representing the supply of goods within certain time limits. These documents must conform to terms and conditions set out in the letter of credit and documents must be presented at a specified place. An irrevocable letter of credit provides a guarantee by the issuing bank in the event that all terms and conditions are met by the buyer. A revocable letter of credit, in contrast, can be cancelled or altered by the buyer after it has been issued by the buyer's bank.

Step 1 Buyer and seller agree terms, including means of transport, period of credit offered, latest date of shipment and other relevant terms to be used.

Step 2 Then the buyer applies to the bank for a letter of credit to be issued.

Step 3 The bank evaluates the buyer's credit rating, and may require a cash cover and/or a reduction of other lending limits.

Step 4 The issuing bank will issue a letter of credit. This will be sent to the advising bank by airmail, telex or SWIFT.

Step 5 The advising bank will establish authenticity of the letter of credit using signature books or test codes, then informs the seller (beneficiary).

Step 6 The advising bank may confirm the letter of credit, i.e., add its own payment undertaking.

Step 7 The seller should check that the letter of credit matches the commercial agreement, and that the terms and conditions can be satisfied in good time.

Step 8 If there is anything that may cause a problem, an amendment should be requested.

Step 9 The seller ships the goods and gathers together all the documents asked for in the letter of credit, such as the invoice and transport document.

Step 10 Before presenting the documents to the bank, the seller should check them for discrepancies against the letter of credit, and correct the documents where necessary.

Step 11 The documents are presented to a bank, often the advising bank.

Step 12 The advising bank checks the documents against the letter of credit. If the documents are compliant, the bank pays the seller and forwards the documents to the issuing bank.

Step 13 The issuing bank will also check the documents. If they are in order the issuing bank will reimburse the seller's bank immediately.

Step 14 The issuing bank debits the buyer and releases the documents (including transport document), so that the buyer can claim the goods from the carrier.

Key URLs: You may explore the use of standby credit letter at such sites as www.bofabusinesscapital.com/products and www.crfonline./org/orc/cro/cro-9-1.html

In a forfaiting transaction, the exporter agrees to surrender the rights to claim for payment of goods or services delivered to an importer under a contract of sale, in return for a cash payment from a forfaiting bank. The forfaiting bank takes over the exporter's debt and assumes the full risk of payment by the importer. The exporter is thereby freed from any financial risk in the transaction and is liable only for the quality and reliability of the goods and services provided. The buyer's obligation is usually supported by a local bank guarantee and can in certain cases be guaranteed by the government. As in the case of letters of credit, the documentation requirements are relatively straightforward. This requires evidence of the underlying transaction, copies of shipping documents and confirmations from the bank guaranteeing the transaction. Forfaiting transactions can be on a fixed or floating interest rate basis. The exporter will receive the funds upon presentation of all the relevant documents, shortly after shipment of goods, and payment will usually be made in the form of a letter of credit.

Countertrade is a general term used to cover a variety of commercial mechanisms for reciprocal trade. The main types of countertrade include:

• simple barter - direct exchange of physical goods between two parties;

• switch-trading - involves transferring use of bilateral balances from one country to another.

• buy-back - this is an agreement where the exporter of plant or equipment agrees to take payment in the form of future production from the plant;

• counter-purchase - involves an initial export whereby the exporter receives 'payment' in goods unrelated to what the exporter manufactures;

• offset - refers to the requirement of importing countries that their purchase price be offset in some way by the seller, this can include requirements to source production locally, to transfer technology or to increase imports from the importing country.

Increasing role of foreign banks in domestic banking systems. Over recent years there has been a substantial growth of foreign bank activity in many banking markets. The increased presence of foreign banks reflects the global liberalization of financial system that has encouraged new entry plus the desire of banks to seek out new sources of profit internationally. The growth of new markets in China, Southeast Asia and in the transition economies of Eastern Europe has prompted a wave of foreign bank expansion. In addition, as non-financial companies seek to source production and distribution facilities in a global marketplace this has also encouraged banks to follow suit. Banks not only operate in many different countries but they also do locate various parts of their operations in various parts of the world - call and IT centers in India being a noticeable example. Table 4.3 shows the structural features of banking systems throughout the world and highlights the importance of foreign banks in domestic systems. It can be seen that in various countries such as New Zealand, Luxembourg and Botswana nearly all the banks are foreign - for example in New Zealand foreign banks (mainly Australian) control over 99 per cent of the domestic banking system. In the United Kingdom foreign banks account for

slightly below 53 per cent of total banking sector assets. Much of the foreign bank activity undertaking in domestic banking systems relates to traditional commercial banking business, namely deposit and loans business. (For instance, in Chapter 14 we note that foreign banks operating in the new EU Member States of central and Eastern Europe mainly operate in the domestic retail market and compete head-on with domestic operators.) Remember that at the start of this chapter we explained that international banking relates to banks doing business across borders and/or with foreign currencies and that this can encompass all types of banking activity - retail banking, corporate banking, investment banking, and so on. The focus of most of this chapter has been on banks providing international banking services to large firms as the products and services on offer tend to be different from those provided to domestic retail and small firm customers. However, one should always be aware that international banking (despite generally being commonly viewed as banking relationships with large multinational companies) also includes retail and other commercial banking business in foreign markets and that these activities barely differ from domestic retail operations.

Key URLs: To stay abreast of developments in international banking around the globe financial managers often consult such sources as the Bank for International Settlements at www.bis.org and the World Bank and International Monetary Fund libraries at jolis.worldbankimflib.org/external.htm.

Unit 6. International Banking risks

Risks are part of any economic activity. In financial services they assume a particular relevance because the business of banking is linked to uncertain future events and the risk of a bank failure is always a possibility in a system essentially run on confidence. Banks have to face a number of often interrelated risks, such as:

Credit risk

Credit risk is defined as 'the potential that a bank borrower or counterparty will fail to meet its obligations in accordance with agreed terms'.

Capital markets value the credit-standing of firms through the rate of interest charged on bonds or other debt issues, changes in the value of shares, and ratings provided by the credit rating agencies. However, modern banks also face credit risk in a number of other financial instruments that are typically off-balance sheet (such as for derivative products and guarantees). This particular type of credit risk is sometimes referred to as counterparty risk.

The traditional lending function involves four different components:

originating (the application process)

funding (approving the loan and availing funds)

servicing (collecting interest and principal payments)

monitoring (checking on borrowers' behaviour through the life of the loan).

However, agency problems may arise as a result of functions (1) and (4). Agency problems imply potential contractual frictions between principals (lenders) and agents (borrowers) because of asymmetric information, moral hazard and adverse selection. Banks need to account for these problems while aiming to minimize losses in lending.

All banks have their own credit philosophy established in a formal written loan policy that must be supported and communicated with an appropriate credit culture.

If internal data are available, credit risk can be monitored by looking at the changes in the ratio: medium-quality loans/total assets ratio. The bank can choose to lower its credit risk by lowering this ratio. If the data on medium quality loans are not available, traditional proxies for credit risk include for instance:

total loans/total assets

non-performing loans/total loans

loan losses/total loans

loan loss reserves/total assets.

Therefore one should look at lead indicators such as:

loan concentration in geographic areas or sectors

rapid loan growth

high lending rates

loan loss reserves/non-performing loans (NPLs).

Another important credit-risk measure is the ratio of total loans to total deposits.

A diversification strategy. Diversification will decrease unsystematic or firm- specific credit risk. This is derived from 'micro' factors and thus is the credit risk specific to the holding of loans or bonds of a particular firm.

While the failure had major implications for the banks concerned, the fact that a number of banks were exposed to losses - rather than just one bank - highlighted the advantages of loan diversification by international banks.

While diversification decreases firm-specific credit risk, banks remain exposed to systematic credit risk.

Key URLs: For an overview of modern loan risk evaluation techniques see, for example, www.riskmetrics.com/sitemap.html and www.defaultrisk.com.

For more information about loan accounting and disclosure of problem loans in an international setting, see www.bis.org/publ.

Interest rate risk

For banks, the exposure to interest rate risk, that is the risk associated with unexpected changes in interest rates, has grown sharply in recent years as a result of the increased volatility in market interest rates especially at the international level. However, not all banks' assets and liabilities are subject to interest rate risk in the same way. Important distinctions should be made between fixed rate assets and liabilities and rate-sensitive assets and liabilities.

Other banks' assets and liabilities can be categorized into non-earning assets (i.e., assets that generate no explicit income such as cash); and non-paying liabilities.

Traditional interest rate risk analysis compares the sensitivity of interest income to changes in asset yields with the sensitivity of interest expenses to changes in interest costs of liabilities. In particular, it is common to refer to the ratio of rate- sensitive assets to rate-sensitive liabilities: when rate-sensitive assets exceed rate-sensitive liabilities (in a particular maturity range), a bank is vulnerable to losses from falling interest rates. Conversely, when rate-sensitive liabilities exceed rate-sensitive assets, losses are likely to be incurred if market interest rates rise.

These traditional measures of interest rate risk have a number of limitations. Bank managers today use sophisticated measures of interest rate management such as the gap buckets analysis, maturity models and duration analysis. The two types of interest rate risk that banks may have to face: refinancing risk and reinvestment risk.

Liquidity (or funding) risk

A liquid asset may be defined as an asset that can be turned into cash quickly and without capital loss or interest penalty.

Liquidity risk is generated in the balance sheet by a mismatch between the size and maturity of assets and liabilities.

If a bank cannot meet depositor demands there will be a bank run, as depositors lose confidence and rush to withdraw funds. This may then make it difficult for the bank to obtain funds in the interbank market and before long a liquidity crisis will turn into a solvency crisis and possible failure. Hence it is common to distinguish two types of liquidity risk.

Day-to-day liquidity risk relates to daily withdrawals. This is usually predictable (or 'normal') because only a small percentage of a bank's deposits will be withdrawn on a given day. Very few institutions ever actually run out of cash because it is relatively easy for the bank to cover any shortage of cash by borrowing funds from other banks in the interbank markets.

A liquidity crisis occurs when depositors demand larger withdrawals than normal. In this situation banks are forced to borrow funds at an elevated interest rate, higher than the market rate that other banks are paying for similar borrowings. This is usually unpredictable (or 'abnormal') and can be due to either a lack of confidence in the specific bank, or some unexpected need for cash. Liquidity crises can ultimately hinder the ability of a bank to repay its obligations and in the absence of central bank intervention or deposit insurance it could result in 'a run' and even the insolvency of the bank.

Typically banks can reduce their exposure to liquidity risk by increasing the proportion of funds committed to cash and readily marketable assets, such as Treasury bills (T-bills) and other government securities, or use longer-term liabilities to fund the bank's operations.

One measure banks can use to monitor liquidity risk relates short-term securities, a proxy for a bank's liquidity sources, to total deposits - this provides an approximate measure of a bank's liquidity needs.

Another traditional ratio of liquidity risk is the loan/deposits ratio. This ratio tends to focus on the liquidity of assets on the balance sheet. A high ratio of short-term securities/deposits and a low loan/deposits ratio indicate that the bank is less risky but also less profitable.

There are, however, other indicators that, are more suited to proxy a modern bank's need for liquidity and based on actual or potential cash flows to meet cash needs. Key URLs: To learn more about loan securitization see especially www.securitization.net and www.fdic.gov.

Foreign exchange risk

As banking markets become more global, the importance of international activities in the form of foreign direct investment and foreign portfolio investments has increased sharply. However, the actual return the bank earns on foreign investment may be altered by changes in exchange rates. Changes in the value of a country's currency relative to other currencies affect the foreign exchange rates. Like other prices, exchange rates (that essentially reflect the price of currencies) tend to vary under supply and demand pressure.

Foreign exchange relates to money denominated in the currency of another nation or group of nations. Any firm or individual that exchanges money denominated in the 'home' nation's currency for money denominated in another nation's currency can be said to be acquiring foreign exchange. In addition, the transaction is also viewed as acquiring foreign exchange if the type of money being acquired is in the form of foreign currency notes, foreign currency bank deposits, or any other claims that are denominated in foreign currency. Put simply, a foreign exchange transaction represents a movement of funds, or other short-term financial claims, from one country and currency to another.

Foreign exchange can take many forms. It can be in the form of cash, funds available on credit cards, bank deposits or various other short-term claims. In general, a financial claim can be regarded as foreign exchange if it is negotiable and denominated in a currency other than that in which it resides.

Foreign exchange risk is the risk that exchange rate fluctuations affect the value of a bank's assets, liabilities and off-balance sheet activities denominated in foreign currency. A bank may be willing to take advantage of differing interest rates or margins in another country, or simply to invest abroad in a currency different from the domestic one. A bank that lends in a currency that then depreciates more quickly that its home currency will be subject to foreign exchange risk.

If the bank is net long in foreign assets it means it holds more foreign assets than liabilities. Conversely, the bank would be holding a net short position in foreign assets if it had more foreign liabilities than assets. To measure foreign exchange risk banks calculate measures of net exposure by each currency. It will be equal to the difference between the assets and liabilities denominated in the same currency. In the case above the bank is exposed to the risk that its net foreign assets may have to be liquidated at an exchange rate lower than the one that existed when the bank entered into the foreign asset/liability position.

Market (or trading) risk

Market risk is the risk of losses in on- and off-balance sheet positions arising from movements in market prices. It pertains in particular to short-term trading in assets, liabilities and derivative products, and relates to changes in interest rates, exchange rates and other asset prices.

General or systematic market risk and unsystematic or specific market risk.

In the case of bank lending, credit risk is the most important, but for banks’ lending to companies that are investing in securities then bank assessment of credit risk will be influenced by the hedge funds' exposure to market risk.

Important indicators of market risk in banking are:

- Book value assets/estimated market value of assets
- Book value of equity capital/market value of equity capital

- Market value of bonds and other fixed-income assets/book value of bonds and other fixed-income assets
- Market value of common and preferred stock per share.

Large banks perform VaR (Value-at-Risk) analysis to assess the risk of loss on their portfolios of trading assets while small banks measure market risk by conducting sensitivity analysis.

Country and sovereign risk

Country risk is the risk that economic, social and political conditions of a foreign country will adversely affect a bank's commercial and financial interests. It relates to the adverse effect that deteriorating macroeconomic conditions and political and social instability may have on the returns generated from overseas investments.

International lending always carries 'unusual' risks; however, it is generally accepted that a loan to a foreign government is safer than a loan to a private sector borrower.

Nonetheless, it is possible that even governments will default on debt owed to a bank or government agency. This is the sovereign risk and refers to the possibility that governments, as sovereign powers, may enforce their authority to declare debt to external lenders void or modify the movements of profits, interest and capital. Sovereign risk can result in the re-scheduling and re-negotiation of the debt, with considerable losses for the lending banks. These types of new agreements are usually obtained with the intervention of international organizations. The extreme case for sovereign risk is debt repudiation, when the government simply repudiate their debts and no longer recognize their obligations to external creditors.

To help investors measure country and sovereign risks, rating company agencies provide tables of sovereign (credit risk) ratings.

Operational risk

Another important risk in banking is operational risk. The risk of loss resulting from inadequate or failed internal processes, people and systems or from external events'. In general terms, this is the risk associated with the possible failure of a bank's systems, controls or other management failure (including human error).

The definition of operational risk given above includes technology risk.

Technology risk occurs when technological investments do not produce the anticipated cost savings in the form of either economies of scale or scope; this risk also refers to the risk of current delivery systems becoming inefficient because of the developments of new delivery systems.

Operational risk occurs whenever existing technology malfunctions or back- office support systems break down.

Basle II requiring banks to hold capital for such risks along with credit and market risk. Operational risk event types that the Basle Committee, in consultation with the industry, has identified as having the potential to result in substantial losses: Internal fraud, External fraud, Employment practices and workplace safety Clients, products and business practices, Damage to physical assets, Business disruption and system failures Execution, delivery and process management.

Off-balance sheet risk

Off-balance sheet (OBS) risk relates to the risks incurred by a bank in dealing with non-traditional banking activities such as financial derivative products (e.g., futures and options), guarantees and letters of credit. It is common to refer to the risks of these activities as OBS risk, but they nevertheless include all the main types of risk faced by banks including, credit risk, interest rate risk, exchange rate risk and liquidity risk.

Paradoxically, OBS activities were introduced to reduce the amount of risk taken by a business; but recent history has shown that while OBS can provide some protection against important risks like interest rate or currency risk, excessive OBS exposures due to mismanagement or speculative use of derivative instruments can result in spectacular losses.

Key URLs: For up-to-date comprehensive futures and options see www.wsj.com/free , for additional information about use of future contracts see www.cbot.com, www.cme.com and www.futuresweb.com.

Given the potential huge losses that can be derived from excessive OBS trading, the regulators' approach has been to incorporate OBS commitments (using an on- balance sheet or credit equivalent) in calculating bank capital adequacy requirements.

Other risks

Macro-risks are also known as environmental risks and some of them are common to all businesses. They can include the risk of an economic recession, a sudden change in taxation or an unexpected change in financial market conditions, due for example to war, revolution, stock market crashes or other factors. Additional examples include:

- Inflation risk;
- Settlement or payment risk - a risk typically faced in the interbank market; it refers to the situation where one party to a contract fails to pay money or deliver assets with another party at the time of settlement. It can include credit/default risk if one party fails to settle.
- Regulatory risk –
- Competitive risk –

Microeconomic risks are generally due to factors inside the bank, rather than external factors, such as:

- Operating risk;
- Legal risk;
- Reputation risk;
- Portfolio risk;
- Call risk.

Sometimes risks may be due to both internal and exogenous factors. Earnings risk, for example, is the risk that earnings may decline unexpectedly and this may be due to bad management or a change in laws and regulation.

Finally, it is worth mentioning management risk. This is the risk that management lacks the ability to make commercially profitable and other decisions consistently. It can also include the

risk of dishonesty by employees and the risk that the bank will not have an effective organization.

Capital risk and solvency

Capital risk should not be treated as a separate risk because all risks described in this chapter can potentially affect a bank's capital. In other words, excessive credit risk, interest rate risk, operational risk, liquidity risk, OBS risk, etc. could all result in a bank having insufficient capital to cover such losses.

A bank will be insolvent when it has negative net worth of stockholders' equity.

Therefore, capital risk refers to the decrease in market value of assets below the market value of its liabilities. In case of liquidation the bank would not be able to pay all its creditors and would be bankrupt.

Capital risk is closely tied to financial leverage (debt/equity) and banks are typically highly leveraged firms. It also depends on the asset quality and the overall risk profile of the institution. One should realize by now that the amount of capital a bank holds is positively related to the level of risk, that is, the more risk taken, the greater the amount of capital required. Banks with high capital risk (that is, banks that have low capital to assets ratios) also normally experience greater periodic fluctuations in earnings.

Capital risk, therefore, is the same as the risk of insolvency or the risk of failure.

The following are some early indicators of failure risk:

- The interest rate spread between market yields on bank debt issues and market yields on government securities of the same maturity: if the spread increases then investors believe that the bank in question is becoming more risky relative to government debt - investors in the market expect a higher risk of loss from purchasing and holding the bank's debt.
- The ratio of stock price per share to annual earnings per share: the ratio will often fall if investors come to believe that a bank is undercapitalized relative to the risks it has taken on.
- The ratio of equity capital to total assets: a low level of equity relative to assets may indicate higher risk exposure for debt holders and shareholders.
- The Basle Tier 1 (equity capital to risk-weighted assets) and Basle Tier 2 (total capital to risk-weighted assets) ratios: indicate how well equity capital and total capital, respectively, relate to the minimum (4 per cent and 8 per cent) regulatory requirements.

Key URLs: Many of the types of risk discussed in this section have been developed and refined by the Bank for International Settlements at www.bis.org/publ/bcbs/107.htm

Unit 7. Banking risk management

In Unit 6 we reviewed the main risks faced by financial institutions; for each class of risk banks need to estimate the expected losses and the probability of unexpected losses, so that an appropriate amount of capital may be held. The essence of modern banking is the measuring, managing, and accepting of risk and the heart of bank financial management is risk management. There are three steps:

• assess how other similar individual banks and groups of banks have made their risk/return decisions;

• compare the bank's performance measure to those of similar banks;

• set reasonable objectives against the backdrop of a bank's historic performance, the performance of its peers and its external environment.

These steps, in turn, are essentially based on the following analysis:

• stock market expectations (if the bank is quoted);

• trend analysis of past performance;

• trend and comparative analysis of peers' performance allowing for factors such as business mix, available production technology and external environment (macroeconomic and regulatory).

Regulatory authorities monitor banks' behavior and try to ensure that they achieve a good CAMELS rating. Banks are rated 1 (essentially sound) to 5 (basically insolvent). Banks with ratings of 1 or 2 are considered to present few, if any, supervisory concerns, while banks with ratings of 3, 4, or 5 present moderate to extreme degrees of supervisory concern. CAMELS summarizes the following elements:

• adequate capital (C);

• good asset quality (A);

• competent management (M);

• good earnings (E);

• sufficient liquidity (L);

• sensitivity to market risk (S)

A bank's CAMELS rating is highly confidential.

Credit risk management

Traditionally, banks have monitored credit risk through a number of standard procedures, such as ceilings placed on the amount lent to any one customer and/or customers within a single industry and/or customers in a given country. While such procedures have long been a central feature of bank lending, credit risk measurement does raise several important issues:

1. The size of the loan is not sufficient to measure the risk because risk has two dimensions - the quantity of risk, or the amount that can be lost, plus the quality of the risk, which is the likelihood of default.

2. The cumulated credit risk over a portfolio of transactions, either loans or market instruments, is difficult to quantify because of diversification effects. If the defaults of all customers tend to occur at the same time, the risk is much more important than if those default events are not related (or independent).

Banks are increasingly facing credit risk (or counterparty risk) in various financial instruments other than loans, including acceptances, interbank transactions, trade financing, foreign exchange transactions, financial futures, swaps, bonds, equities, options, in the extension of commitments and guarantees, and the settlement of transactions.

Ways to measure credit risk more accurately, a need which has recently been strongly driven by a variety of factors:

• the growth of the securitized loan and secondary loan trading market;

• recent evolution of credit derivatives business;

• increased emphasis on risk-adjusted performance measurement systems and the desire to trade credit risk;

• the desire of companies to manage the risk/return characteristics of their debt funding more effectively.

Managing the lending function

One key step in this process is pricing the loan, where the 'price' (loan rate) should be:

$$R^L = \frac{1+r}{1-d} - 1 \qquad (7.1)$$

$\mathbf{R^L}$ *= profitable loan rate; r = risk-free interest rate (i.e., the rate of return on a 'risk free' investment, such as government bonds); d = expected probability of default*

There are some key factors that affect a loan's expected return:

1) interest rate on the loan;

2) fees relating to the loan;

3) credit risk premium on the loan;

4) collateral backing of the loan;

5) other non-price terms (e.g., clauses and conditions on the use of the loan).

The interest rate charged on a loan is:

$$1 + k \quad 1 + f + \quad MR \qquad 7.2$$

κ = contractually promised gross return on the loan per £ lent; f = administration fee; L = base lending rate; M = market premium; b = compensating balance requirement; R = reserve requirement

Another factor that influences the price of the loan is the presence of any collateral. Loans availability in retail markets may not be linked simply to the loan price, but restricted to a selected category of borrowers (credit rationing).

The information asymmetry problems. Credit reference agencies. Credit reference. Credit scoring. To obtain information on a potential borrower, banks will initially adopt a qualitative approach, which involves asking the applicant a number of questions. They will then allocate points (weights) to the answers. Personal judgment on behalf of loan officers based on the ‘five Cs' (character, cash flow, capital, collateral and conditions) is now commonly replaced by a quantitative approach based on the use of the information provided by the applicant to calculate the probability of default. Using a statistical program, creditors compare this information to the credit performance of consumers with similar profiles. A credit scoring system awards points for

each factor that helps predict who is most likely to repay a debt. Credit scoring can be applied both to individuals and to corporations; obviously the variables used to define the scoring system will differ.

Linear probability models

Loans are divided in two groups, those that defaulted ($Z_i = 1$) and those that did not ($Z_i = 0$). These observations are then egressed on a set of j variables reflecting quantitative information about the i^{th} borrower.

$$Z_i = \sum_{j=1}^{n} \beta_j X_{ij} + \varepsilon \qquad (7.3)$$

Logit (and Probit) models

These constrain the cumulative probability of default on a loan between zero and one and assume the probability of default to be logistically distributed (or have a normal distribution in the Probit case).

Linear discriminant models

These models (which include the Altman Z-score model) divide borrowers according to their derived Z-scores into high or low default risk classes, contingent on their observed characteristics (X_j).

The first step in credit risk management is diversification. By diversifying their loan portfolios, i.e., by owing assets whose returns are not statistically correlated, banks can reduce the impact of any failure by diversifying away the unsystematic risk. When assessing the credit risk of the aggregate loan portfolio, bank managers need to calculate the following:

- the expected loss, for each loan and for the whole portfolio, over a specific time-horizon;
- the unexpected loss for each loan and for the whole portfolio (i.e., the volatility of loss);
- the probability distribution of credit loss for the portfolio and assess the capital requirement, for a given confidence level and time-horizon.

There are three factors that drive expected and unexpected losses on a credit portfolio:

- customer default risk - determined by the risk-grade profile of the portfolio;
- exposure - the amount that is likely to be outstanding at the time of default;
- loss given default - determined by the level of security cover, the effectiveness of the recovery process and the credit cycle.

The main problem with applying portfolio theory to banks' loan portfolios is that, in the vast majority of cases, bank loans are non-tradable assets.

Managing interest rate risk

There are two broad management approaches that are used to measure interest rate risk and these are known as 'gap' and 'duration' analysis.

Gap analysis. The 'gap' refers to the difference between interest rate sensitive assets and interest rate sensitive liabilities over a specific time-horizon. If the interest rate sensitive liabilities are

greater than the interest rate sensitive assets, then an increase in interest rates will reduce a bank's profit and vice versa. In the basic gap analysis, the focus is on the maturity of the rate-sensitive assets and liabilities.

$$GAP = RSA - RSL \qquad (7.4)$$

RSA = rate-sensitive assets; RSL = rate-sensitive liabilities.

One extension of the basic gap model is the maturity bucket approach. Each of the bank assets and liabilities is classified according to its maturity and placed into 'maturity buckets'. Analysts compute both incremental and cumulative gap results. An incremental gap is defined as RSA - RSL in each time bucket; the cumulative gap is the cumulative subtotal of the incremental gaps.

The maturity bucket approach allows bank managers to concentrate on the cumulative gaps for the different time buckets. One extension is the maturity gap (M Gap).

$$M\ Gap\ =\ W_A RSA\ -\ W_A RSL \qquad (7.5)$$

W_A = *weighted average rate-sensitive assets;* W_A = *weighted average rate-sensitive liabilities*

Gap analysis was one of the first methods developed to measure a bank's interest rate risk exposure, and continues to be widely used by banks. Despite the extensions, the gap model has been defined as 'naive' and has been subject to a number of criticisms as the approach:

• fails to take into account the market value effect;

• suffers from over aggregation, that is, it fails to consider for intra-bucket effects;

• fails to deal with run-offs, which is the periodic cash flow of interest and principal amortization payments on long-term assets;

• ignores banks' exposure to pre-payment risk;

• ignores differences in spreads between interest rates that could arise as the level of market interest rates changes;

• does not take into account any changes in the timing of payments that might occur as a result of changes in the interest rate environment;

• generally oversimplifies the complexity of a bank's ALM.

For these reasons, gap analysis provides only a rough approximation of the actual impact of changes in interest rates.

Duration analysis takes into account the average life of an asset (or liability) rather than its maturity. The duration of a coupon bond is expressed by the formula (known as Macaulay duration):

$$D_1 = 1 * \frac{C_n/(1+Y)^1}{V} + 2 * \frac{C^2/(1+Y)^2}{V} + \cdots + n * \frac{C_n + \frac{P_n}{(1+Y)^1}}{V} \qquad (7.6)$$

Y = the bond's internal yield or yield-to-maturity (YTM); Cj = annual coupon payment in year 1; Pn = principal payment; n = number of years to maturity; V = current market value of the bond

The formula provides the weighted average payment stream, where the maturity of each payment is weighted by the fraction of the total value of the bond accounted for by the payment.

Using formula it is possible to compute the duration of the entire asset and liability portfolios of a bank. By matching the duration of assets and liabilities, movements in interest rates should have roughly the same effect on both sides of the balance sheet. Duration gap (DG) measures the mismatch between the duration of a bank's assets and its liabilities.

$$DG = \left(D_A - \frac{L}{A} D_L\right) \qquad (7.7)$$

A = market value of assets L = market value of liabilities; D_A - duration of assets

D_L = duration of liabilities; L/A = leverage or gearing ratio;

The impact of a change in interest rates on the value of a bank's equity can be calculated from equation as follow:

$$\Delta E = -DG \left(\frac{\Delta r}{(1 + r)}\right) A \qquad (7.8)$$

ΔE *= change in the value of bank equity; DG = duration gap;* **Δr** *= change in interest rate; A = market value of assets*

There are a number of problems arising from the use of the duration measure:

- Convexity
- Data requirements
- Focuses on only reprising risk.
- The simplifying assumptions.

Key URL: For assistance in calculating regular and modified duration the calculators are available at www.investoredia.com/calculator

Simulation approaches. These simulation techniques typically involve detailed assessments of the potential effects of changes in interest rates on earnings and economic value by simulating the future path of interest rates and their impact on cash flows. Static simulations. Dynamic simulations.

Managing liquidity risk

The holding of liquid assets is necessary as it:

- reassures creditors that the bank is safe and able to meet its liabilities;
- signals to the market that the bank is prudent and well managed;
- ensures that all lending commitments can be met;
- avoids forced sale of the bank's assets;
- avoids having to pay excessive borrowing costs in the interbank markets;
- avoids central bank borrowing.

Banks can minimize withdrawal risk by diversifying funding sources. Prudent banks will also seek to minimize their volatility ratio:

$$VR = \frac{VL - LA}{TA - LA} \qquad (7.8)$$

VL = volatile liabilities; LA = liquid assets; TA = total assets

Prudent banks will have a volatility ratio lower than zero. In measuring and managing a bank's liquidity exposure, the following techniques may be used:

- cash flow projections of daily liquidity positions
- cash flow projections of daily liquidity sources
- scenario analysis and simulation models
- liquidity gap analysis

The liquidity gap is defined as the difference between net liquid assets and unpredictable (or volatile) liabilities. Banks typically will examine the maturity profile of their assets and liabilities to identify mismatches in liquidity that require funding.

$$\text{L Gap} = \text{NLA} - \text{VL} \qquad (7.9)$$

NLA = net liquid assets; VL = volatile liabilities; The financing gap (F Gap) is:

$$\text{F Gap} = \text{Average loans} - \text{Average deposits}$$

If the F Gap is positive, the bank needs cash and will have either to sell some assets or borrow on the interbank market. The bigger the F Gap, the more a bank needs to borrow and the greater its exposure to liquidity risk.

Managing market risk

Two approaches for calculating the capital charge to cover market risks: the standardized approach and the internal models approach. The central components of market risk management are the Risk-Adjusted- Return on Capital (RAROC)

$$\textbf{RAROC} = \frac{Revenues - Cost - Expected\ losses}{Total\ Equity\ Capital} \qquad \textbf{(7.10)}$$

And Value-at-Risk (VaR)

$$VaRx = Vx \left(\frac{dV}{dP}\right) \Delta Pt \qquad (7.11)$$

Vx = the market value of portfolio x; dV/dP = the sensitivity to market prices movements per £ of market value; Δ *Pt = the adverse price movement over a specific time horizon t (under the Basle Agreement t = 10 days)*

The calculation of VaR specified in equation involves several assumptions:

- prices of financial instruments are assumed to be normally distributed;
- price changes are assumed to be statistically uncorrelated;
- the volatility (standard deviation) of the price or rate changes is stable over time;
- the interrelationship between two different price movements follows a joint normal distribution.

VaR analysis allows various options for the choice:

• parametric methods;

• non-parametric methods;

• simulation approaches (such as using Monte Carlo techniques).

A portfolio can be divided according to its sensitivity to certain risk:

a) Delta risk (absolute price risk).

b) Gamma risk (convexity risk).

c) Vega risk (volatility risk).

d) Theta risk (time-decay risk).

e) Rho risk (discount risk).

To arrive at a VaR, the portfolio components are disaggregated according to the above risk factors, netted out and then re-aggregated.

Some authors have expressed the following concerns over the use of VaR:

• VaR does not give the precise amount that will be lost.

• The assumption that financial returns are normally distributed and uncorrelated may not hold.

• VaR measures are seemingly easy to manipulate.

• It does not provide an indication of the probability of a bank failure.

• If all traders are using the same approach to minimize market risk, this can result in increased liquidity risk.

Given the limitations of VaR highlighted above, most banks also employ scenario analysis and stress testing.

Managing operational risk

The Basle II framework proposes three methods for calculating operating risk capital charges, which present increasing sophistication and risk sensitivity:

1 the basic approach,

2 the standardized approach,

3 the internal measurement approach.

The basic approach allocates capital using a single indicator (Gross Income) as a proxy for a banks' overall operational risk exposure.

In the standardized approach, a bank's activities are divided into a number of standardized business units and business lines. This proxy is then used as an indicator for the operational risk within each business line. Within each business line, the capital charge is calculated by multiplying a bank's broad financial indicator by a 'beta' factor. The total capital charge is the sum of the capital charges in each business line.

The internal measurement approach allows individual banks to use internal loss data. However, the methods for calculating the capital charge would be determined by the regulators.

Structure of the internal measurement approach In the internal measurement approach, a bank's activities are categorized into a number of business lines, and a broad set of operational loss types are defined and applied across business lines. Within each business line/loss type combination, the supervisor specifies an exposure indicator (El) which is a proxy for the size (or amount of risk) of each business line's operational risk exposure. For each business line/loss type combination, banks measure, based on their internal loss data, a parameter representing the probability of loss event (PE) as well as a parameter representing the loss given that event (LGE). The product of EI*PE*LGE is used to calculate the expected loss (EL) for each business line/loss type combination. The supervisor supplies a factor (the 'gamma term', y) for each business line/loss type combination, which translates the expected loss (EL) into a capital charge. The overall capital charge for a particular bank is the simple sum of all the resulting products. This can be expressed in the following formula:

$$\text{Required capital} = \sum i \sum j \, [y(i,j) * El(i,j) * PE(i,j) * LGE(l,j) \qquad (7.12)$$

i = the business line, and j = the risk type

To facilitate the process of supervisory validation, banks supply their supervisors with the individual components of the expected loss calculation (i.e., El, PE, LGE) instead of just the product EL. Based on this information supervisors calculate EL and then adjust for unexpected loss through the gamma term to achieve the desired soundness standard.

International risk assessment Banks engaged in international activities face a plethora of risks, including amongst others foreign currency risk, regulatory risk, strategic and reputation risk. These risks are not mutually exclusive and any product or service provided either domestically or internationally may expose the bank to multiple risks. For banks either contemplating an international investment or those already with substantial overseas operations the risks associated with operating in a foreign country need to be evaluated. Country risk can have a critical effect on a firm’s international activities and therefore needs to be explicitly taken into account in the risk assessment of all overseas investments/activities. Borrowers in higher risk countries pay higher premiums for their debt compared with those located in lower risk countries. In banking, country risk is regarded as the exposure to a loss in cross-border lending, caused by events in a particular country that are (at least to some extent) under the control of the government but are not under the control of a private enterprise or individual. This contrasts with what is known as sovereign risk which relates to the risk associated with a government default on bond or loan repayments. A broader definition of country risk relates to any loss associated with international activity due to adverse changes in the overseas operating environment beyond the control of the firm. Transfer risk is another form of risk that is believed to be one of the most important drivers of country risk. This is simply the risk associated with the restriction of foreign payments from overseas to the home company or bank. Transfer risk refers to restrictions on payments between private agents whereas sovereign risk is associated with a government default on payments. In reality, sovereign and transfer risks are closely related as a government default on payments may lead private parties to renege on their payment obligations - especially if the government default leads to a major depreciation or crisis scenario.

Managing country risk

In order to effectively control the level of risk associated with their international operations, firms must have in place a procedure that systematically evaluates the country risk features of its business. This includes having in place a country risk evaluation process that has:

• effective oversight by senior managers;

• appropriate risk management policies and procedures;

• an accurate system for reporting change in country risk and potential exposures;

• an effective process for analyzing country risk;

• a country risk rating system;

• regular monitoring of country conditions.

Appropriate risk management policies and procedures

It is the responsibility of senior bank management to implement policies and procedures for managing country risk. This involves:

• identifying investments and other activities exposed to country risk;

• identifying desirable and undesirable opportunities that can be used to complement or be substituted for current operations resulting in a reduction of country risk;

• establishing country risk limits if necessary;

• identifying clear lines of responsibility and accountability for country risk management decisions.

An effective process for analyzing country risk

In order to construct an effective country risk evaluation process senior managers need to ask the following questions:

• Is there a quantitative and qualitative assessment of the risk associated with each country in which the firm is conducting or planning to undertake activities?

• Is any formal country risk analysis undertaken on a regular basis and are changes in country risk monitored in any way?

• Is the country risk analysis adequately documented, with the findings communicated to the relevant parties?

• Are adequate resources devoted to country risk evaluation procedures?

• Do the company's country risk assessments concur with the risk ratings of third- party assessors, such as rating agencies?

Country risk rating

Country risk ratings simply summarize the main findings of the country risk analysis process.

Factors affecting country risk

Macroeconomic factors

• Size and structure of the country's external debt in relation to its economy

• Level of international reserves

• Potential for extreme adverse exchange rate movements and the effect on the relative price of the country's imports and exports

• GDP growth and inflation levels, current and forecast

• Role of foreign sources of capital in meeting the country's financing needs

• Country's access to international financial markets and the potential effects of a loss of market liquidity

• Country's relationships with private sector creditors

• The country's current standing with multilateral and official creditors such as the IMF

• Trends in foreign investments and the country's ability to obtain foreign investment in the future

• Privatization of government-owned entities

• The extent to which the economy of the country may be adversely affected through the contagion of problems in other countries

• The size and condition of the country's banking and financial system

• The extent to which state-directed lending or other government intervention may have adversely affected the soundness of the country's financial system and economy.

Socio-political factors

• The country's natural and human resource potential

• The willingness and ability of the government to recognize economic or budgetary problems and implement appropriate remedial action

• Extent to which political or regional factionalism or armed conflicts are adversely affecting government of the country

• Any trends toward government-imposed price, interest rate, or exchange controls

• Extent to which the legal system of the country can be relied upon to fairly protect the interests of foreign creditors and investors

• Accounting standards and the reliability and transparency of financial information

• The level of adherence to international legal and business practice standards

• Level of corruption

• Level of corporate social responsibility.

Institution-specific factors

• The bank's business strategy and its plans for investment in the country

• Types of investments, FDI or portfolio investments, joint ventures, licensing agreements, and so on

• Economic outlook for any specifically targeted business opened within the country

• Extent to which political or economic developments are likely to affect the bank's chosen lines of business

• The degree to which political or economic developments are likely to affect the credit risk of individual counterparties in the country. For instance, foreign firms with strong export markets in developed countries may have significantly less exposure to the local country's economic disruptions than do other firms operating in the country.

• The institution's ability to effectively manage its country risk through in-country or regional representation, or by some other arrangement that ensures the timely reporting of, and response to, any problems.

There is a whole host of factors that affect a country's risk rating including various economic, financial and socio-political risks, as well as those risks that may be relevant to the specific bank or firm in question. In quantifying the broad economic/financial and socio-political risks companies can do their own risk evaluation but can also cross-check these with a variety of ratings calculated by third-party firms.

There are many firms that provide services that measure country risk. The main providers include:

• Control Risks Information Services (CRIS)

• Economist Intelligence Unit (EIU)

• Euromoney

• Institutional Investor

• Moody's Investor Services

• OECD

• Political risk services: International Country Risk Guide (ICRG)

• Political risk services: Coplin-O'Leary Rating System

• Standard and Poor's Rating Group

Apart from the OECD, all act as 'rating agencies' and sell their country risk ratings via the web or through other media. Each of these firms produce risk ratings using a variety of qualitative and quantitative information so as to construct a single index or country risk rating schedule.

OECD country risk-weighting calculations

The OECD produces a regular country credit risk assessment that classifies countries into eight risk categories (0 to 7) with 7 being the most risky.

The Country Risk Classification Method measures the country credit risk, i.e., the likelihood that a country will service its external debt.

The classification of countries is achieved through the application of a methodology comprised of two basic components: (1) the Country Risk Assessment Model (CRAM), which produces a quantitative assessment of country credit risk, based on three groups of risk indicators (the payment experience of the participants, the financial situation and the economic situation) and (2) the qualitative assessment of the model results, considered country-by-country to integrate

political risk and/or other risk factors not taken (fully) into account by the model. The details of the CRAM are confidential and not published.

The final classification, based only on valid country risk elements, is a consensus decision of the sub-group of country risk experts that involves the country risk experts of the participating export credit agencies.

The sub-group of country risk experts meets several times a year. These meetings are organized in such a way as to guarantee that every country is reviewed whenever a fundamental change is observed and at least once a year. While the meetings are confidential and no official reports of the deliberations are made, the list of country risk classifications is published after each meeting.

Regular monitoring of country conditions

The quantity of resources devoted to monitoring conditions within a country should, of course, be proportionate to the firm's level of overseas activity and the perceived level of risk. Information provided by senior managers in the foreign country are a valuable resource for monitoring country conditions as are regular reports by regional or country managers. There also needs to be regular contact between parent senior management and those responsible for the operations in the foreign market. All banks conducting international business should not rely solely on informal and ad hoc lines of communication, and established procedures should be in place for dealing with operations that are faced with troubled overseas environments. Also, various contingency plans should be put in place for dealing with problems associated with increases in country risk; if necessary this should include various exit strategies.

It should also be stressed that international banks also must have adequate internal controls in place so that there is a reporting mechanism ensuring the integrity of the information used by senior management to monitor country risk positions and to comply with any pre-determined country risk exposure limits.

Key URLs: For an analysis of risks and opportunities across different regions of the globe, see www.euromoney.com, www.institutionalinvestor.com and www.icrgonline.com.

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Мария Евгеньевна **Шашкина**

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603950, Нижний Новгород, пр. Гагарина, 23.