

# **Banking Strategy**

## **Unit 1 Financial Intermediation – Dynamics and Governance Mechanisms**

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## Unit Overview

This unit reviews the essential characteristics of financial systems and, specifically, the financial intermediation function provided by banks and other deposit-taking institutions. Various theories are explored concerning the composition and role of boards of directors, and the relation between boards and management. The unit then analyses evolution in the global financial environment, how this affects the strategic behaviour of bank management, and the implications for corporate governance of banks. The unit identifies the importance of clear information, and appropriate pricing of risk for governance mechanisms to operate effectively. The case study on UBS illustrates the relationship between bank strategy, internal governance mechanisms, and oversight.

## Learning outcomes

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

- explain the essential characteristics of financial systems and financial intermediation, including maturity transformation
- analyse the particular risks banks are exposed to as a direct result of the intermediation process
- describe internal and external corporate control mechanisms
- discuss theories concerning the composition and role of the board of directors
- assess the degree to which a bank's strategy may lead to an optimal level of risk, for the bank and for the financial system as a whole
- explain how a bank's level of risk may be considered sub-optimal, and identify the internal and external control mechanisms that can lead bank management to correct this
- describe the dynamic and structural change which has occurred in banking, and analyse the implications for bank management and external corporate control
- discuss the factors that can reduce the effectiveness of corporate governance, and explain how this can lead to an excessive level of risk in the financial system.



## Reading for Unit 1

Peter Howells and Keith Bain (2008) 'An introduction to financial systems'.

Matthew Lynall, Bryan Golden and Amy Hillman (2003) 'Board composition from adolescence to maturity: A multi-theoretic view'.

David Erkens, Mingyi Hung and Pedro Matos (2010) 'Corporate governance in the 2007–2008 financial crisis: Evidence from financial institutions worldwide'. *Journal of Corporate Finance*, 18 (2), 389–411.

Roy Smith, Ingo Walter and Gayle Delong (2012) *Global Banking*, Chapter 14 'Systemic risk in global banking'.

Christof Nedopil and Ulrich Steger (2008) *The Failure of Corporate Governance at UBS*'.

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## 1.1 Introduction

This module is concerned with banking strategy, not the day-to-day operation and management of banks, important though these aspects are. We are interested in the higher-level strategic questions, so, for example:

- In which markets should the bank operate?
- What products and services should the bank provide?
- How should the bank's assets be funded?
- Should the bank grow organically, or would its interests be better served by merger and acquisition?
- What are the risks facing the bank, and how can those risks be managed?
- What is the appropriate business model for the bank, to obtain the best outcomes when markets are stable, and when markets exhibit increased volatility and uncertainty?
- How should the bank respond to changes in regulation?

To understand strategic decision making, we need to examine how a bank is managed at the senior level, and how it is governed. And to do this we need to analyse the mechanisms for governance of banks, the incentives and objectives of senior management, and the role and objectives of the board of directors.

We have said that we are focusing on strategic decision making in banks, and not on day-to-day operations. However, to understand bank strategy, we also do need to remember what, essentially, banks do. Why is that? Banks are not just like any other business. Banks provide particular functions that involve specific types of risk, for example, which other types of business do not have. Competition between banks in a particular market will take a particular form, which cannot be separated from the functions that banks provide.

In addition, changes in technology, regulation, innovations in products and services all mean that the environment in which banks carry out their day-to-day operations is constantly changing. For these reasons we should not forget the essential characteristics of banks, and how these might evolve, even when we are analysing strategic management and governance at the highest, sometimes global level.

With this in mind, Unit 1 starts with a brief review of the essential functions provided by banks and other deposit-taking institutions, in the context of the wider financial system. This is a simplified analysis of what banks do. It is not intended to be a definitive statement of how to run a bank! Banks are more complex than this account suggests, and they differ in how and what they do, both within countries, and between countries. It is just a reminder of what it is

that banks do, in essence, so you can better understand how this role has changed; how the distinctions between the different operations carried out by banks have become less clear; and how some of the functions usually associated with banks have been taken on by other non-bank institutions.

Following this simple description of banking and financial systems, the unit continues by examining corporate governance mechanisms in general terms. If we can understand the role and incentives of senior management, and the relationship between management and the directors of a bank, we can develop a better understanding of the strategic decisions which a bank makes.

The unit then considers how the financial intermediation process can change over time. In addition, the unit explores how management incentives in banks can become distorted, and how corporate governance of banks can fail. These aspects are analysed in the context of the lead-up to the financial crisis of 2007–09. The module is not specifically focused on financial and banking crises, but it is difficult to study banking strategy without examining that financial crisis of 2007–09. In addition, this period can be used to demonstrate some general points about banking strategy.

The case study, on UBS, demonstrates some of the points studied in the unit, including governance standards, the role of independent non-executive directors, and the degree of pressure they should and are able to apply to senior management.

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## 1.2 Review of Financial Institutions and Systems

In this section you will review your understanding of the main characteristics of financial systems and the fundamental operations conducted by banks. You may feel you already have a very good understanding of financial intermediation and the essential characteristics of banks, from your work or from your other studies. However, you should still study the analysis and discussion in this section, because the analysis in later sections builds upon it. As noted in the introduction, the aim is to develop a simple characterisation of financial intermediation. In a sense you are establishing a simple model of financial systems and of banking – with this model in mind, you can go on to examine evolution in the banking sector, and developments in corporate governance. The model can also provide the foundation upon which you can develop your understanding of banking strategy.

We may start by saying we are interested in a system of corporate financing. And within this simplified system, we say that households save and firms invest, and banks are involved in the intermediation process between them. Clearly this is an oversimplification – banks also lend to households, in the form of loans, mortgages for house purchase, and credit cards, for example, so there is a flow of funds between saving households and borrowing households. However, for our purposes the simplification will be useful, because it will help us to describe the different characteristics of deposits (from households) and loans (used by firms for investment in plant, proper-

ty and equipment), in terms of different maturity, liquidity and the risks that this involves for the banks.

This then is the function of the financial system in our simple model – to channel funds from households to firms. Obviously, this is a simple representation. You should also remember that financial systems differ between countries in a number of respects, although national financial systems are becoming more like each other, due to the internationalisation of financial markets and the tradability of financial instruments. Consider it a starting point for our more sophisticated analysis and discussion.

### 1.2.1 Classification of financial systems

Another useful simplification we can use is to classify financial systems according to the degree to which they are market-based or bank-based. In a market-based system, firms finance their activities by issuing shares and long-term bonds. In a bank-based system, firms finance their activities using long-term loans from banks. To decide what kind of system we are examining, we could measure the relative proportions of funding provided through markets and through banks. So, for example, in France, Germany and Japan, banks provide approximately 20% of net corporate financing, and markets provide between 3 and 4% (Howells & Bain, 2008); and we could characterise these financial systems as being bank-based.

In contrast, in the UK and USA markets provide between 10 and 15% of long-term finance for firms, and banks provide almost no long-term financing; and we might characterise these systems as being more market-based. You will probably see a flaw in this analysis, which has not accounted for between 76 and 85% of firms' long-term financing, which comes from internally generated funds (retained earnings). From this you can conclude that the quantitative importance of funding sources, although informative, is not the whole picture. (You might also say that our simplified model of the financial system is rather too simplistic – firms also save.)

For our purposes, it might be more useful to concentrate on which bodies exercise external corporate governance of firms. In a system which is more market-based, external governance of firms will be exercised by markets – that is, shareholders and bondholders. In a system that is more bank-based, external governance of firms will be exercised by the banks, which provide the long-term loans. You will examine the mechanisms of external governance in more detail in Section 1.3.

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#### Review Question 1.1

- For the country where you live or work, or for a country with which you are familiar, would you say the financial system is more market-based or more bank-based?
- Do you think this is a useful scale of characterisation for classifying financial systems, or should the financial system be classified in another way?
- If you measured the relative importance of long-term corporate funding from banks and from markets, would it provide a useful indication of the bodies or institutions that exercise external corporate control in the country you are considering?

## 1.2.2 Banks and other deposit-taking institutions

You have seen that different countries have different financial systems. It is also the case that the way banks operate and are organised is different in various countries. Much of this difference can be explained by the history of banking in each country, although banking systems are becoming more similar as the various barriers between financial systems become eroded, through, for example, deregulation, technological change and the internationalisation of financial markets.

For the purposes of studying bank strategy, it is important to be able to characterise different types of banking system to determine what kind of market the banks operate in. We can ask if there is a large number of independent, competitive banks.

- Or is the system highly concentrated, with a small number of banks, each accounting for a large share of the market?
- Are there limits on the activities that banks can undertake?
- Are there geographical or jurisdictional boundaries which limit their scope of operation?

We can also examine whether the banks provide a range of services to different sectors of the economy, with banks combining retail and corporate banking, for example.

- Or are banks more specialised, providing only retail banking, or only corporate or investment banking?
- In addition to banks, are there other institutions that take deposits?

One theme which will emerge from your study of banking strategy is the degree to which banks change over time. So, for example, banks that may have specialised in retail banking could take over, merge, or be taken over by banks and institutions specialising in corporate and investment banking, or asset management, to become more universal banks.

The acquisition and distribution of funds is covered in detail in Unit 4, and the identification and management of risk is studied in Unit 6, but you can probably imagine now how the evolution of banks just described has significant implications for the sourcing and use of funds, and the assessment and management of risk. There are also implications for the incentives and objectives of the senior management in these expanding and evolving banking institutions, which you will consider in Section 1.4.




### Reading 1.1

Please now read the Introduction (Section 2.1) and from Sections 2.2 and 2.3 of 'An Introduction to financial systems', of Howells and Bain, original pages 30–36, to the paragraph titled 'Asset risk'. These sections provide a more detailed analysis of how we might classify financial systems, the nature of banking systems in different countries and

Howells & Bain (2008)  
Chapter 2 'An  
introduction to financial  
systems' in *The  
Economics of Money,  
Banking and Finance*.

the types of activities carried out by banks in different countries, including the degree to which these activities are combined in general banks or kept separate in specialised banks.

As you read, remember you are building for yourself a simplified model of what banks do and how they operate. At this stage it is not a detailed, complex, or entirely realistic model, but you should have in mind a useful model which can be put to work to analyse changes in banks and what banks do, a model which you can use as a reference point for your study of banking strategy. You do not need to be concerned with the discussion in this reading about whether deposits cause loans or vice versa.

 In addition to writing clear notes on the banking model, please answer the following question.

- What is meant by maturity and size transformation?
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In our simplified model of a financial system, households save and firms invest. This simplified model of banks states that banks accept deposits from households, which are counted as a liability on a bank's balance sheet (the bank owes the funds to the depositors). And banks lend the funds to firms to invest in property, plant and equipment; these loans are counted as assets on a bank's balance sheet. Again it is a simplification, but typically we say that deposits from households are placed with the bank for a relatively short period of time, but the loans are used by firms to invest in long-term assets.

This is the process of maturity transformation carried out by banks – a household is unlikely to want to hand their deposits to a firm directly, because the firm would want to keep hold of the funds for a longer period of time than the household is happy with. So in brief, banks borrow short and lend long. Banks also engage in size transformation, taking relatively small deposits from many households, but lending larger sums of money to firms to fund their investment projects and operations.

The maturity transformation provided by banks creates a particular type of risk for the banks: the risk that householders will wish to withdraw their short-term deposits, while the funds are tied up in long-term loans to firms. Banks know what proportion of deposits will be withdrawn in any period of time, and they keep a reasonable proportion of deposits back as capital, not lent out to firms, to cover this possibility.

This analysis has focused on banks and other deposit-taking institutions. The intention has been to describe the particular characteristics and activities of deposit-taking and making loans, which will enable you to identify the particular risks that banks face, to see how these activities have changed over time and to examine the strategic decisions of banks. Clearly, financial systems include other institutions that accept funds from households and make these funds available to firms for long-term investment, which we might call *non-deposit-taking institutions*. These include pension funds, mutual funds and insurance companies.

These institutions are a large and important part of the financial system, but they are defined by a different set of characteristics compared to banks, and

they engage in a different type of transformation. For example, funds are placed by households with these institutions on a regular basis, often required by law; payouts are made according to very clear criteria, or at a specified time. Discretionary withdrawal of funds is usually not possible. It is also true that some banks also provide these services. We will make reference to these non-deposit-taking institutions when this is required, but in this module we shall be concentrating on *bank* strategy, with respect to banks as we have defined them in this section.

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### Review Question 1.2

Before you finish this section, please pause and consider the simplified model of banking we have developed so far, which essentially involves maturity and size transformation.

- To what extent do you think it captures the fundamental characteristics and activities of banking?

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## 1.3 Governance Mechanisms

Economic policymakers and regulators are concerned with a stable banking system. Bank shareholders and managers also desire profitability and equity returns. Which corporate governance mechanisms are best suited to delivering these potentially conflicting goals? In this section we will consider corporate governance both in terms of the governance mechanisms that apply to corporations generally, and their application to financial institutions. In Section 1.4 we will explore corporate governance with specific reference to the banking sector. Hitt *et al* (2007) define corporate governance as the set of mechanisms used to manage the relationship among stakeholders that is used to determine and control the strategic direction and performance of organisations.

Corporate governance helps ensure that a firm's strategic decisions are made effectively and in line with its shareholders' best interests. It aligns the managements' decisions with the interests of the owners. It also serves as a reflection of the firms' set of values and beliefs. Strong and effective corporate governance mechanisms are a competitive advantage for a firm. Corporate governance also has an impact at the national level, because it is believed that only those firms with sound corporate governance policies have the necessary long-term perspective to improve the economic and social environment in the nations in which they operate. Corporate governance has been gaining increasing publicity, as shareholders and activists wish to adequately monitor the decisions taken by top-level managers.

### 1.3.1 Internal governance mechanisms

In this and the next section we will consider internal governance mechanisms and external governance mechanisms. There are three types of internal mechanism:

- ownership concentration



- the board of directors
- executive compensation.

For a modern firm, external governance determines, in a sense, who manages and controls the company: it is the market for corporate control. Therefore we can say that for the modern firm, outsiders such as banks, analysts, the mass media, public activists, regulatory bodies and listing rules determine external corporate governance mechanisms.

### Ownership concentration

Ownership concentration concerns how many large shareholders there are, and how much of the company they own, so it refers to those shareholders who own large blocks of a firm's shares, typically over 5% of the issued capital. These shareholders are usually influential, and given the large stake they hold, they are also active in demanding that the firm follow sound corporate governance policies.

Large shareholders have typically been *institutional* owners, such as pension funds and insurers. Given the size of their holdings, these shareholders have the power to influence the firm's strategic decisions and adherence to corporate governance. Institutional shareholders are usually given board seats, which they can use to discipline senior management.

### The board of directors

A board of directors consists of individuals who have been elected by the shareholders to protect their rights and interests by ensuring adequate control over and monitoring of a firm's top-level management (Hitt *et al*, 2007). The board of directors also plays an important role in constituting the audit committee, remuneration committee and nomination committee of a company. Hitt and his colleagues describe three types of directors:

- *Insiders*: these include the firm's chief executive and other senior managers who are actively involved in the firm's day-to-day operations.
- *Related outsiders*: these are individuals who are not actively involved in the day-to-day operations of the firm, but nevertheless have some relationship, contractual or otherwise, with the firm, and are therefore not truly independent.
- *Outsiders*: these individuals are the independent directors who have no involvement in the firm's day-to-day operations. The presence of a significant number of independent directors on the board is seen as an important corporate governance mechanism.

An effective board of directors is expected to play a critical role in ensuring high standards of corporate governance at a firm, and it has been suggested that individuals selected to serve on the board come from a diverse range of backgrounds so as to provide a wider skill set.

## Executive compensation

Executive compensation is defined as a governance mechanism that seeks to align the interests of managers and owners through salaries, bonuses and long-term incentive compensation, such as stock awards and options (Hitt *et al.*, 2007). Pay packages for chief executives and senior executives can come under closer scrutiny by investors if they are concerned that executives are being paid excessively.

There is also a preference for long-term incentive plans to be provided to top-level management – it is assumed that this would ensure their loyalty and that their actions would be in line with the shareholders' interests. However, remuneration in forms such as annual bonuses is often considered a reward for short-term performance, which may not actually be in the long-term interest of the firm.

### 1.3.2 External corporate governance mechanisms


The external corporate governance mechanism for a firm is the market for corporate control (Hitt *et al.*, 2007), which typically steps in when all other options fail. In such a case, an undervalued firm is taken over by individuals or firms, which then replace the former executives who are considered responsible for its poor performance. This takeover usually happens when the internal governance mechanisms have proved to be ineffective. These kinds of takeovers are invariably hostile bids brought about by a firm's poor performance. Fear of acquisition by corporate raiders also acts as a significant corporate governance mechanism, ensuring that shareholder and management interests are appropriately reflected in a firm's strategies.

The next reading considers whether the board of directors of a company is always suited to the evolving needs of the company. The argument is that organisations evolve over time, so what the company needs from its directors also changes over time. When the board is formed, it is likely to be composed of people who are well-suited to serve the company at that particular stage in the company's organisational lifecycle. However, in later stages of the lifecycle the needs of the company change, but there is a strong time-dependence in boards – how a board is composed, and how it operates, depend to a great extent on how it was composed and how it operated in the past. The authors also emphasise the importance of the relative power of management and external financiers, at the point when the board was formed – this balance of power may persist over time.



#### Reading 1.2

Please now read pages 416–20 of the article on board composition by Lynall, Golden and Hillman (2003), which presents four theories of corporate governance. The analysis and discussion are in general terms, and as you read you should try to think how these theories apply in the specific context of banking.

 As well as making clear notes on the issues cited above, please answer the following questions.

Lynall *et al.* (2003)  
 'Board composition from adolescence to maturity: A multi-theoretic view'.  
*Academy of Management Review*  
*Review*, 28 (3), 416–31.

- Briefly describe the role of the board in each of the theories.
  - Do you think one or more of the theories is especially relevant for banks?
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*Agency theory* relates to the separation of ownership and control. Shareholders own the firm, but the firm is run by managers, who may not have the maximisation of shareholder value as their primary objective. The role of the board is to represent shareholders, and to align the interests of the management with those of shareholders.

In the *theory of resource dependence*, the firm is considered an open system, which is dependent on external organisations and environmental contingencies. In this theory the role of the board is to manage this dependency, providing (i) advice; (ii) legitimacy; (iii) channels for communication between the firm and the external organisations; and (iv) assistance in obtaining resources or commitments from outside the firm. From this we can conclude that the board will reflect the environment in which the firm operates.

*Institutional theory* states that organisations reflect the rules institutionalised and legitimised by the social environment in which the firm operates, so for a firm this is the firm's shareholders. The role of the board is then selection of CEOs and supervision of CEO compensation.

*Social network theory* emphasises the social networks within which firms operate. The CEO and the external financiers live, work and participate in leisure activities within particular social networks, and it is these networks which influence the composition of the board. The social networks allow the board to acquire external resources based on pre-existing relationships. Without the networks, firms would have to bring those resources into the firm through vertical integration.

For the boards of banks, you can probably imagine that more than one of these theories would apply in relation to the composition and operation of the board. Indeed, the authors of this article argue that a multi-theoretic approach is more suitable, which fuses all four theories, and examines the conditions under which each theory is more applicable.

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### **Review Question 1.3**

For a bank with which you are familiar or in which you are interested, examine the current composition of the board of directors.

- Can the membership of the board be explained by any or all of the theories described in the reading by Lynall and his colleagues?



On a bank's website you can find this information if you follow links to 'Who we are' or 'About Us', and/or 'Leadership' or 'Governance'. For example, for Goldman Sachs the members of the board of directors are shown at <http://www.goldmansachs.com/who-we-are/leadership/board-of-directors/index.html>; and for JP Morgan Chase this information is at <http://www.jpmorganchase.com/corporate/About-JPMC/board-of-directors.htm>

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In theory, the mechanisms outlined above appear to provide the optimal check on bank behaviour. Independent non-executive outsiders and board chairman should act as a powerful check on the behaviour of bank management. This model has become known as the *Anglo-Saxon model of best practice*. However, you may wonder why this did not act as a suitable restraint on management in the run-up to the global financial crisis.

A more thorough analysis of the boards of leading commercial banks reveals some interesting paradoxes. Some of the banks that were noted for defying Anglo-Saxon best practice survived the crisis in far better shape than some of those that complied with best-practice. Banks such as HSBC, which had long traditions of internal appointments to the position of Chairman, and Santander, which has a familial culture with a strong executive Chairman, performed much better during the financial crisis than 'best-practice' banks such as Citigroup and Lehman Brothers.



### Reading 1.3

To understand this apparent contradiction, please now read the article by Erkens and his colleagues, which examines why financial firms with more independent boards and higher institutional ownership experienced worse stock returns during the financial crisis.

 Please take notes on the following points:

- Why did financial institutions with greater institutional ownership take more risk prior to the crisis?
- Were these banks pressured by institutional owners to boost shareholder returns?
- How convincing do you find the argument that banks with more independent boards raised more equity capital during the crisis, leading to a greater transfer of wealth from existing shareholders to debt-holders?
- Is there a case for reconsidering the application of the Anglo-Saxon model to banks?

Erkens *et al* (2010)  
'Corporate governance in the 2007–2008 financial crisis: Evidence from financial institutions worldwide'. *Journal of Corporate Finance*, 18 (2), 389–411.

Having fished reading the above article, you might conclude that while the best practices associated with the Anglo-Saxon model hold considerable appeal, the link between director independence, superior performance and reduced risk is tenuous at best.

## 1.4 Core Incentive Problems and the Breakdown of Corporate Governance

So far in this unit you have studied a simplified model of banking activity, and examined internal and external mechanisms of corporate governance. In this section you will analyse what happens when banks depart from the fundamental activities described in our simple banking model, how the incentive mechanisms operating at senior management level can lead to sub-optimal levels of risk taking and how the mechanisms of external corporate governance can break down.

We demonstrate these points in the context of the build-up to the financial crisis of 2007–09. We will touch upon the process of *securitisation*, but only enough to show how this affects incentives and corporate governance – you will examine securitisation in more detail in Unit 4 on the acquisition and use of funds. We will also touch upon risk, the level of risk which is optimal for individual banks and for the system as a whole, and the concept of systemic risk. Again, we do this to show how distortions in incentives and the mispricing of risk can affect risk-taking – you will examine in more detail the measurement and management of risk in Unit 6, and bank business models in the presence of systemic risk in Unit 7.

### 1.4.1 Optimal risk

In our simple model of banking activity we have said that banks accept many, small, short-term deposits, and they make large, long-term loans. This process of intermediation creates risk for the bank, due to the maturity mismatch between deposits and loans. This is a form of *liquidity risk*. The bank certainly has assets (loans) to match its liabilities (deposits), but if many depositors wish to withdraw their funds, the bank cannot productively foreclose on the long-term loans. Perhaps the bank could call in some of the loans before the loans reach maturity, but it is unlikely to recover the full value, because the loans have been used to invest in long-term property, plant and equipment, which cannot be sold quickly for its fair value. In the extreme, where enough depositors believe the bank is unable to repay its liabilities, all depositors rush to withdraw their funds and there is a run on the bank.

But there are also risks directly associated with the long-term loans – there is the risk that the firms taking the loans will be unable to repay them, due, perhaps, to poor investment decisions, over-ambitious expansion or difficult economic conditions. This is a form of credit risk: the risk that a borrower will be unable to pay the interest on the loan, or the principal amount of the loan.

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#### Review Question 1.4

Briefly consider what banks and governments can do to prevent bank runs.

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Rather than lend out all funds deposited with them, banks hold some of the funds as capital, to allow for the maturity mismatch between deposits and loans. Governments can set minimum standards for the quantity and quality of capital held by the banks. In many countries the central bank provides a *lender-of-last-resort* role, so if banks are short of liquidity and are unable to obtain liquidity in money markets, they can borrow funds from the central bank (exchanging fewer liquid assets for more liquid assets). The knowledge that this lender-of-last-resort facility exists prevents bank runs from occurring.

Governments can also insist that banks are part of a deposit insurance scheme, which pays to depositors a maximum amount if a bank fails. Again, the existence of the deposit protection insurance is intended to prevent bank runs from occurring. In the extreme, if banks look like they are going to fail,

governments can step in to provide capital, or take the banks into public ownership.

But what are the effects of such schemes on the incentives of bank management, and on the strategic decisions they make with regard to risk?

We consider the situation first without deposit insurance (or a lender-of-last-resort facility, or the possibility of government bailout), and then with these protective schemes in place. Consider a situation where there is no deposit insurance or other protection. In theory, banks will take a more cautious attitude to both liquidity risk and credit risk, because they know they will not have the protection of the deposit insurance, or the lender-of-last-resort facility, and they will not be bailed out by government. The bank will hold back a prudent proportion of deposits as capital, and it will sensibly balance the costs and benefits of taking on extra risk. The depositors, bondholders and shareholders of a bank will exercise external governance of the bank carefully and attentively.



### Study Note 1.1

Notice we have quietly extended our simple model of banks! Banks take deposits from households and make loans to firms. They also obtain capital by issuing shares, and they sell bonds to obtain additional capital and short- and long-term funding. Did you spot anything else?

Banks can also borrow short term from money markets to cover gaps in liquidity. Even as we extend and develop our model of banking, please keep in mind the essential nature of financial intermediation, and the particular problems and opportunities it presents for banks.

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How does the external governance mechanism work in this case? If depositors believe a bank is providing too many loans, or making loans that are more risky than depositors consider is sensible, they can demand a higher rate of interest on their deposits (to compensate for the increased possibility that the bank will be unable to repay the deposits); or they can withdraw their deposits.

Owners of the bank's shares can sell those shares if they consider the bank is mismanaging risk, which has the effect of lowering the share price. The lower share price means the bank's cost of capital increases (if the bank needed to issue shares to raise capital, it would need to issue more shares to obtain the same amount of funding). A lower share price also makes the bank more vulnerable to takeover. If the incentive structure of managers includes payment in the bank's shares, the lower share price will also indicate to management that they need to improve the bank's risk position. Finally, holders of the bank's bonds can choose to sell those bonds if they believe the bank is taking too risky a position. Selling the bonds has the effect of lowering the bond price, increasing the yield and increasing the borrowing costs of the bank. This sends the signal that bank management should reconsider its lending policy.

Please note the importance of clear information in this external governance mechanism. For the mechanism to work effectively and efficiently, depositors, shareholders and bondholders must have a clear idea of the risks associated with the loans. The risk must be accurately priced, in the sense that the conditions on the loans, and the rate of interest charged, should accurately reflect the possibilities of default. If the riskiness of loans is not made clear, or the pricing of the risk is not accurate, it is less easy for depositors, shareholders and bondholders to exercise effective external corporate governance.

Also note how the bank manages risk in this scenario – it balances the benefits of taking on more risk against the cost of more risk. The benefits to the bank of extending more loans, and taking riskier loans onto the balance sheet is that the interest on the loans adds to the bank's income. But taking on more risk results in an increase in costs, as depositors, shareholders and bondholders apply the external governance mechanism described above. In addition, when it extends more loans, the bank must also set aside more capital. Capital needs to be in the form of more liquid, less risky, assets. Liquid, riskless assets pay a lower return, so retaining capital involves a cost to the bank because it could be using those funds to make loans that earn a higher return.

### Optimal and sub-optimal risk

In what sense can we say the level of risk taken on by bank management is 'optimal' for the bank? What amount of risk would be considered sub-optimal for the bank, either in terms of too little or too much risk?

If you have studied economics you will be familiar with the argument that we can achieve an optimal outcome if we choose a level of activity where the marginal (or extra) benefit of one more unit of activity is equal to the marginal (or extra) cost of that extra activity. By this reasoning, if the bank follows a risk management policy or strategy in which the extra benefit obtained from a slightly more risky position is equal to the extra cost associated with that additional risk, then the overall level of risk may be considered optimal from the bank's perspective.



#### Study Note 1.2

Marginal analysis works like this. For the optimal amount of risk (and maximum contribution of risk-taking to profit), we have said that the marginal cost of the risk should be equal to the marginal benefit: at the optimal level of risk, the marginal amount of risk adds as much to total costs as it adds to income, and profit is unchanged.

At levels of risk higher than this, the extra cost of taking on more risk is greater than the extra benefit from that additional risk: taking on more risk will add more to costs than to income, and will reduce profit. Hence it makes sense to reduce risk: reducing risk will reduce costs by more than income is reduced, and profits will increase.

Conversely, if the bank is operating with risk below the optimal level, the extra benefit of taking on more risk is greater than the extra cost, and taking on more risk would add more to income than to costs, and would increase profit. At the optimal level of risk, there is no incentive to increase risk or to reduce risk.

This is a roundabout way of stating that bank management will be able to decide on the optimal amount of risk for the bank by balancing the costs and the benefits of taking on extra risk. If the bank pursues a different policy, internal and external corporate governance mechanisms will operate to correct this. But for the bank to choose the optimal level of risk, and for the external governance mechanisms to operate effectively, there should exist clear information on the quantity and riskiness of the loans extended by the bank, and the loan risk should be priced accurately.

#### 1.4.2 Deposit protection, bank support and incentives

Now consider a situation where some kind of deposit protection is in place – perhaps a lender-of-last-resort facility provided by the central bank, or compulsory deposit insurance, or the understanding among banks that if one or more of them were to experience massive loss of liquidity, or if it was believed the value of a bank’s loans was far less than the value of its deposits, the government would step in to support the bank.

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##### Review Question 1.5

Please pause for a moment and consider how this would influence the bank management’s incentives with regard to risk, given the analysis in Section 1.4.1.

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In this situation the banks would have a slightly different attitude to the risks created by financial intermediation. The management of the bank could, potentially, be less cautious with respect to risk, knowing that support, in one form or another, would be provided for the bank if it should run into funding difficulties. This introduces the concept of *moral hazard*.

Moral hazard refers to the situation where an individual, household, firm or, in this case, a financial company changes its behaviour in response to some intervention, here the protection provided to depositors. The provision of deposit protection induces the bank to take on more risky positions. To continue the story, deposit holders might give less attention to the riskiness of the bank’s loan positions, safe in the knowledge that their deposits, up to a maximum level, would be protected no matter what the bank did.

Shareholders and bondholders might be more relaxed (to some extent) about the risky positions adopted by the bank because they expect government support if the bank gets into trouble. The external governance mechanisms would still work (to some extent), because when governments bail out banks it is often the case that bondholders are forced to take a ‘haircut’ or write-down on their bonds, and shareholders experience falls in the value of their shares. But even so, these external governance mechanisms will be less sharp, less reactive to changes in the bank’s risk position.

We can look at this same story from another perspective, using our marginal analysis of risk. The benefit of taking on extra risk is the same for the bank.



But what happens to the marginal cost of risk, from the bank's perspective? The deposit protection, or lender-of-last-resort facility, or potential government bailout, means that the cost of extra risk will be reduced for the bank. For any given level of risk on the bank's loan book, depositors, shareholders and bondholders will not require the same return to compensate for the risk – for them, the perceived risk is reduced because of the protection. And the cost of funds for the bank is reduced.

Now consider the bank's decision on risk taking. The benefits of extra risk are the same, but the costs are reduced. If the bank is choosing the optimal level of risk (optimal from its perspective), it will choose a higher level of risk than if no protection existed (at this higher level of risk, the bank's marginal cost will again equal the marginal benefit of risk). With regard to the bank, it is still carrying the optimal level of risk – the bank's marginal benefit from risk equals the marginal cost of the risk. But for the financial system as a whole, the level of risk taken on will not be optimal – there will be too much risk.

Note that if deposit protection takes the form of a deposit insurance scheme, the bank will have to pay insurance premiums into the scheme, so there *is* an additional cost for the bank. If the premiums are related to the bank's deposits and loans in a systematic way, then increasing risk will involve an additional cost to the bank. But with any insurance scheme, the moral hazard problem remains. If we consider the existence of a lender-of-last-resort facility provided by a central bank, or the expectation of a bailout from government, then, generally speaking, these supports provide reassurance to depositors, shareholders and bondholders (thus reducing funding costs for banks), but without involving any premium payment or up-front additional cost for banks.

### 1.4.3 Off-balance sheet, securitisation and incentives

You saw earlier in the unit that banks are required to hold capital on their balance sheets, funds held in liquid, less risky securities. We stated that this is costly for the bank – liquid, less risky securities pay a return that is lower than the returns which can be obtained on riskier loans. If a bank advances a loan, this adds to the bank's balance sheet, and the bank has to allocate an appropriate additional amount of capital. The bank management might wonder if it was possible to advance the loan, but not to hold it on the balance sheet – the bank receives the income from the loan, but the bank's capital would not have to increase.

The conclusion of this logic is the funding model known as '*originate, securitise and distribute*'. You will study securitisation in detail in Unit 4, on the acquisition and use of funds. But, in brief, *originate* refers to the extending of the loans, for which banks might charge a fee. *Securitisation* involves bundling together loans (it can be done for many kinds of loan – mortgages, credit cards, car finance, student loans) and packaging them for sale as securities to other financial institutions (such as other banks, pension funds, insurance companies). Such securities include mortgage-backed securities

(MBS) and collateralised debt obligations (CDO). The interest payments on the loans are turned into an income stream for these investors, as a return on their part of the security. The *distribute* instruction refers to the selling of the securitised loans to other financial companies.

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### Exercise 1.1

Briefly consider how 'originate, securitise and distribute' might affect the bank's incentives.

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The bank might keep a portion of the securitised assets on its own balance sheet, or it could distribute the securitised assets completely. In either case, the bank needs to allocate less capital compared to holding the loans completely on its balance sheet. The bank receives fees from originating the loans, and a portion of the interest from the loans (depending on how much of the securitised loans it distributes). Therefore, the bank has an incentive to originate more loans than would be the case without securitisation and distribution. Using marginal analysis, the benefits to the bank from extending more loans are the same, but the extra cost (in terms of allocating more capital, and increased risk exposure) is reduced.

#### 1.4.4 The failure of external corporate governance

How does the 'originate, securitise and distribute' process affect the external mechanism of corporate governance? Recall that this mechanism works when there is clear information about the riskiness of the bank's position, and risk is accurately priced.

Without going into the detail here, securitisation is a complex process. The securitised loans are allocated in *tranches*, depending on the perceived riskiness of the loans. The least risky loans are allocated to the senior tranche. The next level of loan, in terms of riskiness, is allocated to the mezzanine tranche. And the most risky of the loans are allocated to the junior tranche.

If the loans bundled up in the securitised asset stop performing, in the sense that interest was not being paid, then holders of the junior tranche would be the first not to receive income from their asset. Likewise, if the loans were not repaid, it would be the holders of the junior tranche who would not receive payment of their principal sum invested. If losses on the loans continue or worsen, holders of the mezzanine tranche lose out. The holders of the senior tranche would be the last to stop receiving an income, or not have their principal investment returned in full. The legal documentation for these securitised assets is complex, and you can see that the requirement of clear information regarding risk is not satisfied to the same degree with these products.

And what about the pricing of risk? In the securitisation and distribution process, the various tranches were rated by the credit rating agencies (Moody's Investors Service, Standard & Poor's, and Fitch Ratings being the three largest and most well known), with the senior tranches usually given

the top, AAA, rating. The potential problem with this is that if a security is given a high credit rating, the return on the security will be relatively lower. Even though the packaged security is based on loans of varying quality, the security will be priced as if it were low risk.

To complicate matters, the lower tranches from different securitisations can also be bundled together, and this bundle allocated into senior, mezzanine and junior tranches. Again, the senior tranche might be given an investment-grade credit rating and priced accordingly (thus paying a low rate of return), even though it is in fact comprised from the junior tranche of other securitisations.

To summarise the points in this section:

- Innovations in financial intermediation have the potential to alter the incentives of bank management, such that they adopt strategies that are more risky than would otherwise be the case. This can lead to a level of risk which might appear to be optimal for each bank, but not for the financial system as a whole.
- It is possible for banks to create more risk in the financial system, for which insufficient capital has been reserved, by moving risky assets off their balance sheet and into the wider financial system.
- In these circumstances, the mechanisms of external corporate control may not be able to operate effectively, because accurate information on risk is not available, and/or risk is not priced correctly.

The next reading describes the move from the relatively simple process of financial intermediation to securitisation and distribution, and the build-up to the financial crisis of 2007–09. There is also a consideration of moral hazard with respect to the securitisation process. The reading refers to the creation of systemic risk.


In this unit we have considered liquidity risk and credit risk as they apply to an individual bank. In the simple process of financial intermediation we have described, the risks that a bank is exposed to were specific to that bank – the credit risk associated with the loans on its balance sheet, and the maturity imbalance between deposits and loans on that bank's balance sheet. Banks decide on their optimal level of risk, which is also optimal for the whole system. If one bank took on too much risk, or made bad loan decisions, or experienced funding difficulties, the problems would be confined to that bank.

The process of securitisation and distribution transfers risks between financial companies, so that the financial companies become more closely linked; a problem at one bank becomes a problem for all banks, and the risk becomes *systemic*. Put another way, due to a distortion of incentives within banks, and a failure of corporate governance, what is optimal risk for each of the banks is too much risk for the system as a whole.



## Reading 1.4

Please now read Chapter 14 in *Global Banking*, pages 337–57. You will be studying securitisation in more detail in Unit 4 on the acquisition and use of funds, so you do not need to give too much time to this aspect of the reading: you need to read this part of the chapter now, but remember you will be studying securitisation again specifically in Unit 4. You will also study the assessment and management of bank risk in Unit 6: we have introduced risk in this unit to demonstrate some of the essential characteristics of financial intermediation and banking. It is difficult to consider banking without talking about these elements of risk. You will also consider the regulatory response to the 2007–09 crisis in more detail in Unit 8.

 The important point to note in the reading is on how the incentives of bank management can alter over time and in response to changes in the banking environment, and the effect of this on their strategic decision making. You should also make good notes on how the internal and external mechanisms of corporate governance failed in this period, and why.

Smith *et al* (2012)  
Chapter 14 'Systemic risk  
in global banking' in  
*Global Banking*. pp.  
337–57.

## 1.5 Case Study

We now turn to the case study. Recall that this module uses case studies in two ways:

- the stories in the cases illustrate the arguments and theories that you are studying, as well as bringing 'real world' experience into your thinking
- the cases are chosen to enable you to apply or challenge the theoretical material you are studying in the module.

You will get more out of the cases if you prepare your answers and engage in the discussion on the VLE.


### 1.5.1 Case Study: The Failure of Corporate Governance at UBS

This case study examines the case of an analyst for a major pension fund who is asked to evaluate corporate governance practices at the Swiss bank UBS. The bank had just suffered one of the largest write-offs following its exposure to the subprime crisis. The write-off was of such a scale that the study indicates that it could only have happened due to a lack of oversight by the Board of Directors. In the case study, UBS's Chairman Marcel Ospel, in place since 2001, has just been replaced by Mr Rohner, a lawyer by trade.



## Reading 1.5

Please now read the case study on the shortcomings of corporate management at UBS.

 Use your study of this unit to help answer the following questions:

1. What growth strategy did UBS follow in the run-up to the sub-prime crisis?
2. The board of UBS was composed of a number of high-profile and well-renowned businessmen (you can examine their backgrounds in Exhibit 2). Its Chairman had been with UBS since 1977 and had been known to keep a tight reign over the bank.

Nedopil & Steger (2008)  
*The failure of Corporate  
Governance at UBS*. IMD  
3–2003.

Returning to your study of corporate governance and the reading by Erkins and colleagues (2010), do you think this was an optimal and appropriate board structure?

3. The case study indicates that since the 2008 shareholder report deemed the corporate governance framework to be appropriate, the cause of failure and the source of flaws must have been 'in processes and not structures'. Do you agree with this assessment?
  4. Why do you think both the chairman's office and the supervisory board were able to ignore the pessimistic view of the subprime market presented in 2006 and the rapid increase in the VaR (Value at Risk) between 2005 and 2007 (see Exhibit 4)?
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### 1.5.2 Feedback on Case Study

Please compare your notes on the case and your answers to the suggested points presented below.

1. At the start of this unit, we said that strategy was concerned with identifying what markets a bank should compete in, what products it should offer, how it should grow and how this growth should be funded. The study showed that UBS focused on three core markets: wealth management, asset management and investment banking and securities trading. In 2004, it set an ambitious strategy to become Number One in investment banking by the end of 2008 through internal expansion of its investment banking activities. At the core of this strategy was an increase in the risk limits. Implementing this strategy meant that, in practice, the losses the bank could make in its securities arm were allowed to increase. However, although the strategy allowed for growth initiatives in businesses that focus some or all of their activities in the US sub-prime market, the strategy did not set specific guidelines on what to invest in. It was not until the subprime market turned sour that the poor strategic choice was revealed. It is notable that as UBS had the largest exposure of its competitor banks (exhibit 1).
2. On the one hand, the case study indicates that the board of directors was composed of highly experienced business people. On the other hand, the argument could be made that many might not have understood the concept of risk management in banking and were therefore not in a position to object to the bank's strategy.
3. It is clear that the processes failed in the sense that the risk assessments made by the risk subcommittee on subprime exposure were ignored and the UBS lacked clear guidelines on its growth strategy. However, your study of corporate governance practices and in particular the paradoxes highlighted in the study by Erkins and colleagues indicate that the structures might not have been appropriate.
4. UBS's growth strategy lacked clear focus and limits. As a bank, UBS was traditionally renowned for its conservatism. However, the increase in risk limits allowed it greater balance sheet flexibility, but with few apparent governance checks.

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## 1.6 Conclusion

We began this unit by defining and classifying financial systems according to whether they are bank-based or market-based. The orientation of a financial system towards either markets or banks has consequences for how companies raise external finance. In market-based systems such as the US and the UK, it is mainly through equity and bond markets. In bank-based systems, bank loans play a greater role. Furthermore, the type of financial system has implications for the dominant form of corporate governance. External governance mechanisms such as take-overs are much more important in market-based systems, whereas representation of banks in corporate boards prevails in bank-based systems. However, the distinction between market- and bank-based systems is a slightly artificial one and has become increasingly blurred in the last decade.

We then characterised banks as institutions that take deposits and grant loans, to distinguish them from other financial intermediaries such as insurance companies and pension funds. We also discussed in detail how financial innovation, high leverage, implicit government guarantees and lenient regulation created strong incentives for bank executives to take high or, in some cases, excessive risks. The crisis of 2007–09 was not only a failure of regulation, but also a failure of corporate governance, because the interests of shareholders and bank management were not properly aligned.

Finally, you studied these governance mechanisms in action in the case study of UBS. The case demonstrates how poorly designed growth strategy and weak governance structures can lead to strategic disorientation and even threaten a bank's existence. The case illustrates that corporate governance is a strategic decision of first-order importance. In Units 2 and 3 we turn to describing the drivers of structural change and introduce a model for dealing with the challenge of positioning a bank strategically.

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