

Chapter 1

Comparing Financial Systems

1.1 Objectives

Many economists view (frictionless) markets as the ideal mechanism for allocating resources. The most important markets from our perspective are the stock market and other financial markets. In the United States (U.S.) and United Kingdom (U.K.), where many of the ideas concerning the desirability of markets were developed, financial markets are indeed important and at first sight this characterization seems appropriate. However, there are a number of serious problems with this view of the world.

- The first is that in most countries stock markets are unimportant. Financial markets are primarily markets for government debt. Often the external funds firms need for investing are obtained from banks.
- A second problem is that in all countries, including the U.S. and U.K., internally generated funds are very important. In the industrialized nations they are far more important than external finance raised through markets and banks.
- A third is that the ideal of frictionless markets is rarely achieved in practice. In fact, one of the arguments made in this book is that intermediaries are needed to overcome the informational barriers to participation in markets and thus enable firms and investors to exploit markets effectively.

A comparison of different countries' financial systems thus indicates that the focus of standard economic models on financial markets as a means of allocating resources is misplaced. The aim of this book is to outline a more nuanced view. We seek to develop theories which better capture how resources are allocated in practice and understand the normative properties of different financial systems.

Financial systems are crucial for the allocation of resources in a modern economy. They channel household savings to the corporate sector and allocate investment funds among firms. They allow intertemporal smoothing of consumption by households and expenditures by firms. They allow both firms and households to share risks.

These functions appear to be common to most developed economies. When we look at different countries, however, we observe that they have very different financial systems. These differences will be described in some detail in later chapters. Here we only need to take account of some broad comparisons which are summarized in Figure 1. The U.S. and Germany can be viewed as polar extremes. In the U.S. financial markets play an important role in allocating resources while in Germany they are relatively unimportant. (In the sequel, when we refer to "financial markets" we mean organized markets for securities such as stocks, bonds, futures contracts, options, etc.). Instead, in Germany banks play by far the most important role. The three major universal banks, Deutsche, Dresdner and Commerzbank dominate the allocation of resources in the corporate sector. In contrast the U.S. has long pursued a vigorous policy of promoting competition among banks. As a result the banking system is less concentrated than in Germany, particularly with regard to providing services to the corporate sector. Universal banking is prohibited by the Glass-Steagall Act so the commercial and investment banking sectors have been separate.

As Figure 1 indicates, other major industrial countries fall in between these two extremes. In the U.K. financial markets have a long history and also play a central role but, in contrast to the U.S., the domestic banking industry is highly concentrated with four major banks, Barclays, National Westminster, Midland and Lloyds traditionally dominating the market. Although there is no equivalent to the U.S. Glass-Steagall Act and universal banking is

allowed, commercial and investment banking are in practice separate in the U.K. Japan has sophisticated financial markets but for most of the last fifty years a concentrated banking system has played the dominant role in allocating resources. Finally, France is much like Germany in that banks have traditionally dominated and markets have been unimportant for the corporate sector. The main difference in France is that the government has been much more important than in other countries through its direct ownership of major banks and other financial institutions at various times.

The differences in institutions and markets across countries also have implications for corporate governance. In the U.S. and U.K., the equity markets provide a market for corporate control. In particular, the possibility of takeovers is assumed to be a device for disciplining managers. A raider can buy up the shares of a badly managed company, replace the management and make a capital gain. Hostile takeovers are legally possible in Japan and Germany but they do not occur in practice. It has been widely suggested that monitoring by the banks performs the same external oversight role as hostile takeovers. In Japan this is known as the “main bank” system and in Germany it is called the “hausbank” system.

Why do these different countries have such different financial systems? Do their economies have different needs, resources, and technologies that require different financial systems? Are different financial systems performing different functions or do they constitute different ways of doing the same thing? Can we say that one system is “better” than another?

The current trend is towards market-based systems. As a matter of policy, France has deliberately chosen to increase the importance of financial markets since the mid 1980’s. Japan is planning a “Big Bang” reform of its financial system to make it more efficient and enable the Tokyo markets to compete with those in New York and London. The European Union is moving toward a “single European market”, which will increase competitiveness and exposure to financial markets. Latin American countries, such as Brazil, are implementing changes to create U.S.-style financial systems.

Why are so many countries, with different histories, environments, and populations converging on a single financial paradigm? Is there any reason to think that financial systems

based on sophisticated, competitive financial markets dominate all others? There are at least two explanations for the almost universal popularity of financial markets at this time. The first is that government intervention has become discredited. The popularity of government intervention in the 1950s and 1960s can be traced back to the *market failures* of the 1929 Wall Street Crash and the Great Depression of the 1930s. To many people nowadays it appears that *government failures* are at least as important a problem as market failures. The second reason is that economic theory, particularly that pertaining to financial markets, has stressed the effectiveness of markets in allocating resources. For example, in discussing financial deregulation in France Melitz (1990; p.397) remarks as follows.

“As one contemplates the panoply of measures that took effect in France from late 1984 to the end of 1986, there is no doubt that the changes were inspired by a general vision. This was no mere lifting of controls: new instruments were created; new markets were added, including markets in futures; and the importance of permitting every individual agent to hedge his risks was clearly recognized. The whole program smacks of a close acquaintance with the principles of the theory of finance.”

We are interested in understanding the role of financial markets and financial intermediaries in different national economies. As economists, we bring to our task an intellectual training that places markets at the center of the study of economic phenomena. For some, markets define the subject matter of economics. For most of us, complete and competitive markets represent an ideal allocation system characterized by the fundamental theorems of welfare economics. The theory of asset pricing, which is the most highly developed part of financial economics, is also a theory of markets. The theory of finance that Melitz refers to as inspiring the program for reform of the French financial system is a theory of markets. So it seems natural to begin by looking at the financial systems we find in the world in terms of the extent to which it conforms to, or deviates from, the ideal of complete, perfectly competitive markets.

This is not the only way to frame these issues, however. As every economist knows, the ideal world of Arrow-Debreu-MacKenzie markets leaves out of account a number of factors that have become an increasingly important part of economics in the last few decades:

- The incentive problems that arise between employers and employees, managers and shareholders, financial institutions and their customers.
- The difficulties that arise in financial markets when information is asymmetrically distributed.
- The transaction costs and moral hazard that prevent the existence of more than a small fraction of the number of markets envisaged by the ADM model.
- The lack of perfect competition that results from long-term financial relationships or the existence of powerful financial institutions.

These issues are central to an understanding of finance, since much of financial practice and theory deals with the attempt to overcome agency problems, incomplete markets, transaction costs, and lack of information. So one could argue that the ADM ideal is the last place to look for guidance on financial issues.

Despite its limitations, the classical theory makes a powerful case for the role of markets, whenever the imperfections caused by market power, asymmetric information, and incentive problems are not too great. However, the theory does not give us any reason to think that financial markets are the solution to all our problems. What remains is to develop a better understanding of the potential for market failure and the role for financial intermediaries in helping markets to achieve the potential indicated by the classical theory. We try to elucidate the strengths and weaknesses of financial markets and other institutional arrangements. In doing so, we have identified a number of “trade-offs” which are outlined below that seem to us to be central in understanding the historical development of financial systems and the way to improve their performance and design.

It is important to stress from the outset what this book does not attempt to do. It is not meant to be a synthesis and survey of existing theories of banking. Freixas and Rochet (1997) have already provided an excellent book doing this. Moreover we do not seek to provide a comprehensive survey of work on the design of financial systems. Recent insightful contributions include Baliga and Polak (1995), Boot and Thakor (1997a,b), Bhattacharya and Chiesa (1995) and Hauswald (1996). Nor do we cover the large and growing literature on finance and development or the literature on capital market imperfections and investment except where they are relevant to the topic at hand. For excellent surveys of these literatures see Levine (1996) and Hubbard (1998), respectively. Instead, we seek to develop new theories based on a broad comparison of different countries' financial systems.

1.2 Background

The historical development of financial systems was heavily influenced by the problems associated with financial markets, especially financial crises. In Chapter 2 we discuss the evolution of the financial systems in five countries that we have chosen to focus on, namely, the U.S., U.K., France, Germany, and Japan. In each country we see that market failures have shaped the evolution of the financial system. In some cases, the response has been to regulate financial markets; in other cases, the response was to rely on banks and other institutions at the expense of markets.

Chapter 3 describes the current institutions and markets in these countries. The financial system in all countries transforms household savings into investment funds for firms, but the roles of financial markets and financial institutions differ in importance as do the types of assets held by households. In the U.S. and the U.K., households hold securities that are marked to market. In Germany and Japan, with their greater reliance on banks and other institutions, households hold fixed claims on financial institutions. As a result, one important difference among these countries is the extent to which households are exposed to risks originating in changes in market values. There are also features that are common to

all the financial systems in these countries. One is the importance of internal finance: the amount of investment financed by retained earnings is much greater than that financed by external sources, regardless of the relative importance of markets and institutions.

In Chapter 4 we discuss the different ways in which countries deal with the problem of corporate governance. The relative importance of financial markets and financial institutions makes a difference here to. In the U.S. and the U.K., the market for corporate control is assumed to play an important part in disciplining managers and forcing high corporate performance. If a company is badly managed or underperforming, it can be taken over and the management replaced or the direction of the company changed. This mechanism is not actively used in other countries, however. In Germany, many companies are not publicly traded and those that are controlled by block shareholdings, so hostile takeovers are difficult. In Japan, cross-shareholdings perform the same function of preventing hostile takeovers. An alternative suggestion is that close relationships with banks, the “hausbank” in Germany and the “main bank” in Japan, provide a substitute for control by the market. While there has been a lot of theoretical support for these ideas, the empirical evidence is weak. Nonetheless, each of these economies has performed well in spite of the ambivalent evidence of effective corporate governance.

In Chapter 5 we review some attempts to build a more realistic theory by assuming that markets are perfectly competitive but incomplete. These models are of some value in understanding the limitations of financial markets. Ultimately, however, theories based on the absence of transaction costs, information problems and other frictions are not a satisfactory representation of actual markets and we have to consider new ways of modeling these frictions.

Having set the stage in Section I, the remaining three sections of the book argue that financial institutions, intermediaries and firms, solve market failures and compensate for the limitations of financial markets. Any comparison of financial markets and financial institutions involves complex trade-offs. The current moves towards market-based financial systems may be desirable. In the period from 1865-1914, when the U.S. financial system

was market-based and unfettered by regulation, the U.S. went from having a GDP per head comparable to Germany and France but less than that of the U.K., to being by far the richest country per capita in the world. On the other hand, the U.S. was beset with financial crises throughout this period. This instability did not cease until the regulations of the early 1930's were imposed in response to the Great Crash of 1929 and the banking crisis of 1933. There are other ways of dealing with market failures. The suppression of financial markets that has historically occurred in countries such as France and Germany has been one response. The strict regulation of the financial system that has occurred in the U.S. and the self-regulation that has been characteristic of the U.K. financial system are others. We seek to develop a fuller understanding of the attributes of different financial systems by examining these developments as a response to the limitations of financial markets.

1.3 Competition versus risk sharing

The ideal of competitive markets underlies the anti-trust law and a good deal of economic policy in the U.S. In financial markets, competition among investors and firms performs a number of roles. It ensures that risks are spread widely. It also ensures there is informational efficiency so assets are priced accurately and these prices provide effective signals for resource allocation. The theoretical foundation for competition policy comes from the classical theorems of welfare economics, which assume the Arrow-Debreu-MacKenzie (ADM) environment of complete markets, symmetric information, no agency problems and so on, and from industrial organization theories that were originally developed with non-financial industries in mind. For many practical purposes the ADM setting is irrelevant and the transposition of models from non-financial to financial settings begs the question of whether the financial sector works in the same way as the non-financial sector. When markets are imperfect in various ways there are important trade-offs between competition and other objectives such as efficiency and stability. Since one of the often-heard arguments in favor of financial markets is that they are more competitive than financial institutions, questioning

whether competition is a “good thing” may lead one to question the value of markets.

In the banking sector, competition ensures the banking industry operates efficiently and shares the returns of that efficiency among all sectors of the economy. As Figure 1 indicates, the U.S. banking sector is the only one of the five that is not dominated by a few large banks. The European countries developed concentrated nationwide banking systems with extensive branch networks in the nineteenth century. In contrast, the U.S. explicitly rejected this structure in the nineteenth century and has actively encouraged competition by regulation and anti-trust law ever since. As we pointed out above, the theoretical arguments for the competitive ideal are based on models that may not be appropriate in the financial sector, especially when imperfections such as asymmetric information, incompleteness of markets, and moral hazard are taken into account. The example of the European financial systems suggests that some countries at least have not been persuaded by the theoretical arguments.

In Section II we reconsider a number of different aspects of competition in relation to financial markets and financial institutions. One of the most important functions of a financial system is to achieve an optimal allocation of risk bearing. One of the conditions for optimal risk sharing is that markets be “complete”. Unfortunately, markets are not in reality complete and so we must seek a “second-best” solution.

As we document in Chapter 3, one of the drawbacks of a market-based system is that investors are exposed to market risk, that is, fluctuations in asset values caused by changes in market information and investors’ beliefs. Market-based systems (the U.S. and the U.K.) expose households to more risk than institution-based systems (Germany and Japan). This immediately raises the question of who bears the risk? The answer we provide in Chapter 6 is that intermediaries can eliminate the risk through “intertemporal smoothing”, thus providing insurance to investors who would otherwise be forced to liquidate assets at disadvantageous prices.

This is an example of how the incompleteness of markets gives rise to a role for institutions. If markets were complete in the ADM sense, it would be possible for individual investors to insure themselves against this risk. Since markets are incomplete, there is a

demand for risk sharing that can be provided by long-lived institutions. Secondly, even if there were markets, this risk is normally considered non-diversifiable. To eliminate the risk one needs not just markets for cross-sectional risk sharing but a different pattern of accumulation. If markets were complete, this accumulation of reserves would occur automatically in response to intertemporal prices. Since they are not complete, intermediaries must make these decisions instead.

In fact, financial markets can destroy risk-sharing opportunities. In markets, investors constantly rebalance their portfolios to earn the highest rate of return. Intertemporal smoothing requires that investors accept lower returns than the market offers in some periods in order to get higher returns in others. A financial institution that has to compete with financial markets will face disintermediation when the market return is higher than the “smoothed” return, even though the insurance provided by financial institutions would make everyone better off than they would be without it. Unless institutions can be shielded from competition, it may be impossible to offer welfare-improving insurance against fluctuations in market returns.

One of the arguments for markets is that they economize on and disseminate information that is needed for efficient decision making. Market-based financial systems are characterized by dispersed information (publicly traded companies are required to reveal more information than privately held companies) and dispersed shareholdings gives a large number of people an incentive to gather information on firms and monitor their performance. These arguments seem to suggest that market-based financial systems such as those in the U.S. and U.K. have a clear informational advantage over intermediary-based systems such as those in France and Germany. However, this advantage is not immediately clear from casual observations of these countries’ financial systems. As we argue throughout, the situation is more complex when real world imperfections are taken account of. One of the drawbacks of market-based systems is the well known free-rider problem. If information is going to be revealed by the market, no one has an incentive to collect it. For this reason, competitive financial markets may be characterized by underinvestment in information. Intermediaries with block shareholdings,

as in Germany, or close relationships with a small number of firms, as in Japan, may have a better incentive to gather information and monitor firms and can efficiently internalize the fixed costs of doing so. Whether they actually do so is another matter.

What these simple comparisons overlook is the fact that markets and intermediaries may be dealing in different kinds of information. What markets do well is to collect and aggregate diverse opinions. Intermediaries and other financial institutions can benefit from increasing returns to scale in processing standardized information, but may have less success dealing with uncertainty, innovation, and new ideas. The contrast between markets and intermediaries can be carried too far, however. We have already suggested that intermediaries may be necessary for the successful functioning of markets. Recent developments in venture capital firms and the private equity market blur the distinction between intermediaries and markets.

For all these reasons, explored in some detail in Chapter 7, the comparison of markets and intermediaries and their informational properties is not easily resolved. Welfare analyses involving information are notoriously difficult and it is therefore not surprising there are no straightforward conclusions to be drawn.

In Chapter 8, we look at some issues of competition policy that arise in financial systems. U.S. policy for a long time actively discouraged the development of branch networks. This led to a very large number of small banks. It was argued this was desirable because it ensured markets were competitive and banks had incentives to operate efficiently. We develop a model where depositors bear transaction costs of searching among banks. It is shown that taking account of these radically changes conventional results. In this case the equilibrium with a multitude of single branch banks is the same as the monopoly equilibrium. In contrast, a duopoly with two large banks with extensive branch networks leads to the perfectly competitive solution. Another key issue is risk taking. It is well known that agency problems give rise to risk-shifting behavior. Competition may exacerbate these problems by increasing the incentives to “go for broke”. In this sense, competition may increase the instability of the financial sector and create inefficiency through excessive risk taking.

There is also a tension between the goals of competition and stability. The U.S. financial system experienced frequent financial crises during the latter part of the nineteenth century and the early part of the twentieth century. This was not the case in Europe. Although frequent before this time, by the middle of the nineteenth century the European central banks, and the Bank of England in particular, had developed their techniques of intervention to such an extent that banking panics were essentially eliminated.

Many historical financial crises were accompanied by recessions and depressions. The financial system plays a central role in the economy and it came to be widely believed that financial systems are “fragile” in the sense that small shocks may start a contagion that eventually destabilizes the whole system. In the past, financial systems have been prone to periodic crises and maintaining the stability of the system has often been one of the top priorities of financial policy makers.

This sometimes leads to a mentality of maintaining “stability at all costs”, which may not be the optimal policy. In Chapter 9 we initially study a model with banks alone in which optimal risk sharing actually requires crises in the banking system. The point here is simply that some shocks cannot be avoided and the futile attempt to prevent an inevitable adjustment to one of these shocks will exacerbate the consequences of shocks and lead to a misallocation of risks.

This is not the end of the story, because this analysis is based on a financial system with banks alone. We go on to introduce markets for financial assets held by the banking system. Unfortunately, this innovation does nothing to remedy the situation. In fact, it makes it worse. Troubled intermediaries, seeking to find liquidity by selling their assets on the market, simply reduce the value of their assets, thereby making their problems worse. The mere existence of a market does not provide liquidity to the system as a whole, nor does it ensure that liquidity will be available to the banking sector on reasonable terms. We show that a central bank can intervene and prevent this type of collapse in prices. This intervention is welfare improving in the sense that it makes everybody better off.

Banking panics are not the only type of financial crisis that have been important histor-

ically. There are a number of historical episodes where the prices of stocks and real estate have risen to great heights and then collapsed dramatically. These collapses often appear to spill over into the real economy because people default and the collateral for loans is based on the peak asset prices. Recent examples of this type of incident are the bubbles and subsequent recessions in Japan, Finland, Norway and Sweden. In the second part of Chapter 9, we consider the role of monetary policy and the credit system in creating the conditions for a crisis. When asset purchases are financed by the financial system, it is possible for bubbles to be created. These bubbles then lead to the possibility of financial crises, since the assets on which the expansion of credit is based are over-valued and further expansion of credit may be necessary to sustain the value of these assets. When expansion stops, the bubble pops, and the financial system is left with losses that may threaten its stability. Unfortunately, both market-based and intermediary-based systems seem to be prone to these crises. Sensible regulation and credit policies are the only safeguard.

One way of distinguishing financial markets and financial intermediaries is by the kind of relationship that is formed when two parties enter into a financial transaction. In a market it is distant: once the security is issued and purchased it is very difficult to change it. With an intermediary it is more intimate: the number of parties is small (two) and this allows a contract to be adjusted as circumstances change. This may be an advantage or a disadvantage. When there are moral hazard problems, the commitment that dealing with a market allows may create an incentive for the agent to make better decisions *ex ante*. On the other hand, in a risk sharing problem, continuous renegotiation may be a substitute for writing a very complex contract. These issues are discussed in Chapter 10. We illustrate some of these ideas in a discussion of the U.S. private equity market. This “market” consists of limited partnerships that have some of the features of an intermediary.

1.4 The Role of the Firm

One cannot discuss the financial system of a country without mentioning the corporate sector. The corporate sector provides many of the securities traded by the financial sector and the returns to these securities depends on the performance of the companies that make up the corporate sector. The financial sector has a role in corporate governance because it allocates control rights and assists in the design of the securities that are used. The financial sector also provides information on company performance that guides managers and investors. Perhaps the most important reason for regarding the corporate sector as part of the financial system is that, in the presence of “imperfections” in the financial sector, companies internalize financial tasks themselves. This is most obvious in the phenomenon of internal finance, where the firm provides from its own resources the funds needed for investment, rather than turning to external sources of finance. There are other ways in which the firm internalizes the functions of a financial institution, from diversification to hedging to corporate control. For all these reasons, there is no sharp line that can be drawn between the theory of the firm and the theory of finance.

The theory of the firm that has been developed over the last twenty years stresses the agency relationship between owners and managers and poses the problem of controlling the manager as the central theoretical issue. As we have noted, a careful comparison of financial systems is not very supportive of existing governance theories. Markets for corporate control simply do not exist in some countries and the evidence for the monitoring role of banks is weak. In addition, the reliance on internal finance in each of the countries underlines the fact that managers are largely autonomous of outside sources of finance. It seems that a theory of the firm as an autonomous entity is needed to complement the theory of the firm based on agency and corporate control.

Chapter 11 starts by considering why this kind of separation of ownership and control may in fact be desirable. External controls involve costs as well as benefits, and a certain degree of autonomy on the part of management may be beneficial for the firm. For example, if managers have superior information about the way in which the firm ought to be run,

it may be optimal to give them “free rein” to make use of that information, even if the managers’ interests are not perfectly aligned with those of the owners.

We typically think of the firm as one of the beneficiaries of the financial system, but not part of the financial system itself. However, in an imperfect world in which markets are incomplete and intermediaries suffer from agency problems, the firm itself can act as a financial institution. That is, the firm takes over the functions of a financial institution to compensate for the limitations of financial markets and financial intermediaries.

One example of this phenomenon is the role of internal finance. With complete markets, we can assume that firms pay all earnings to shareholders and that financial markets or intermediaries provide firms with the funds they need for investment. In practice, asymmetric information and agency costs restrict the role of external finance and make it a costly alternative to internally generated funds. Quantitatively, internal finance is a more important source of funds for investment than debt or equity. The problem with this state of affairs is that there is no reason to think that the resulting allocation of funds for investment is optimal. Firms that are cash-rich may be poor in opportunities for investment and vice versa. So the external finance constraint appears to be a source of inefficiency. What this simple argument overlooks is the possibility that firms that have an excess of cash can acquire other firms and, conversely, firms that have too little cash can sell themselves to those that have too much. In other words, the firm re-defines itself to achieve a better allocation of resources and increase value. This kind of situation is considered in the second part of Chapter 11.

Another justification for internal finance is the asymmetry of information between managers and shareholders. Even if managers’ interests are not perfectly aligned with those of shareholders, it may still be second-best optimal to give managers a large amount of discretion in the running of the firm. The reason is simply that tying their hands through restrictive corporate governance procedures prevents them from exploiting their informational advantage their own behalf but it also prevents them from exploiting it on the behalf of shareholders as well. Shareholders may be better off allowing managers a free hand to appropriate some rents if they increase the value of the firm sufficiently. An example of this

sort is presented in Chapter 11.

In Japan, the separation of ownership and control is perhaps the most extreme. There are no hostile takeovers. Boards are large and ineffective and are dominated by the President of the company. The banks intervene only when a firm is in financial distress. In many ways Japanese firms are like non-profits in the U.S. Despite this, many of these Japanese firms have been very successful over a long period of time. Companies like Toyota, Sony, Matsushita to name but a few are world leaders in their industries. Moreover the shareholders in Japanese companies have done well in the long run. The return on the NRI 350 index since the early 1970's is about the same as the return on the S&P 500 during that period. ¹This same view of the firm as an independent entity is true in other countries although perhaps to a lesser degree. As will be documented in Chapter 4, in the U.S. the non-profit sector is thriving and large. Non-profits often successfully compete directly with for-profits. Their external governance mechanism are weak or non-existent and yet they seem to operate fairly efficiently.

These examples provide a challenge to conventional theories of firms as profit maximizing entities. In Chapter 12 we consider a different approach. We see the firm as a self-organizing entity that can solve its own incentive problems. The firm is influenced by many groups of stakeholders—managers, shareholders, customers, suppliers, workers—and requires the cooperation of all these groups in order to succeed. Although different groups have different interests, they all have a common interest in the growth and prosperity of the firm. In Chapter 12 we study some examples of ways in which the firm develops its own autonomous “objectives” that are not identifiable with those of any individual. Managers have to cooperate in running the firm, and by *mutual monitoring* can overcome the agency problems that have been the focus of the traditional literature on the manager-shareholder conflict. Instead of leading to “shirking”, this form of cooperative autonomy leads to far-sighted concern with the success of the firm, because the welfare of each individual manager depends on being able to attract new, young managers into the firm, which is only possible if the firm has a viable future. This simple idea is an example of the way in which self-interested

stakeholders are led to cooperate in behaviors that lead to success for the firm rather than myopic exploitation or rent seeking.

1.5 Intermediaries and Markets

The contrast between the U.S. and German financial systems, with which we began this chapter, suggests that markets and intermediaries are alternatives that perform more or less the same functions but in different ways and perhaps with different degrees of success. One important area where they perform differently is where people have diversity of opinion and there is genuine disagreement about the optimum decision. One of the advantages of the market, discussed in Chapter 13, is that it allows investors to agree to disagree. Economizing on information through the delegated monitoring inherent in intermediation inevitably requires investors to submerge their disagreements and accept a compromise, one that may not satisfy most of them. As a result markets may have a significant advantage over intermediaries in situations where diversity of opinion is important such as the financing of new technologies.

However, in general the more one examines the limitations of markets and the reasons why markets are used in some situations and not in others, the less adequate the “either-or” perspective appears. In fact, it appears that intermediaries are becoming increasingly essential to the efficient exploitation of increasingly complex markets.

The tremendous innovation in financial markets that has occurred in the last two decades in the U.S. and the explosion in the volume of trade that followed, has been very narrowly focused. Essentially, it has been providing better risk-sharing opportunities for financial institutions (and their customers). This is not surprising when one considers the expertise that is needed to operate in these markets, but it is something that is hard to reconcile with traditional theory of asset markets. To put it another way, the familiar advice “if you don’t understand it, don’t buy it” is hard to reconcile with the standard model of expected utility maximizing behavior. The traditional theory builds in so much information along with its

standard rationality postulates, that an investor with rational expectations would want to participate in all of these markets. On the other hand, we do not necessarily want to drop the rationality assumption as an organizing principle. This presents us with a dilemma.

Chapter 14 develops an approach to model the informational costs of using markets and to explain in terms of rational behavior, but somewhat non-standard informational structures, why markets are costly to use and why participation in these markets is limited as a result.

The role of intermediaries then, is to make it possible for individuals to gain some of the benefits of markets without bearing prohibitive costs. Part of this can be done by economizing on the costs of acquiring information. This can be seen as the traditional advising role of intermediaries. The intermediary acquires information at a fixed cost and then shares it with its customers at a nominal marginal cost. But this transmission may not be the most important role of intermediaries. Much of the information is hard to transmit and if the intermediary takes on the role of agent for the customer, and makes decisions on his behalf, there is the problem of how the intermediary knows what is good for the customer without the latter understanding how the market works. One possibility is that intermediaries can repackage securities in a way that requires less information to evaluate. Another is that intermediaries can make implicit contracts with customers to insure them against some of the “uncertainty” they face in trading an unfamiliar security. These ideas are explored in Chapter 15.

1.6 Trade-offs

There are a number of themes that tie the book together. One theme is that the same functions may be performed by quite different markets or institutions in different countries. So one has to look at the financial *system* as a whole in order to get an idea of how well the system performs these functions.

Another theme concerns the tension between the (ex post) efficiency associated with competitive financial markets and the superior risk sharing associated with financial systems

based on large financial institutions. In order for financial markets to exist, there has to be a certain amount of depth, that is, there have to be large numbers of traders and a large volume of trade. large numbers of traders and a large volume of trade. These are circumstances in which competition flourishes. Financial markets are attractive because they minimize the role of the middle man and provide the best terms to those providing investment funds and those trying to raise funds. Firms and individuals who deal with a financial institution are often at a disadvantage, however, because of differences in size or because of the “hold-up” problems that arise from asymmetric information in a long-term relationship.

The drawback of market-based financial systems is that markets are incomplete. There are fixed costs of setting up markets, which can only be recovered when a minimum critical size is reached, so many small markets are not viable. Other markets are not viable because of asymmetric information, moral hazard, etc. Financial systems based on institutions can overcome these problems by offering “made to measure” risk-sharing contracts. Furthermore, there is a sense in which incomplete financial markets actually expose individuals and firms to greater risk, because assets that are marked to market may fluctuate for reasons that have little or nothing to do with their fundamentals. In fact, financial institutions, by avoiding the use of markets, may be able to offer risk smoothing services that markets cannot. Finally, competition from markets may undermine the risk sharing offered by institutions, since there will be states of nature in which the returns offered on the market diverge from those offered by institutions that are engaged in offering risk sharing contracts. Then there will be disintermediation which may prevent the co-existence of competitive markets and institutions. So there are a number of trade-offs between the (ex post) efficiency of financial markets and the risk sharing provided by financial institutions.

Another theme concerns the tension between the competitiveness of financial systems characterized by financial markets and an unconcentrated banking sector and the stability of financial systems characterized by a few dominant institutions. Competition among banks may lead to risk-taking behavior because banks are fighting for market share (which introduces non-convexities into their preferences) or because it lowers profit margins, reducing the

value of future earnings and the associated incentive to avoid bankruptcy. Also, the presence of markets for assets, which offers helpful liquidity when an individual bank suffers a small shock, may turn into a disadvantage when it forces banks to liquidate assets at firesale prices, thus reducing asset values and worsening the position of depositors compared to a situation in which the banks' assets were relatively illiquid. Similarly, competition may require large numbers of small banks, which are more prone to financial contagion. These are just some of the ways in which a financial system that encourages competition may incur costs that can be avoided in a bank-based or institution-based system.

Information plays a central role in many of the topics we discuss. Markets and intermediaries deal with information in different ways. Markets are known to be effective mechanisms for aggregating information. Intermediaries economize on the costs of gathering information by replacing many monitors with one delegated monitor. Which is most effective depends on the kind of information that is being acquired. Intermediaries may be most effective in eliminating duplication of information gathering and processing, which is likely to be relevant when everyone agrees on what information needs to be collected and how it should be processed. But there are also situations in which individuals agree to disagree and everyone has to make up his own mind. This may be the case when new technologies are being evaluated or when a unique decision has to be made. Competitive markets may be better at dealing with this kind of information.

Another theme is the autonomy of the modern corporation. One of the major concerns of corporate finance is the design of mechanisms for corporate control. In other words, how to make managers do what shareholders want. Markets and banks can provide corporate oversight, but firms themselves can develop structures to solve the oversight problem. We argue that in some cases, external control may not be optimal. In any case, some degree of autonomy seems to be the norm and does not appear to be incompatible with success.

Likewise, when external sources of finance do not provide the firm with all the funds it needs, the firm can resort to self-finance. This is often regarded as a bad thing. Either the cost of self-finance is greater than the cost of obtaining funds in the market or self-finance is

seen as symptomatic of an agency problem, because the manager is undertaking investment that the market does not want to finance. We know there are conditions under which external sources provide efficient finance, but these are restrictive. The fact that internal finance is so dominant in many successful economies suggests that it may be optimal under certain circumstances. In this sense, the firm can be regarded as a “financial” institution that overcomes the limitations of financial markets in the same way that intermediaries do.

A final theme concerns the role of intermediaries in making markets work. We have stressed the advantages of financial institutions as if they were a substitute for markets, but one of their most important functions is a supporting role. Markets are a wonderful invention, but they require a great deal of sophistication on the part of investors. When the participation costs of acquiring information are substantial, the second-best solution may be to develop alternative institutions that economize on the participation costs. One of the things we try to do in this book is to find a way of thinking about the informational and other barriers to using markets effectively. Intermediaries are one of the solutions.

So in the end, it is not a question of markets *versus* intermediaries, but rather of markets *and* intermediaries.

A comparison of different types of financial system is complex. There are no simple answers. A wide range of systems different systems is observed in practice. Each of these has advantages and disadvantages. What is important in analyzing financial systems is understanding the major trade-offs. Figure 2 shows the ones that we have emphasized. Although it is a caricature, we can see the different financial systems of the U.S. and Germany as two extremes. The U.S. has a competitive, market-based system which is prone to instability. Large amounts of information are disseminated publicly but the free rider problem blunts the incentives to gather the information. The market for corporate control imposes some external restraints. At the other extreme is Germany. This has a concentrated, intermediary-based financial system. This provides risk sharing and stability. Not much information is disseminated publicly but the private incentives to gather information are large because the free rider problem is eliminated. Finally, the external constraints on firms are probably weaker

than in the U.S. and this gives firms greater autonomy. The other countries lie in between. The U.K. is close to the U.S. in terms of its reliance on markets, but differs in its tolerance of concentration in the financial sector and the relative laxness of its regulatory environment. Japan and France are closer to Germany in their tolerance of concentration, lack of reliance on markets and weakness of external mechanisms of governance. Finally, going forward it is likely to be a combination of markets *and* intermediaries that are important everywhere as markets become increasingly sophisticated.

By historical accident, much of the academic research on financial systems has been undertaken in the U.S. and U.K. This has perhaps led to a bias towards market systems. At the very least we hope that this book will convince the reader that the study of comparative financial systems and the role of institutions in overcoming market failures is important and there is no theoretical presumption that intermediated systems are inferior.

Notes

1. From the first quarter of 1971 until the third quarter of 1995, the annual growth rate of the NRI 350 was 12.16%. Over the same period, the annual growth rate of the S&P 500 was 12.17%.