The impact of institutional investors on equity markets and their liquidity
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Chapter 2

The role of capital markets

2.1 Introduction

Capital markets form an integral part of each financial system. They facilitate the transfer of savings to investments. In this chapter we discuss the role of capital markets in general and contrast it with the role that banks and other financial intermediaries perform within the financial system.\(^1\) To understand one, we have to relate it to the other. Furthermore, we look at the factors that have an impact on the development of capital markets, such as the legal environment, privatization and pension system reform.\(^2\) These factors may be responsible for some of the cross-country variation in the development of capital markets and the dominant financing choice by firms. Privatization and the pension reform have a particular influence on the design and development of capital markets in transition economies. We briefly discuss the role of capital markets in these economies at the end of the chapter.

We can distinguish at least four strands of literature that deal with the theory of capital markets. First, the theory of financial intermediation provides many implications for the role of capital markets relative to financial intermediaries.\(^3\) Second, the theory of corporate finance provides insights that are relevant for the role of capital markets. Most of them follow from the analysis of financing decisions by firms. The emerging research on the design of financial systems and on financial architecture represents a new class of

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\(^1\) A capital market is a market where debt and equity are traded. The term financial market is often used as a synonym for a capital market. However, some authors view financial markets more broadly, i.e. encompassing capital markets and money markets. Since we do not consider money markets in this dissertation, financial markets and capital markets will be used as synonyms.

\(^2\) Although we do not deal with debt markets in this dissertation, most of the discussion in this chapter concerns both debt and equity markets. This makes the discussion more general.

\(^3\) See Greenbaum and Thakor (1995) for an overview of the theory of financial intermediation.
more theoretically-oriented research (see Allen (1993), Thakor (1996), Boot and Thakor (1997)). Comparative studies of financial systems represent the fourth strand of literature. This empirical line of research looks at the advantages and disadvantages of banks and capital markets in providing firms with capital and servicing investors’ needs. It provides an indication of which source of capital leads to a better allocation of savings under different financial structures. This chapter builds primarily on the literature on financial intermediation and on comparative studies of financial systems.

The chapter evolves as follows. In Section 2 we discuss the general purpose of the financial system. Section 3 provides a review of the comparative advantages of capital markets relative to financial intermediaries, and the conditions that allow both financing structures to co-exist within the economy. We discuss the importance of the financial infrastructure in Section 4. In Section 5 we discuss the role of privatization and pension reform for the development of capital markets, and the role of capital markets in transition economies. Section 6 provides some conclusions.

### 2.2 The role of the financial system

Financial systems facilitate the flow of savings from agents with a surplus of funds to the most productive uses. The objective is to have an efficient allocation and use of savings across space and time, with minimum resources dissipating or evaporating in the process. A financial system develops to ameliorate the effects of information and transaction costs (Levine (1997)). It includes financial instruments, markets, intermediaries, service firms and other institutions that are used to carry out the financial decisions of households, enterprises and governments.

There are two basic ways in which funds flow from investors to borrowers: i) via capital markets, and ii) through financial intermediaries. Financial intermediaries are firms that provide customers with financial products and services that cannot be obtained more efficiently by transacting directly in the market. They provide brokerage services and qualitative asset transformation (Greenbaum and Thakor (1995)). The main types of financial intermediaries are banks, investment companies and insurance companies. Banks (and other depositary intermediaries) traditionally had a special role within the financial system, mostly because of their involvement in the creation of money within the economy. In their non-monetary activities, banks compete with capital markets and with other intermediaries such as finance companies, venture capitalists, insurance companies, pension funds and mutual funds.

There are wide differences in the structure of financial systems between countries. By financial structure we mean the prevailing mix of financial markets, financial institutions and financial instruments. Some countries are more market-oriented while others are more
2.3. Capital markets versus financial intermediaries

intermediary-oriented. The two orientations differ in how efficient financial markets and financial intermediaries are in performing the functions of the financial system. A properly functioning financial system has the following functions within the economy (Bodie and Merton (2000)):

1. It provides efficient means for allocating economic resources across borders and through time (savings have to be channeled to those who can make the best use of them).

2. It provides ways of managing risk.

3. It provides ways of clearing and settling payments to facilitate trade.

4. It provides mechanisms for pooling resources and for the subdividing of ownership in enterprises.

5. It provides price information to help coordinate decentralized decision-making in various sectors of the economy.

6. It provides ways of dealing with incentive problems when there is information asymmetry among parties, or when there is an agency relationship between them.

A financial system that efficiently performs these functions has a positive effect on overall welfare economic growth. Levine (1997) shows how this may occur through capital accumulation and technological innovation. Financial systems affect capital accumulation either by changing the savings rate in the economy, or by reallocating savings towards different capital-producing technologies. Empirical evidence shows that a well-developed financial system can have a positive impact on economic growth.4

2.3 Capital markets versus financial intermediaries

Firms can finance their activities internally, using retained earnings, or externally. External funds can be raised in the primary capital market, or acquired from financial intermediaries.5 Empirical evidence shows that retained earnings represent the dominant source of funds, and that banks are the dominant source of outside financing of firms in selected developed countries (Mayer (1990)). In a world with incomplete markets and financial

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4For the empirical evidence on the impact of capital markets and financial intermediaries on economic growth, see e.g. Atje and Jovanovic (1993), Rajan and Zingales (1998), Levine (1997), Levine and Zervos (1998), Levine et al. (2000).

5When firms issue shares or bonds they sell them in the primary market.
institutions that are subject to agency-problems, firms seem to rely heavily on internal financing (Allen and Gale (2000)).

Firms typically combine funds from financial intermediaries with funds raised on the capital market in such a way that their cost is the lowest. Operational and informational frictions make external financiers harder to find and increase the cost of capital for firms. Financial intermediaries can reduce the travelling, search and organization costs that stem from operational frictions. Intermediaries can also decrease the costs of asymmetric information. The reduction in costs is primarily due to economies of scale.

In this section we review the main advantages of financial intermediaries relative to capital markets according to the financial intermediation literature. To see what the comparative advantages of capital markets are, we have to contrast them with financial intermediaries. The shortcomings of one typically provide room for the other.

2.3.1 Comparative advantages of capital markets

The existence of capital markets depends on a large number of traders and a large volume of trade. This fosters competition and enables markets to offer services at lower costs (Allen and Gale (2000)). Capital markets reduce the role of middlemen by attracting a larger pool of resources and raising funds at a lower cost. In this way, markets secure the best terms for those economic agents who are providing funds and for those who have financing needs.

Continuous trading between a large number of competitive traders that leads to the best price at each point in time is probably the most important comparative advantage of capital markets. Continuous trading means the continuous collection of public information that gets reflected in prices and, hence, continuous price-setting. Capital markets provide incentives to gather information (Allen (1993)), which then becomes reflected in share prices. Consequently, there is continuous feedback of information about decisions to prices and from prices to real decisions. Share prices provide signals for the efficient allocation of savings to the most productive investments (Grossman and Stiglitz (1980), Diamond and Verrecchia (1981)). Under certain conditions, capital markets also allow for the most efficient risk-sharing (Diamond (1967)). Let us look at these advantages of capital markets in more detail.

Although capital markets do not seem to contribute most to the corporate sector’s financing (Mayer (1990)), they do promote an efficient allocation of funds by providing the prices that guide it. Information reflected in share prices allows for the design of effective managerial

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6 This is one of the main messages of the excellent book by Allen and Gale (2000), who compare financial systems across the world, and provide some theoretical background for the observed differences.
2.3. Capital markets versus financial intermediaries

incentive schemes (Diamond and Verrecchia (1982), Holmström and Tirole (1993)), because market prices give objective, third party assessments of a firm’s performance. Hence, capital markets can play an important role in the corporate governance of corporations. Market monitoring of managers typically occurs via takeovers.\(^7\)

A big advantage of capital markets in the allocation of resources is the provision of incentives for a large number of investors to monitor a firm’s performance (Allen (1993)). Financial markets collect and aggregate diverse opinions, and disseminate information that is needed for efficient decision-making. Financial markets are especially effective where information is scarce and there exists a diversity of opinions. They are successful in dealing with uncertainty, innovation and new ideas. The advantage of capital market financing for the borrower lies in the payoff-relevant information that the informed traders on the market possess (Boot and Thakor (1997b)). Even the borrower does not have this information. It is noisily transmitted to the borrowing firm through the market price, which leads to improved real decisions and an enhanced payoff. Market prices contain unique information about performance that cannot be extracted from the firm’s current or future profit data (Holmström and Tirole (1993)). The amount of information contained in the market price depends on the liquidity of the market, which is affected by the ownership structure of the firm. Concentrated ownership further reduces market liquidity which may benefit the monitoring of firms.

Allen and Gale (1995) show that a market-based system provides cross-sectional risk-sharing opportunities that are superior to those provided by an intermediary-based system. This holds only when markets are complete.\(^8\) When intertemporal risk-sharing opportunities like diversification, hedging and portfolio adjustments exist, an intermediary-based financial system may achieve a higher level of welfare than a market-based system.\(^9\)

Another advantage of market financing is in the marketability (liquidity) of claims and in risk diversification (Boot and Verheyen (1997)). When liquidity of financial claims is more important than the availability of capital in general, the use of capital markets is advantageous. Capital markets have a particular advantage in enhancing liquidity and reducing the cost of trading of standardized contracts.

Finally, Dewatripont and Maskin (1995) suggest that financial markets have an additional advantage over intermediaries in maintaining commitments to refuse funding, and not renegotiate. Renegotiation of a contract within more distant relationships that get formed

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\(^7\) See, for example, Franks and Mayer (1990), for a discussion of capital markets and corporate control. The literature on corporate governance provides many examples on the role of capital markets in exerting control.

\(^8\) The risk-sharing argument holds only with respect to the cross-sectional risk-sharing opportunities that financial markets provide (Allen and Gale (1996)).

\(^9\) Allen and Gale (1996) show that intermediary-based economies might be worse off if they allow access to financial markets because the competition from the latter might unravel the intertemporal smoothing mechanism.
between parties in financial markets is harder than a renegotiation within a long-term, one-to-one relationship with a bank.\textsuperscript{10}

In a world with free access to the markets, without any barriers to entry, free information on the prices and quality of capital that is available to each participant and no distorting taxes, there would be no room for financial intermediaries.\textsuperscript{11} However, information is not equally accessible to everyone and market failures happen. Deviations from perfect markets caused by frictions provide room for financial intermediaries.

### 2.3.2 Main advantages of financial intermediaries

Banks and other financial intermediaries are specialized financial institutions that can take advantage of the economies of scale that occur due to the concentration of clients within the institution and eliminate the costs of searching for other parties. In this way, banks reduce the so-called operational transaction costs. This is a more traditional view of the advantages of financial intermediation, whereby financial intermediaries reduce the per unit cost of monitoring, executing transactions and acquiring information for their investors.\textsuperscript{12}

However, the main advantages of financial intermediaries are in dealing with informational frictions and incentive problems. In addition to qualitative asset transformation (Greenbaum and Thakor (1995)) and the intertemporal risk-sharing that is behind it, asymmetric information has been viewed as the reason for the existence of financial intermediaries in modern theories of financial intermediation.\textsuperscript{13} Financial intermediaries monitor the borrowers' characteristics and actions. The costs of ex-ante information asymmetries, i.e. screening costs, rationing and underinvestment are reduced by concentration and specialization in screening, verifiability of information through signalling and reputation. Similarly, the verification and agency costs of monitoring and bonding due to ex-post information asymmetry are reduced by intermediaries. Also, financial intermediaries provide borrowers with information and advice, if necessary.

The borrower-specific information that banks acquire during screening and monitoring

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\textsuperscript{10}Relationships are also important in financial markets, in particular in private equity markets. Private equity markets are comprised mostly of limited partnerships which transfer the funds of institutional investors and wealthy individuals to companies that cannot raise money in the debt market, or in the public equity market.

\textsuperscript{11}Bank dominance may also evolve as a result of political support for a less competitive market place. The latter leads to lower average asset values and reduces the risks associated with stakeholder rents, which are generally undiversifiable (Perotti and von Thadden (1998)).

\textsuperscript{12}Financial intermediaries collect information, for which returns to scale can be realized (Allen and Gale (2000)). However, the gains from intermediation should not exceed the additional transaction costs due to the presence of intermediaries (Hellwig (1991)).

\textsuperscript{13}Financial intermediaries can reduce the costs of transformation of maturities, sizes and risks due to the economies of scale and diversification.
of their clients is often proprietary in nature. In such cases, bilateral financing can be advantageous for innovative or high-technology firms who want to conceal (strategic) information from their competitors (see Bhattacharyya and Chiesa (1993)). High-quality, innovative firms prefer to use bilateral private placements of debt (or equity) in order to conceal private information from product market competitors (Yosha (1995)). Firms that are reluctant to disclose proprietary information reject the equity market as a source of capital and go to banks instead.

If markets are incomplete, or the participation in financial markets is incomplete, intermediaries have an advantage in providing intertemporal risk-sharing opportunities and hedging of risks (Allen and Gale (1995)). Changes in market information and in investors' beliefs cause fluctuations in asset values and expose investors to market risk. Financial intermediaries can eliminate this risk through intertemporal smoothing (see Diamond and Dybvig (1983)). In this way, they provide insurance to investors who would otherwise have to sell assets at unfavorable prices. Intertemporal smoothing can (theoretically) be achieved through inter-generational risk-sharing and through the means of asset accumulation. Hellwig (1998) argues that financial intermediaries may be less costly to use for risk-sharing than financial markets.

Next to acting as delegated monitors of corporate borrowers (Diamond (1984)), financial intermediaries also allow for long-term relationships and hence commitment (Boot et al. (1987), Mayer (1988), Boot (2000)). The relationship with a financial intermediary is typically more intimate and allows for adjustments in contracts in case of any change. Therefore, renegotiations that are welfare improving can take place. Close relationships (accompanied by block holdings) provide financial institutions with better incentives to monitor firms and efficiently internalize the cost of doing so. In this way, financial institutions overcome the free-rider problem that leads to the underinvestment in information when relationships are loose and ownership dispersed (Allen and Gale (2000)). Reputation reduces the cost of capital for clients.

In summary, financial intermediaries add value when the cost of establishing and maintaining markets, the cost of participation in the markets and the informational requirements for participation are high. Banks and other intermediaries have a particular advantage when information frictions are large. However, many of the cost reductions can also be achieved by capital markets (think of decreasing operational costs). Firms recognize this and use both financial intermediaries and capital markets when they raise capital.

14In reality, some substitute mechanisms may endogenously develop within the bank-oriented systems. These mechanisms simply perform some of the functions that are in market-oriented systems performed by financial markets (Allen and Gale (1995)).
2.3.3 Coexistence of the two financial structures

In the real world we observe the simultaneous existence of financial markets and financial intermediaries. Firms combine the sources of capital in such a way that their cost of capital is as low as possible. According to the literature, the choice of financing depends on the degree of informational and operational frictions that exist between the firm and its financiers. The level of development of capital markets and financial intermediaries, and their efficiency in monitoring the firms further determine the joint existence of financial markets and intermediaries over time and across countries.

Given that investors have different views on how firms should be run, different financial structures might be optimal and can co-exist. Allen (1993) suggests that in industries in which the optimal actions of management are widely agreed upon, i.e. in competitive industries, banking will predominate. Equity markets, on the other hand, are important where there is wide disagreement on optimal action, in the industries dominated by large corporations and high-tech industries. Banks do not give repeated evaluations in the same way that equity markets do, and they may be an inefficient way of allocating resources when there are large differences in how investors view their operations and performances. Consequently, the countries with a significant role of capital markets will be those with a significant amount of technological innovation and concentrated industries (Allen (1993)).

Boot and Thakor (1997a) show that the extent to which firms use bank or capital market financing depends on the efficiency of the banks’ monitoring and the development of the financial market. Not all the information transmitted by financial market prices is useful in terms of affecting real decisions. This effect arises from the 'feedback' provided by the market to the firm manager that induces him to improve his decisions. The usefulness of the aggregated information depends on the severity and likelihood of any post-lending moral hazard. This indicates that bank financing also has a real effect - it is more effective in encouraging the borrower to choose socially preferred projects. The aggregated information has to exceed some critical level and security prices should not be too informative, otherwise the Grossman-Stiglitz (1980) paradox appears. Borrowers with high observable credit qualities prefer to directly access the capital market, while firms with a more serious moral-hazard problem (less observable credit quality) opt for bank financing (Boot and Thakor (1997a)).

Diamond (1997) shows that there is a two-way causality between the development of financial markets and financial intermediaries. Improvements in banking (through more efficient operations and less distorting regulations) positively affect the liquidity of financial markets and their development, while improvements in access to the markets (through disclosure and transparency) make the market more liquid and diminish the role of banks. However,

Financial innovation, which is usually aimed at reducing information asymmetries, may reduce the market share of banks relative to the financial markets.
since banks also trade in these markets improved access for banks also reduces their costs.

The co-existence of intermediated financing and capital market financing might also be necessary when the capital markets are not being highly efficient in inducing corporate managers to behave in the shareholders' best interests (Thakor (1993)). A bank sitting on the board of directors of a company may provide monitoring which could discipline the managers. As the financial system develops, it should become easier for outsiders to take corporate control away from incumbent managers. This should ameliorate the asset-substitution moral-hazard problem and reduce the role of banks (Boot and Thakor (1997b)).

Finally, financial intermediaries have become important for assisting firms and investors in participating in financial markets (Allen and Gale (2000)). Intermediaries use a wide range of markets to transfer, transform and redistribute risk. At the same time, financial intermediaries can also ensure financial markets with sufficient depth. All in all, financial intermediaries have become complements to financial markets, not their substitutes.

2.4 Capital market infrastructure

Well-defined and protected property rights, an honest and sophisticated judicial system and adequate legislation and its enforcement are the prerequisites for the development of capital markets. These are the components of what we call the capital market infrastructure. In this section we discuss the legal framework and financial regulation as two of the main building blocks of this infrastructure.

The legal framework encompasses legal and accounting procedures, the organization of trading and clearing facilities and the regulatory structures that govern the relations among the users of the financial system. The most important are the laws that discourage fraud and enforce contracts. Financial regulation complements the contract law, commercial codes, taxation law and other laws that represent the basis of the legal framework. The systems of financial regulation differ across the financial services industry, but they are all aimed at controlling and limiting the risk-taking on the part of financial intermediaries, and market participants in general. One of the fundamental issues in financial market regulation is transparency, which we discuss in more detail at the end of the section.

2.4.1 Legal environment

The attractiveness of capital markets relative to intermediated finance may be very sensitive to the legal environment. An inadequate legal environment allows for the expropriation of
investors and impairs the development of a capital market by destroying investors’ trust in it. With respect to capital markets, the quality of the legal system depends crucially on the enforcement of investor rights that stem from standardized contractual relationships, like securities. A legal environment fosters the development of a viable equity market that can provide capital to growing firms (Black (2000)). However, it has to ensure that minority shareholders have good information about the value of a company and confidence that the company’s managers and controlling shareholders will not cheat them out of most (or all) of the value of their investment.

The importance of the legal environment for the development of capital markets also has been emphasized in empirical research. La Porta et al. (1997, 1998) use the legal framework for explaining the cross-country differences in the size (and development) of capital markets. They examine legal rules for protecting investors, the origins of these rules and the quality of their enforcement in 49 countries. They find evidence that the quality of legal rules and their enforcement is negatively related to the size and the width of capital markets in these countries. Furthermore, the concentration of ownership in the largest public companies is negatively related to investors’ protection. This is consistent with the hypothesis that widely dispersed ownership is not characteristic of countries that have weak legal protection of ownership rights. Modigliani and Perotti (2000) find evidence that poor investor protection hampers the development of capital markets and pushes firms towards intermediated finance. More generally, countries with high ratings for the effectiveness of legal systems enable firms to rely more on external finance and grow faster (Demirguc-Kunt and Maksimovic (1998)).

2.4.2 Financial regulation

The main objectives of financial regulation are: market integrity (ensuring that markets are fair, efficient and transparent), investor protection, enhancing competition and minimization of systemic risk. The role and the design of regulation differ between countries and reflect the role that capital markets have within the financial system. Financial regulation is particularly important in countries with less developed financial systems and underdeveloped judicial systems. In this subsection we discuss some of the strategies used in financial regulation, with a particular focus on securities regulation.

Different regulatory strategies are used across the financial services industry. Jackson (1999) distinguishes five strategies used by the regulators: (i) private ordering within a

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17Pistor et al. (2000) perform a similar analysis for transition economies and find similar results.
18Johnson and Shleifer (1999), e.g. show how regulation and the conditions under which the regulation of a particular market is undertaken matter for its effectiveness in transition economies.
19See Jackson (1999) for a detailed survey of different regulatory strategies that are used across different sectors of the financial services industry.
two-party contract; (ii) mandatory disclosure obligation and anti-fraud rules; (iii) general standards of conduct; (iv) portfolio shaping rules; and (v) bonding mechanisms. The more complex the financial arrangements and the more opaque the balance sheets of the intermediaries involved, the more intrusive and severe the regulation is. For less complex arrangements, the system of regulation depends on passive oversight. For example, the regulation of mutual funds falls somewhere in between the two extremes of complexity. The activities of mutual funds are limited to investing and trading in securities. For this reason, their regulation is based on the regulation of securities transactions. It includes disclosure rules, anti-fraud protection, prudential and portfolio-shaping rules for brokers-dealers, and supervisory oversight. In addition, mutual funds are also subject to portfolio-shaping rules that are tailored to enhance disclosure and fiduciary protection.

The aim of securities regulation is to promote market confidence and to ensure the development of a transparent and well-informed securities market which provides equal access to information and participation on a level playing field for every market participant (Lawrence (2000)).

Securities regulation subsumes all of the legal principles regarding raising capital in primary markets by issuing claims to investors, and trading of these claims in the secondary market. In other words, it includes the regulation of the issuers, market intermediaries and the secondary market. Securities regulation is exercised by the regulatory agency, which is in charge of such regulation by law, and by the self-regulatory organizations.

Organized stock exchanges are the most important and typically most active self-regulatory organizations. They are subject to the supervision of the regulator and they have to meet standards of fairness and confidentiality when exercising powers and delegated responsibilities (IOSCO (1998)). The stock exchange regulation is aimed at protecting the integrity of the marketplace, member-firms and customers. Stock exchanges perform market surveillance by searching for unusual trading patterns, insider trading abuse or other prohibited trading practices. Furthermore, they supervise member firms for compliance with financing and operational requirements, check brokers’ selling practices and monitor the operations of specialists (if present). Stock exchanges further design and enforce listing standards, trading rules, concentration rules and transparency rules. Trading rules are in place to standardize procedures so that the costs of transacting are minimal.

An important part of trading rules are the rules that prohibit manipulation of trading prices via self-dealing and insider trading. The potential for insider trading and direct self-dealing by corporate insiders creates an adverse selection problem by issuers, which may force the ‘good’ companies to leave the market. Black (2000) argues that having an

20While it increases investors’ confidence in capital markets, securities regulation is also associated with costs like the cost of acquiring licences, disclosing information etc. (see Lawrence (2000) for a discussion).

21Black (2000) defines direct self-dealing and insider trading in the following way. Direct self-dealing takes place when a company that the insiders control, but only partly own, engages in transactions that make the insiders themselves, their friends or relatives or their other companies richer. Indirect self-dealing,
effective set of institutions that counter insider trading is one of the main conditions for the development of a successful equity market.\textsuperscript{22}

In addition to trading rules, transparency and disclosure rules play a fundamental role in the fairness and efficiency of the secondary securities markets. They are subject to a lot of academic research and policy debates, so we shall consider them more closely.

**Disclosure and transparency**

Disclosure and transparency are two important elements of the design and regulation of capital markets. Effective disclosure and transparency rules reduce the problem of asymmetrical information between investors and corporate insiders, and enable corporations to acquire long-term financing at a lower cost.

Disclosure typically refers to the dissemination of information by the issuer of securities (and broker-dealer firms) to the shareholders, investors, or regulators. Information disclosure can be mandatory or voluntary. The ultimate benefit of providing more information to the capital market is a lower cost of equity capital.\textsuperscript{23} The benefits of disclosure are the highest for firms that provide consistently high disclosure. It is important what kind of information gets disclosed. More forward-looking information and key non-financial statistics may be particularly important for companies with low or moderate analyst following (see Botosan (2000)). Disclosure policy is one of the most important elements of a firm’s investor relations, because it indirectly affects the liquidity of the firm’s shares, and may reduce the cost of capital for the firm, thereby increasing its share price (Brennan and Tamarowski (2000)). Good disclosure of information induces more analysts to follow the company, and increases the accuracy of valuable information that analysts provide to investors.\textsuperscript{24}

Transparency is used to describe the extent to which real-time information on trade and quotes is made available. In other words, it concerns the disclosure of trade and quote information to market participants. Transparency is important because it allows investors to judge the fairness of the terms at the time of a trade relative to other recent transactions, and it provides a mechanism that facilitates the dissemination of information about the value of a share that some investors may have (Franks and Schaefer (1995)). Transparency facilitates the linking of dispersed markets and improves price formation, fairly called \textit{insider trading} occurs when insiders use the information that only they have to trade against uninformed traders in public securities markets.

\textsuperscript{22}See Black (2000) for an extensive discussion of these institutions.

\textsuperscript{23}See e.g. Botosan (1997) and Brennan and Tamarowski (2000). They emphasize the costs of disclosure, not just the benefits. In addition to the direct cost of producing and disseminating information, the provision of detailed information may also expose disclosing firms to lawsuits in the event of errors, and their competitors can take advantages of the disclosed information.

\textsuperscript{24}See, for example, Lang and Lundholm (1996), Brennan and Tamarowski (2000).
ness, competitiveness and attractiveness of the markets (Bloomfield and O'Hara (1999)). The transparency issues are fundamental to the competitiveness of stock exchanges. It is feared that competition among national stock exchanges might lead to reduced disclosure and transparency requirements. Association agreements between stock exchanges might overcome the negative consequences of such regulatory arbitrage.

There is little consensus on the issue of the overall effects of market transparency among academics and regulators (see Bloomfield and O'Hara (1999)). It has been argued that: i) transparency should be restricted if this ensures adequate liquidity; ii) restricting transparency provides benefits to large investors at the expense of small investors; iii) trade disclosure significantly improves the informational efficiency of markets etc. A formal analysis of transparency has received more attention in the literature recently.

Boot and Thakor (2000) argue that the optimal structure of disclosure requirements depends on the type of information that has to be disclosed, and on the heterogeneity in the information-acquisition costs that investors have to bear. Disclosure requirements should be more stringent in less-developed capital markets. More stringent disclosure requirements on securities exchanges lead to a worse pool of borrowers that the banks can attract. Competition among exchanges and securities regulators will not necessarily lead to weaker disclosure requirements.

Ang and Ciccone (2000) examine international differences in financial transparency, which are viewed as a function of country-specific, firm-specific and management discretionary components. Their results suggest that while all three components help determine transparency, the discretionary component (profitability of firms) is the most important. Perotti and von Thadden (1998a) predict that lender-dominated firms and firms in bank-dominated financial systems are less transparent than equity-dominated firms and firms in shareholder-oriented financial systems. According to their model, corporate transparency usually accompanies equity-dominated economies, together with relatively more informative share prices, and volatile earnings.

In this section we have limited the discussion to a few issues concerning the legal infrastructure of financial markets, but there are many more. The independence of financial regulators is one of them. A detailed analysis of regulation simply exceeds the scope of this chapter.

2.5 Recent developments in capital markets

Demographic changes such as aging of the population and the privatization of state enterprises are two forces that have recently affected the growth of capital markets in many countries. Pension reforms that were triggered by demographic pressures induced the
growth of pension funds, insurance companies and mutual funds which are managing an increasing amount of money on behalf of individual investors.\footnote{Mutual funds are being used more intensively as one of the mechanisms for managing assets of different pension plans, particularly in the US (see Walter (1999)).} We discuss the importance of institutional investors for the capital markets in detail in the next chapter. In this section we focus on privatization and pension reform. These two developments have particularly shaped the capital markets of transition economies and other emerging economies.

### 2.5.1 Privatization and pension reform

Governments usually adopt privatization programs in order to improve the efficiency of public enterprises. Simultaneously, they expect that privatization programs implemented through the public issue and sale of shares will also help develop their national capital markets. Privatized firms are often among the largest and the most valuable firms in their equity markets and account for a large portion of equity market capitalization. Privatizations through public offerings on the local stock exchange can therefore substantially increase market capitalization and the number of listed companies on the domestic exchanges.\footnote{In Europe, for example, the privatization issues accounted for about one-third of all equity issues in 1999 (see OECD Financial Market Trends, June 2000).} Megginson and Boutchova (2000) show that privatizations have contributed significantly to the nearly eight-fold increase in the total capitalization of the world's equity markets between 1983 and 1998. Privatizations have also increased the number of shareholders in many countries.\footnote{According to Megginson and Boutchova (2000), the privatization-induced ownership structures are typically not very stable.} The additional benefits of privatization are the improved risk-sharing opportunities for local investors, who can now diversify their portfolios better, and increased liquidity due to the new-privatization related listings. It has been argued that a privatization through a public offering of shares in the equity market, the dominant method of sale in the OECD area, has substantially contributed to the development of some European capital markets by increasing their liquidity.\footnote{According to the OECD (2000), Greece, Italy and Portugal are countries where privatizations have had a positive impact on capital market liquidity.} Perotti and van Oijen (2000) emphasize an important additional benefit of the privatization. If the privatization process is implemented rigorously and consistently, it resolves the uncertainty over future government policy and results in a strengthening of property rights and institutional reliability, which makes the equity investment more attractive (in particularly in emerging equity markets). Perotti and van Oijen (2000) present evidence that these changes, which reduce the country's political risk in general, have a strong positive effect on the local equity market development and excess returns in emerging economies.

Pension reforms may be another factor that induces governments to adopt share-issue privatization programs. As such, they provide an impetus for the development of capital
markets. The linking of pension reform and privatization offers opportunities for important synergies in the development of capital markets. Pension reform leads to an increase in demand for equity (and other financial assets), which might have an upward pressure on equity prices. Privatization, on the other hand, increases the supply of equity.

However, deep and efficient capital markets may sometimes be a prerequisite for the implementation of funded pension schemes. The unbearable liabilities of the pay-as-you-go system are forcing countries all over the world to shift to funded pensions in the form of public and private defined-benefit, or (more recently) defined-contribution plans. Clark (1998) argues that the size and significance of capital markets can be explained by the demand for equities that stems from the structural and contingent causes of ‘pension fund capitalism’, characterized by the growth of pension funds, increased individualism, the latent preference for market solutions and flexibility etc.

Privatization of state ownership and reforms of the social security system have been particularly important for shaping the role of capital markets in transition economies. The existence of capital markets was a prerequisite for the implementation of privatization in some of them. In others, the capital market developed as a side-product of privatization. Well-functioning domestic capital markets will also provide support to the transition to the funded pension systems that many transition economies plan to undertake. Next, we evaluate the role of capital markets in transition economies more generally.

2.5.2 Transition economies

Transition economies are typically characterized by a weak legal infrastructure, highly leveraged financial intermediaries, limited institutional development and substantial political uncertainty. The stability of banking systems within the transition economies typically guarantees the stability of the overall financial system. It is usually hard to disentangle the banking sector from the rest of the economy because banks take equity positions in the corporate sector, and the non-bank financial institutions are underdeveloped in many transition economies. Information problems in transition economies are usually more severe, with more dramatic changes taking place on the borrowers’ side. These factors may depress the role of banks and financial markets for quite some time (Claessens (1997)). As a result, even the most developed equity markets in transition economies of Central Europe are small, and involve little trading activity in the domestic stock exchanges. What role can capital markets play under such conditions?

A well-functioning capital market was considered essential to the process of transformation

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29 As a short-term solution for many transition economies, Claessens (1997) suggests self-finance, inter-mediation among enterprises and through non-bank financial institutions.

from state ownership to private ownership in many transition economies. According to Stiglitz (1995), capital markets in transition economies are by definition informationally inefficient. The introduction of such markets leads to the unproductive use of savings in the economy, and does not contribute to GDP growth. The notion that capital markets in transition economies do not foster the allocation of funds to the corporate sector is widely accepted in the literature (see Pohl et al. (1995), Berglöf (1995) and Mramor (2000)). In some transition economies, capital markets had an important role in the (sometimes illegal) redistribution of wealth in the post-privatization period (see Mramor (2000)). Capital markets may gradually come to play a role in facilitating ownership transfer and generating information on the performance of firms (Berglöf (1995)). If properly regulated, capital markets may eventually lead to an increased level of savings in the economy, particularly if accompanied by pension reform moving from unfunded to funded pension systems.

2.6 Concluding remarks

In this chapter we have discussed the functions of a financial system and the comparative advantages of capital markets and financial intermediaries in performing these functions. Historically, some financial systems developed into bank- and others into more capital-market-oriented ones, depending on how the majority of firms in the economy chose to finance their operations. This orientation has important implications for the functioning of the markets for corporate control, and for monitoring the management of companies. In some countries, capital markets are important for the allocation of resources, while in others (like in Continental Europe) banks play a more prominent role with financial markets remaining less important and less developed. These differences have a long history and are the result of the each country's evolution of its industrial structure. They seem to be path dependent.

In this chapter we also reviewed the factors that may affect the development of capital markets and determine their role as a source of financing for corporations. In particular, we emphasized the importance of the legal environment, securities regulation, privatizations, pension reform and the level of development of an economy for framing the role of capital markets.

We have by no means exhausted the factors that affect the performance of capital markets between countries. Two important factors that were not discussed in this chapter are market liquidity, which is a precondition for the efficient operations of capital markets, and institutional investors. We discuss market liquidity extensively in Chapter 3. In Chapter 4 we consider the impact of institutional investors on capital markets.