

# Firms' Access to Finance: Entry, Growth, and Productivity

IT IS BY PROVIDING FINANCIAL SERVICES TO ANY AND ALL FIRMS WITH good growth opportunities that the financial sector helps developing economies to grow and to converge on the high-income levels of advanced economies. This is not just a matter of the overall volume of lending: it matters crucially which firms get finance and on what terms, that is, on whether creditworthy firms of all sizes, both incumbent ones and those that seek entry, have broad access to finance at reasonable costs. Improving access to external sources of funding is undoubtedly the main challenge for firm finance in developing countries, and that fact alone justifies the attention it receives. Naturally, it is also the area of finance that has received the most econometric research attention. Other dimensions of finance also matter, such as cash management and payments services, risk management, and insurance, and they deserve further research attention.

This chapter looks at how firms finance themselves in developing countries and explores the barriers to improved contracting between firms and the providers of funds. It discusses the channels through which finance affects firm performance and the relative importance of financing obstacles as a constraint to firm growth compared with other obstacles in the business environment. Firms finance their operations and growth in many different ways, reflecting both the preferences of management and the options that are available to them. Availability of external financing for firms depends on the wider institutional environment, and lack of availability is one of the more important business obstacles firms have to overcome. Better access to finance can help new firm entry and growth, which in turn promotes growth at the aggregate level.

**This chapter examines the impact of financial barriers on firms—**

—and on economic structures  
in general—

The chapter documents how improvements in the functioning of the formal financial sector can be expected to reduce financing constraints more for small firms and others who have difficulty in self-financing or in finding private or informal sources of funding. As a result, the effectiveness of finance has a significant impact on the ownership structure, the dynamism, and the resilience of the economy at large. Finance does not just raise aggregate firm performance uniformly but also transforms the structure of the economy by affecting different types of firms in different ways. The removal of financial barriers appears to be especially beneficial for small firms—which embody much of an economy’s latent dynamism. Removal or reduction of financial barriers can thus broaden the sectoral range of the economy and reduce its vulnerability to sector-specific shocks. The institutional environment can also influence patterns of ownership—for example, well-functioning financial and legal systems can lead more firms to incorporate and result in more diffuse patterns of firm ownership.

—identifies firms’ sources  
of finance—

Finally, the chapter examines the ability of firms, especially small firms, to access finance from different sources, including banks and other intermediaries, securities markets, and foreign investment. Special attention within this section is given to the much discussed issue of foreign-owned banks and their contribution to improving access. The debate about whether banks or markets do a better job no longer excites much interest: each has its place in ensuring that finance reaches a wide clientele. Creating the infrastructures that let both markets and institutions reach their optimal level is likely to be the best policy. Relationship lending, which relies on personal interaction between borrower and lender and is based on an understanding of the borrower’s business and not just on collateral or on mechanical credit scoring systems, is costly for the lender and thus requires either high spreads or large volumes to be viable. However, if the customer’s creditworthiness is hard to evaluate, then there may be no alternative to relationship lending—although this may lead to discrimination against certain groups. The modern trend to transactional lending—whether based on assets or, for example, on automated credit appraisal using improved data—is clearly the way of the future. Credit registries are an important tool for the expansion of transactions-based lending technologies.

—and considers the role of  
foreign banks—

Foreign banks bring with them capital, technology, know-how, and a degree of independence from the local business elite. However, the role of foreign banks in improving access has always been controversial, partly

for political reasons. Foreign banks have a comparative advantage in transactional lending, which raises concerns about their contribution to credit access for countries where relationship lending is still needed. The entry of foreign banks has directly benefited larger firms, and in many countries this improved credit access has extended directly or indirectly to smaller firms. Nevertheless there are also some indications that the arrival of foreign banks has not always been good for small firm access to credit, at least at first.

Nonbank finance remains much less important than bank finance in most developing countries, but this can be expected to change. The corporate bond market and organized securities markets are chiefly of relevance to larger firms, although by broadening the range of firms that have access to long-term funding, these markets do make a contribution to access. Foreign direct investment offers a partial substitute for local finance and is an alternative that has proved important in some countries. FDI appears to have eased financing constraints—although again the benefits are most apparent for larger firms.

—and the growth of  
nonbank finance

## Access to Finance: Determinants and Implications

Firms finance their operations and growth in many different ways. Their financing choices are influenced by the preferences of each firm's entrepreneurs and, more important, by the options that are available to them. In what form, from whom, how successfully, and at what cost firms are financed thus depends on a wide range of factors both internal and external to the firm. The internal financial resources available to the firm's entrepreneurs and other insiders are of course important. Not only are these the basis for most start-ups, but they can help leverage external finance, that is, finance from outsiders. But given information and agency problems (discussed in chapter 1, box 1.2), external financing also depends on the firm entrepreneurs' own ability to project a credible financing proposal, their willingness to share control, the nature of their business plan, and the uncertainties and risks involved in implementing it. The credibility of the proposal depends not only on the substance of the business plan, but on how the firm is governed and on the transparency of its operations and financial condition.

Circumstances external to the firm are also important. Availability of external financing depends not only on the firm's situation, but on the

wider policy and institutional environment supporting the enforceability and liquidity of the contracts that are involved in financing firms. And it depends on the existence and effectiveness of a variety of intermediaries and ancillary financial firms that help bring providers and users of funds together in the market, not least by helping overcome information and agency problems (Tirole 2006).

**Barriers to finance are a constraint to firm growth—**

As countries differ in their financial contracting environments, so too the extent and pattern of firm financing tend to differ. Most important, these background conditions affect the extent to which *firms as a whole* face financing constraints in different countries (and even within countries across different states or provinces; see Laeven and Woodruff 2007). As noted in chapter 1, access to finance is among the aspects of the business environment most frequently cited by surveyed enterprises in the developing world as an important obstacle to their growth.<sup>1</sup>

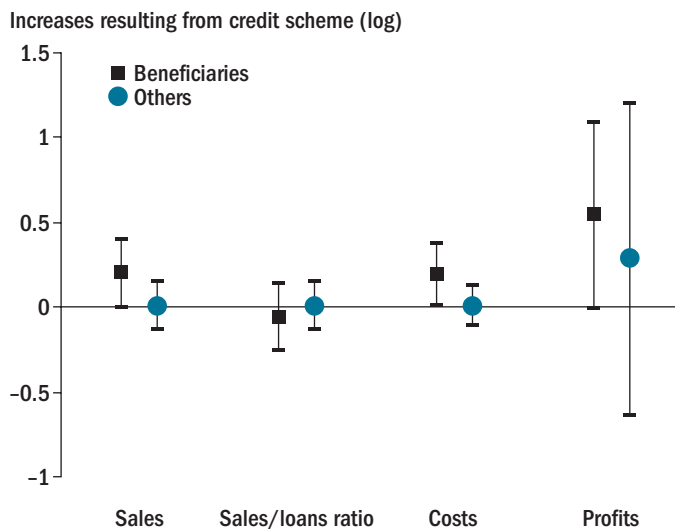
Moreover, investigations of the impact of financing obstacles on firm growth reveal that firms' complaints are valid—their growth is significantly constrained by lack of access. One nice piece of evidence on this comes—somewhat ironically, given the policy recommendations of this report—from a study of a directed credit program in India. Banerjee and Duflo (2004) studied detailed loan information on 253 small and medium-size borrowers from a bank in India both before and after they became newly eligible for the program. Specifically, the size definition of the program was changed in 1998, which enabled a new group of medium-size firms to obtain loans at subsidized interest rates. Naturally these firms began to borrow under this favored program, but instead of simply substituting subsidized credit for more costly financing, they expanded their sales proportionally to the additional loan resources, which suggests that these firms must have previously been credit constrained.

Moreover, as shown in figure 2.1, the new beneficiaries experienced significantly higher costs and profits, while there was no significant effect for other firms.<sup>2</sup> The reader should not, of course, jump to the conclusion that directed credit is the best—or even a good—solution to the existence of credit constraints. As discussed in chapter 4, not all such programs even reach their intended target groups or result in increased output for the eligible firms, let alone their impact on the rest of the economy.

**—indeed, the major constraint to firm growth, according to surveys of managers**

More extensive cross-country evidence comes from the responses of some 10,000 firms in 80 countries to the World Business Environment

**Figure 2.1** Response of beneficiaries under a credit scheme

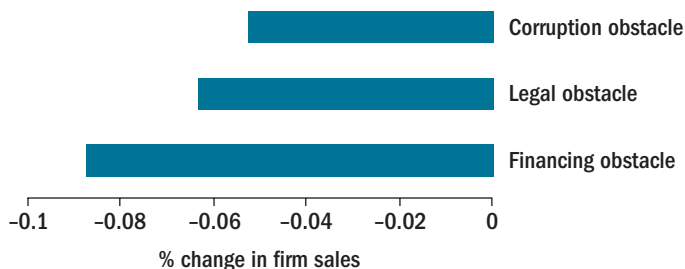


Source: Based on Banerjee and Duflo (2004).

Note: This figure shows estimated logarithmic increase in sales, costs, and profits for beneficiaries and nonbeneficiaries of the credit scheme. Error bars indicate 95 percent confidence intervals.

Survey of 1999–2000. It turns out that respondents who identify finance as a constraint are more likely to experience slow output growth (Beck, Demirgüç-Kunt, and Maksimovic 2005).<sup>3</sup> Among the three constraints these authors focus on—corruption, legal, and finance—financing constraints lead to the greatest reduction in firm growth (figure 2.2). While other business environment obstacles are also important, they are

**Figure 2.2** Impact of self-reported obstacles on growth of firm sales



Source: Beck, Demirgüç-Kunt, and Maksimovic (2005).

Note: The figure shows the estimated reduction in the rate of firm sales growth for a firm reporting the given obstacle (calculated at the average value of the obstacle).

often related to finance, and even when these interactions are controlled for as well as they can be in a cross-section, access to finance seems to emerge consistently as one of the most important and robust underlying factors that constrain firm growth (Ayyagari, Demirgüç-Kunt, and Maksimovic 2006a).

Both cross-country and case-study evidence thus points to the existence of financing constraints and shows how access to and use of credit can alleviate these constraints.

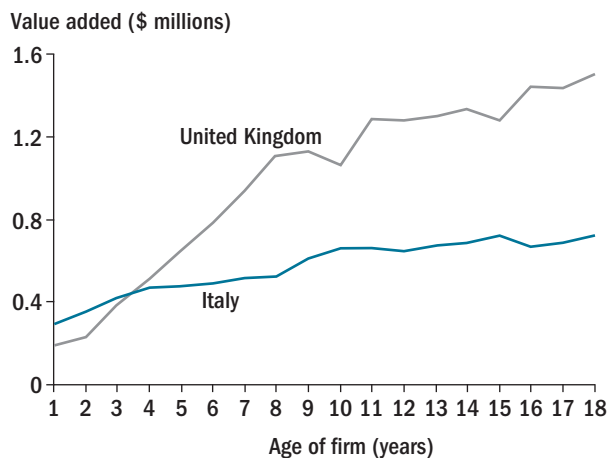
## The Channels of Impact: Micro and Macro Evidence

The next issue is to identify the channels through which easier access to external finance increases firm growth and ultimately economic growth. There are numerous *potential* channels, and recent research shows that finance is associated with all of them.

- The availability of external finance is positively associated with the number of *start-ups*—an important indicator of entrepreneurship—as well as with firm dynamism and *innovation*.
- Finance is also needed if existing firms are to be able to exploit *growth* and *investment* opportunities and to achieve a larger equilibrium size.
- Firms can safely acquire a more efficient productive asset portfolio where the infrastructures of finance are in place,<sup>4</sup> and they are also able to choose more efficient organizational forms such as incorporation.

### Better access to finance can promote new firm entry and growth

To get a flavor of the nature of the empirical evidence researchers use in detecting these effects, look, for example, at the evidence on start-ups and their subsequent growth. Klapper, Laeven, and Rajan (2006) extracted data on more than 3 million firms from the Amadeus database (which assembles information mainly from national company registries in advanced and transition economies in Europe). From inspection of the reported age of each company, Klapper and her colleagues were able to compute the entry rate for each of eleven two-digit sector groups and thus assess the effect of entry and other regulations on the degree of new firm entry and firm growth. Figure 2.3 shows striking differences, even between two developed economies such as Italy and the United Kingdom, in such dimensions as the rate of firm entry (higher in the

**Figure 2.3** Italy vs. U.K.: firm size at entry and over time

Source: Klapper, Laeven, and Rajan (2006).

United Kingdom), initial firm size at start-up (higher in Italy), and more rapid growth (higher in the United Kingdom).

The econometrics shows that such differences are in part related to firm registration costs (more than six times as high in Italy as in the United Kingdom), as well as to easier access to external finance in the United Kingdom. The authors also dig deeper and test the conjecture that, within countries, entry regulations would have the greatest effect in industries that—in a lightly regulated economy like that of the United States—would be most likely to have a high entry rate. Indeed, this proves to be so, providing a more convincing case for the importance of avoiding unnecessarily burdensome regulation. But not all types of regulations hinder: it turns out that the kinds of regulation needed for well-functioning finance (such as accounting standards and property rights) have a *positive* effect on entry.<sup>5</sup>

The wealth of information generated on a cross-country basis by the Investment Climate Surveys can be used to examine the role of finance in influencing a range of enterprise characteristics. For example, Ayyagari, Demirgüç-Kunt, and Maksimovic (2007a) exploited the responses of some 17,000 firms in 47 countries to the questions on enterprise innovation.<sup>6</sup> Taking an average of each firm's responses to the innovation-related questions, these authors assembled a range of country- and firm-level variables likely to be associated with firm innovation, including

**Use of external finance is associated with more innovation by firms**

## Box 2.1 Are cross-country regression results credible?

ECONOMETRIC STUDIES PURPORTING TO EXPLAIN cross-country differences in economic growth rates and other country characteristics have proliferated in recent years. Not all of these studies have been equally convincing. Numerous published papers did not take adequate account of the formidable problems of making valid inferences from such data. The most widespread problems include heterogeneity of effects across countries, measurement errors, omission of relevant explanatory variables, and endogeneity, all of which tend to bias the estimated effect of the included variables. These problems are not limited to cross-country regressions, but they seem especially prominent in this area. Of these, endogeneity is the most intractable. It arises when the common effect of an omitted factor or disturbance on two variables is misinterpreted as a causal link between them. Econometric theory offers a number of possible solutions, but most of them call (in one way or another) for what are known as instrumental variables. These are not always available or credible, given that their validity and effectiveness depends on the instrument being correlated with the explanatory variables, but (crucially) not otherwise correlated with the dependent variable. The second criterion for validity—the so-called exclusion restriction—is difficult to verify.

The cross-country studies cited in this report have all made plausible efforts to deal with these problems, sometimes by painstaking collection of data on ingeniously chosen instrumental variables; indeed, the literature has relied heavily on just a handful of such instruments (compare Pande and Udry 2006). Since they cannot logically have satis-

fied the exclusion restrictions required to ensure their validity for all of the applications, in at least some applications they must have been invalid.

Sometimes, a more direct approach can be taken using micro data and making use of sectoral or firm-level differences. For example, instead of just looking at country aggregates, it may be plausible to assume that the effect being measured, if present at all, is stronger in some sectors, or for some types of firms, than others; in other words, some sectors or firms are more *susceptible* to the causal factor being examined (for example, financial sector development). Even if the causal factor varies only across countries, its impact can then be more precisely measured if data is available at the firm or sector level.<sup>a</sup>

The additional information obtained by working with cross-country firm- or sector-level data may not be as great as at first appears, however; the different firms in any given country are likely affected by common disturbances, which, if neglected, can result in overestimating the precision of coefficient estimates. Dropping the cross-country dimension often allows researchers to take explicit account of special circumstances and to exploit more detailed data, such as data across different states or regions of a country. The quality of the data is more likely to be uniform for observations within a single country. But omitting cross-country variation comes at the cost of narrowing the range of variation in the phenomena being studied—indeed, some causal factors of interest may not vary at all within a country. All in all, it is through an accumulation of evidence using different methodologies that the complete picture can be progressively filled in.

a. Several of the papers discussed in this chapter employ this assumption, using the product of the causal variable and the supposed sectoral or firm-level susceptibility as the explanatory variable. This approach was first applied in the financial access literature by Demirgüç-Kunt and Maksimovic (1998) and by Rajan and Zingales (1998). Using firm-level data from 8,500 large companies in 30 countries, the former used a financial planning model to calculate how fast those firms could be expected to grow if they had no access to external finance. The extent to which firms were able to grow faster than this internally financed growth rate represented the firm's growth susceptibility to good finance. In countries with greater financial depth, stock market development, and legal enforcement, a higher proportion of firms were able to grow at rates that are possible only with access to external finance. Rajan and Zingales worked with data on 36 sectors in 41 countries and assumed that each sector's susceptibility to financial development would be correlated across countries with the degree to which large firms in the same sector in the United States relied on external financing. This statistical technique is also referred to as a form of "difference-in-differences" estimation.

information about the structure of each firm's financing. Despite the inclusion of the other control variables and even after controlling for reverse causality by using instrumental variable techniques, they found that firms' use of external finance was associated with more innovation. This finding was even more strongly evident when access to finance was from foreign banks.

The results of this firm-level, cross-country evidence are pretty unambiguous. Access to and use of finance, and the institutional underpinnings that are associated with better financial access, favorably affect firm performance along a number of different channels. If entry, growth, innovation, equilibrium size, and risk reduction are all helped by access to and use of finance, it is almost inescapable that aggregate economic performance will also be improved by having stronger financial systems.

Indeed, this result is likely a glimpse of the main underlying mechanism behind the now relatively long-established finding that a significant fraction of the differences across countries in economic growth in the latter half of the 20th century can be explained by variations in their level of financial development (Levine 2005; World Bank 2001). The finance and growth literature typically measures financial development by the ratio of bank credit to the private sector to GDP, an inevitably crude measure that captures only two aspects of financial development, namely, the ability of banks to mobilize resources, and the degree to which they channel these resources to the private sector. Indeed, researchers' extensive use of this banking-depth variable to summarize financial development occurs primarily because—unlike other measures—it is available for many countries over a long period of time. Among the dimensions not explicitly captured by this measure are the ability and success of banks in making good credit appraisal and monitoring decisions and in maintaining operational efficiency; the measure also does not capture the operation of nonbank aspects of the financial sector, including the market for equities. Given the imperfections of this measure, it is all the more striking that such a strong statistical cross-country correlation between financial development and growth was detected and proved robust to the application of instrumental variables to take account of endogeneity. Indeed, when the adjustment for endogeneity is made, it *increases* the estimated impact of finance on growth, which underscores that credit depth is only a proxy for the true degree of financial development.<sup>7</sup>

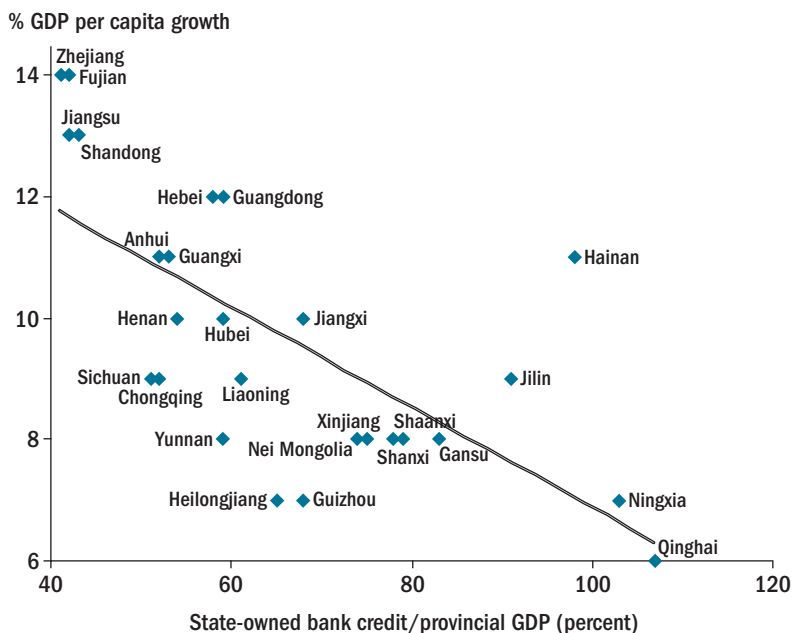
**Broader access to finance also promotes growth at the aggregate level**

Overall banking depth (not just private credit) is also correlated across countries with overall economic growth, but less robustly: it does seem that restricting attention to private credit, as opposed to all bank intermediation, is correct. Look, for example, at China (a country that is excluded from most econometric studies, not least because of the difficulty of reliably measuring private credit, due to the ambiguity of firm ownership in the process of China's transition from the planned economy system). Interprovincial differences in growth rates in China are highly correlated with banking depth—but *negatively* (Boyreau-Debray 2003; Boyreau-Debray and Wei 2005). Mobilizing huge amounts of funds to pour into the declining parts of the Chinese state enterprise system, as the main Chinese banks were doing during the last decades of the 20th century, does not appear, on this evidence, an effective way of employing the financial system in the interests of economic growth. China has continued to grow rapidly, as more workers shift from subsistence agriculture and other low-productivity activities into the modern sector. But the Chinese banking system, despite being one of the deepest in the world, has not been a major contributor to this growth (figure 2.4).<sup>8</sup> The finance and growth link is thus better seen as one that operates by enabling privately owned firms to reach their potential.<sup>9</sup> Likewise, the aggregate evidence on long-term growth shows that finance has its influence through productivity gains rather than simply through an increase in the volume of investment (Beck, Levine, and Loayza 2000; Love 2003); finance also plays an important role in reallocating investments across sectors as demand shifts (Wurgler 2000).<sup>10</sup>

**Rapid growth of the banking sector can be potentially destabilizing**

Banking systems can grow too quickly—with the boom inevitably followed by a bust—and in some countries the huge size of the banking system reflects policy distortions that are inhibiting the emergence and growth of complementary segments of finance. Perhaps therefore it is not so surprising that the econometric link between banking depth and aggregate economic growth has weakened in recent years, in particular when the data set includes the 1997–98 East Asia financial crisis (Rousseau and Wachtel 2005).

There also seems to be a threshold effect at the other end of the scale: below a certain level of financial development, small differences do not seem to help growth.<sup>11</sup> In these countries, financial development may boost income but not the long-run growth rate. Indeed, Aghion, Howitt, and Mayer-Foulkes (2005) suggest that it is lack of access to finance that prevents entrepreneurs in poor countries with undeveloped financial

**Figure 2.4** Finance and growth across Chinese provinces

Source: Boyreau-Debray (2003).

Note: This figure plots credit by state-owned banks relative to provincial GDP against GDP per capita growth.

systems from catching up. Without access to finance at a reasonable cost, and lacking sufficient personal wealth, these entrepreneurs cannot afford to make the needed investments in innovation. The theoretical access-based model of Aghion, Howitt, and Mayer-Foulkes implies that low-income countries with low financial development will continue to fall behind the rest, whereas those reaching the financial development threshold will converge and, up to a certain point, will do so faster the higher the level of financial development. Comparing average long-term economic growth rates for a cross-section of about 70 countries, they find—consistent with their theory—that financial development helps an economy converge faster but that there is no effect on steady-state growth.

Summarizing, access to credit supports firm growth and ultimately national growth through a variety of different channels. Providing access to credit to the most efficient and innovative enterprises is behind the well-documented causal relationship between financial depth and national growth. But who benefits the most from financial deepening

## Box 2.2 External vs. internal and formal vs. informal finance

TWO ASSUMPTIONS, EXPLICIT OR IMPLICIT, IN much of the literature on financial access are that availability of external finance and greater formality in finance are both improvements over internal and informal finance.

The idea that availability of external finance represents an improvement comes from two rather different perspectives. First is the idea that a latent pool of enterprise and innovation exists in an economy that, absent external finance, can be made effective only if the entrepreneurs happen to begin with sufficient wealth either themselves or through associates (Rajan and Zingales 2003). Second (and in a sense the opposite problem) is the question of agency: a firm that generates too much free cash may find its insiders making poor investments and relaxing cost control efforts (Jensen 1988; Stulz 1990). If that happens in enough firms in a rapidly growing and profitable enterprise sector, excess free cash could actually weaken the growth process compared with a situation where the enterprise sector has to rely more on external finance provided by an efficient

and competitive financial system. The contemporary case of profitable state-owned companies in China provides an interesting case for this last point, as discussed by Kuijs (2005).

The argument that informal financial systems may substitute for formal financial systems has been canvassed for the case of China by Allen, Qian, and Qian (2005, 2008). But their story takes as given obstacles to formal financial development such as restrictions on entry and pervasive state ownership of banks. Even if informal finance works in such conditions, it is just a second-best solution. Besides, informal sources of finance vary widely in their effectiveness. Ayyagari, Demirgüç-Kunt, and Maksimovic (2007b) provide evidence from China that, on average for the firms in their sample, access to formal finance was associated with faster firm growth. More generally, informality and relationship lending survive where the institutions needed to support modern technologies of credit appraisal and monitoring are not present.

and better access? What impact does financial deepening and broadening have on the economy's structure? We turn to these questions next.

## Transforming the Economy: Differences in Impact

Finance does not just raise aggregate firm performance uniformly; it also transforms the structure of the economy by affecting different types of firms in different ways. As already discussed, some categories of firms—the small and the new, for example—have more difficulty obtaining external finance than others. But as financial access conditions improve in an economy, those that were formerly shut out have an

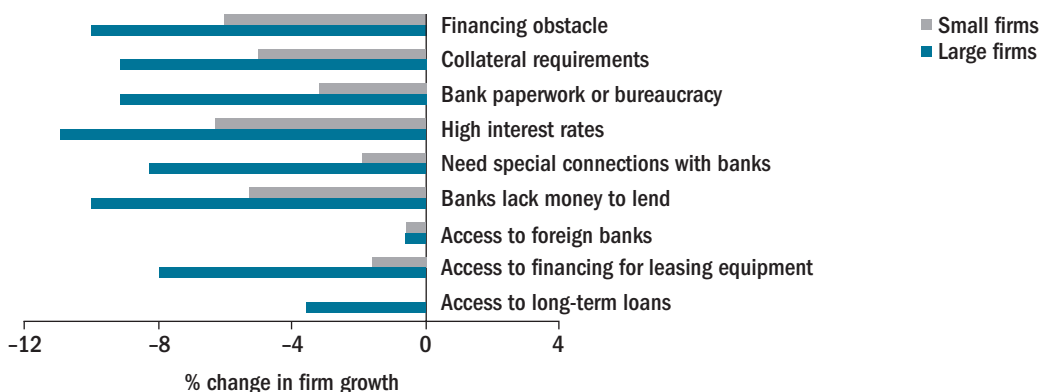
opportunity to expand. In this way, financial sector development has consequences for the composition and performance of the enterprise sector in terms both of size and of ownership.

The size distribution of firms can be affected by the availability of external finance: financial development aids entry of small firms much more than that of large ones, but small firms usually struggle more to get finance when the environment is weak.<sup>12</sup> The size and success of sectors in which small firms have a natural advantage, or those in which firms generally rely more on external finance (including export-oriented firms),<sup>13</sup> are also particularly dependent on financial sector development.

Not only do small firms report higher financing obstacles than do large firms; they are also more severely affected when they encounter these obstacles. Survey findings suggest that financing obstacles loom much more for small firms than for large firms (figure 2.5). Specifically, Beck, Demirgüç-Kunt, and Maksimovic (2005) find that financing constraints reduce firm growth by 6 percentage points, on average, for large firms but by 10 percentage points in the case of small firms. This difference between small and large firms is as big or even bigger for some of the specific financing obstacles reported in the World Business Environment Survey, such as collateral requirements, bank paperwork,

**Lowering financial barriers is especially beneficial for small firms—**

**Figure 2.5** The effect of financing constraints on growth: small vs. large firms



Source: Beck, Demirgüç-Kunt, and Maksimovic (2005).

Note: This graph shows the effect of different financing obstacles on firm growth for small and large firms, measured at the average constraint for the two size groups.

—which in turn can widen an economy's sectoral range and dynamism

interest rate payments, the need for special connections, and banks' lack of lending resources. In addition, the lack of access to specific forms of financing such as export, leasing, and long-term finance is significantly more constraining for small firms (Beck, Demirgüç-Kunt, and Maksimovic 2005).

To the extent that small firms embody much of an economy's latent dynamism, a weaker financial system, by constraining such firms, may condemn a country to a much slower growth path. More generally, the economy as a whole may lose out on the potential for wealth creation in sectors that might give the economy a comparative advantage were it not for the sector's difficulty in accessing needed financial services.<sup>14</sup> With a narrower range of healthy sectors, the economy's resilience to sector-specific shocks is also likely to be weakened.

While lack of financial access tends to hurt small firms the most in countries with underlying weaknesses in their institutional environment, empirical evidence also suggests that small firms benefit disproportionately—in terms of seeing their constraints relaxed—as financial systems develop (Beck, Demirgüç-Kunt, and Maksimovic 2005; Beck and others 2005). Hence it is those who were previously constrained—not those who were already getting finance—that benefit most from financial development. This effect also shows up when studying episodes of financial liberalization. Laeven (2003) shows that small firms' financing constraints decrease following financial liberalization (including interest rate liberalization, elimination of credit controls, privatization, and foreign bank entry), while large firms' financing constraints actually increase (perhaps reflecting the loss of preferential access to finance by large and politically well-connected firms).

Financial development influences ownership patterns

Perhaps even more important, ownership patterns depend on financial sector development, both because firm entrepreneurs choose ownership structures in large part to ensure adequate financing, and because finance tends to go to firms with conducive ownership structures—the selection effect. Specifically, background conditions in the financial sector influence the degree to which the producing firms choose to incorporate or remain controlled by a closed group of family members.

For example, Demirgüç-Kunt, Love, and Maksimovic (2006) use survey data from 52 developed and developing countries to investigate the drivers of the decision to incorporate and the gains for the enterprise from incorporation. They find that firms are more likely to incorporate

in countries with better-developed financial and legal systems, strong creditor and shareholder rights, and effective bankruptcy processes. While incorporated firms do not necessarily report lower financial barriers to their operation and growth in an average country, financial and institutional development does seem to lower obstacles more for incorporated than unincorporated firms. Similarly, incorporated firms grow faster than unincorporated firms only in countries with higher levels of institutional development. These results suggest that the costs and benefits of the legal form of enterprises is endogenous to a country's institutions: incorporated firms have a comparative advantage in countries with institutions that support formal contracting, while unincorporated firms are more adapted to operate in countries with less-developed formal institutions where firms have to rely on informal institutions and reputation.

The institutional environment can also affect other dimensions of ownership. Family firms, even large ones, are still remarkably common, as are interrelated multifirm business groups. Ownership concentration is prevalent in countries with weak minority shareholder rights, suggesting that the inability to share control and profits with nonmanagement shareholders might very well result in limiting the opportunities for raising external equity (La Porta, Lopez-Silanes, and Shleifer 1999). The prevalence of interrelated business groups in many developing countries is similarly attributed to the lack of functioning financial markets, forcing firms to look for alternatives in the form of internal capital markets of large business groups.

Financial development and easier access to external finance thus allows incorporated, self-standing, and independent enterprises with widely spread ownership to flourish. This has a range of broader implications for the identity and concentration of ownership in the economy at large. For one thing, a developed financial sector also tends to be associated with a greater degree of competition in the nonfinancial enterprise sector. More broadly, ownership structures in the enterprise sector can influence political economy performance (Rajan and Zingales 2003).

Summarizing, financial development that improves access to external finance by firms has a deep impact on the sectoral and industrial structure of an economy. What institutions and markets matter most for broader access to external finance, particularly for small firms? We address this question in the next section.

**Increased shareholder rights can broaden the ownership base**

## What Aspects of Financial Sector Development Matter for Access?

We now examine different sources of access to finance. This section looks first at the old “banks versus markets” debate, before turning to a more detailed look at the role of banks (especially foreign banks), nonbank debt markets, and equities. Other dimensions of finance, such as cash management, payments, and insurance, are not specifically discussed, reflecting the state of the literature. In particular, the role of domestic and foreign financial intermediaries (including insurance firms) in helping to manage risk for firms in developing countries is an area deserving much more formal econometric research to add to a sizable practitioner literature.

The main message of these subsections can be briefly summarized. On the debate between banks and markets, the suggestion that one type of system is clearly better than the other no longer has much support in the literature, whether for access or for financial sector development. Instead, creating the infrastructures that let both markets and institutions reach their optimal level is likely to be the best policy.

Making credit from banks and other intermediaries that provide debt finance more widely accessible calls for two complementary approaches. On the one hand, the modern trend to transactional lending, whether based on assets or on automated credit appraisal such as credit registries, for example, is clearly the way of the future. On the other hand, neglect of relationship lending can mean that large parts of the market are underserved where infrastructures are weak and economic activity more informal. The role of foreign banks in improving access has always been controversial, partly for political reasons. We look in some detail at the evidence here, and conclude on balance that opening to foreign banks is likely over time to improve access for small and medium enterprises, even if the foreign banks confine their own lending primarily to large firms and governments.

The corporate bond market and organized securities markets are chiefly of relevance to larger firms, though by broadening the range of firms that have access to long-term funding, they do make a contribution to access. Indeed, the spillover effects of greater access for large firms may be significant for smaller firms because they often rely on trade credit, another area that deserves more research. Opening up the equity market to foreign investors improves access for the larger firms. The market for

private equity (including through inward foreign direct investment) can also reach medium-size firms, and its development depends on adequate shareholder protections and accounting and other information.

### **Banks versus Markets**

As mentioned, much of the early econometric evidence on cross-country differences used broad measures of financial development such as banking depth. That was largely a matter of convenient availability of data, and it certainly does not imply that nonbank finance is of lesser concern. Even a deep banking sector can hinder access if it lacks competition, mainly serves incumbents at high cost (something that has often been observed with state-owned banking systems), or operates without regard to prudential standards. In contrast, a liquid securities market can contribute an additional valuable dimension to financial access (albeit mainly for larger firms).

Following a vigorous debate about the relative merits of bank-dominated systems and those oriented to the securities market, the proponents of each seem to have fought themselves to a standstill. There are good reasons for thinking that each has its sphere of comparative advantage (Allen and Gale 2000). For instance, banks can be effective in financing ventures and firms active in sectors where there is little dispute over the sector's prospects and where firms can be relied upon to pay back loans provided they maintain cost control and productive efficiency. Even though just a few banks may control most of the loanable funds, that need not result in exclusion of creditworthy borrowers. In contrast, where an entrepreneur seeks external financing for a venture about whose prospects there is considerable disagreement, the securities markets can help: even if majority opinion is against the scheme, the entrepreneur can find financing if a sufficiently well-financed minority of investors likes the project.

But when it comes to aggregate economic growth, the research evidence shows that it does not matter for long-term economic growth whether a financial system is primarily bank-based or market-based. What does matter is the level of overall financial development of banks and markets (Demirgüç-Kunt and Levine 2001; Levine 2002).

The same is true at the sectoral level: there seems to be no tendency for sectors especially reliant on external finance to grow more (or less) quickly in a bank-dominated system than in a market-based system

**Both banks and markets  
have a role to play—**

**—although markets may  
be better at providing  
long-term finance**

(Beck and Levine 2002). The growth in the number of firms in the sector, or in the average size of firms, is likewise insensitive to the relative size of the banking and securities sectors.<sup>15</sup> There is a hint, however, in the results obtained by Demirgüç-Kunt and Maksimovic (2002), that firms' ability to obtain financing may be affected in different ways by the two systems, especially at lower levels of financial development.<sup>16</sup> While development of both banks and markets improves access to external finance, a relatively larger securities market may be associated with relatively better access of firms to long-term financing, with banking development more associated with availability of short-term financing. Hence differences in the contracting environments and their impact on relative development of banks versus markets may have important implications for which firms and projects have access to finance, despite our inability to observe an impact on growth using aggregate data. More recent analysis helps shed light on some of the underlying aspects of financial sector development in broadening access.<sup>17</sup>

### Access to Debt Finance

**Debt finance is the major source of external funding for firms of all sizes**

Debt finance is typically the major source of external funding for firms of all sizes, no matter how small.<sup>18</sup> Diverse lending technologies are employed for reaching different types of client in contrasting environments, especially where clients do not have conventional collateral or where collection of collateral is not secure.<sup>19</sup> Conventional practice distinguishes between transactions lending, based primarily on “hard” quantitative data (such as a credible set of borrower financial accounts) or secured on assets, and relationship lending, based significantly on “soft” qualitative information. In practice, however, the menu is much broader (as Berger and Udell 2006 emphasize).

Because of the time and effort involved in understanding the borrower's business and financial needs, relationship lending is costly for the lender and therefore requires either high spreads or large volumes to be viable. If the customer's creditworthiness is hard to evaluate, then there may be no alternative to relationship lending. In a broad sense, relationship lending is at the core of the banking business, continuing to give banks a comparative advantage over markets and nonbank financial institutions, even in developed countries (Boot and Schmeits 2005). Indeed, limited access to credit in some difficult environments may be attributable to the reluctance of existing intermediaries to engage

in relationship lending on a small scale (Honohan and Beck 2007).<sup>20</sup> For lenders willing to put in the effort, however, relationship lending can be profitable.

Credit networks that employ and sustain a form of social capital through relationship lending have long been observed in different parts of the world. These networks are often characterized by a common ethnicity of the participants, although ethnic group membership does not automatically convey membership in the credit network.<sup>21</sup> Biggs and Shah (2006) describe credit networks observed in the responses to enterprise surveys in a sample of African countries in the 1990s.<sup>22</sup> They show that a common ethnicity greatly increases the likelihood of a trade credit relationship between any two firms, and that a lengthy specific relationship history between the two firms involved in the credit transaction is not required: network membership itself seems to be sufficient. Credit between firms from different networks is much less likely and does require a lengthy trading relationship. As a result, firms that are not in the dominant networks are effectively shut out of credit, resulting in ethnically biased financial access. For example, enterprises that form part of a network of European-owned or Asian-owned firms enter at a larger size, show higher productivity, and grow faster compared with other African enterprises.<sup>23</sup> To overcome the de facto exclusion of the latter from these networks based on relationship lending, it would be desirable to build the infrastructures that allow a move towards the greater formality and anonymity of modern transaction-based lending.

Corruption in India and the strong pro-state orientation of formal finance in China mean that relationship lending has had to assume an important role in supporting the recent fast growth of firms in those countries, as documented by Allen, Qian, and Qian (2005, 2008) and by Allen and others (2006). For the firms that responded to their survey in India, informal governance mechanisms, such as those based on reputation, trust, and relationships, are more important than formal mechanisms, such as courts, in resolving disputes, overcoming corruption, and supporting growth. Apparently, the pervasiveness of petty corruption more than offsets the advantages of inheriting the common law legal origin in India, inhibiting the growth of transactional lending. Despite the need to rely on relationship lending, however, the Indian economy has managed to grow at a rapid rate, showing the potential for these mechanisms to substitute at least partially for more formal finance in a very poor country. Likewise in China, the fast growth of private

**Informal relationship lending discriminates against firms outside the credit networks—**

**—though informal finance has filled some of the gaps left by constrained formal systems**

firms in some coastal provinces seems to depend a lot on relationship lending (facilitated by Confucian ethics), including from unlicensed private financial intermediaries, as well as on relationships built on social capital and shared interests with local government officials. (See box 2.2, however, for a somewhat different perspective).

**Other forms of lending can provide financial access**

But even where standard types of transactional lending based on transparent financial accounts are not available, other forms of transaction lending may be possible, as Berger and Udell (2006) stress. Provided the relevant laws are in place, asset-based lending such as factoring, fixed-asset lending, trade finance, and leasing are technologies that can release sizable financing flows even for small and nontransparent firms to finance the relevant assets. To be sure, factoring does require a degree of creditworthiness but not necessarily of the “borrower,” but rather its customers. That may often be the case, as where a major exporter buys on credit from smaller suppliers. As a result, factoring is found to be more prevalent where credit information is good, though it does not seem to require a high degree of property rights protection (Klapper 2006).

It is striking that some of these techniques have not been more widely used in developing countries. Leasing, for example, constitutes only a few percentage points of fixed investment in the typical developing country, while it reaches up to 20 percent in many developed countries. Similarly, factoring in the United Kingdom reaches 7 percent of GDP, whereas it constitutes less than 1 percent of GDP in most developing countries (Klapper 2006). The limited role of leasing and other nonstandard debt financing is also illustrated by the financing patterns reported in chapter 1 and potentially reflects the shortcomings of the underlying legal, informational, and institutional environment, as is discussed later.

**Credit registries and credit scoring can expand access for small firms—**

Credit registries are important tools for the expansion of transactions-based lending technologies (Miller 2003; Love and Mylenko 2003; Brown, Jappelli, and Pagano 2006; Powell and others 2004). Credit registries ease for the lender the routine task of verifying aspects of the repayment record (and sometimes the outstanding indebtedness) of the applicant borrower and increase the cost of delinquency, thereby reducing moral hazard. They also help build a database that the lender can use to generate credit scores predicting repayment on the basis of borrower characteristics. This technology is quite mature in the United States, where, as shown by Berger, Frame, and Miller (2005), the use of credit-scoring technology for small business loans has led to an expansion in the availability of loans to small and riskier firms, even by larger

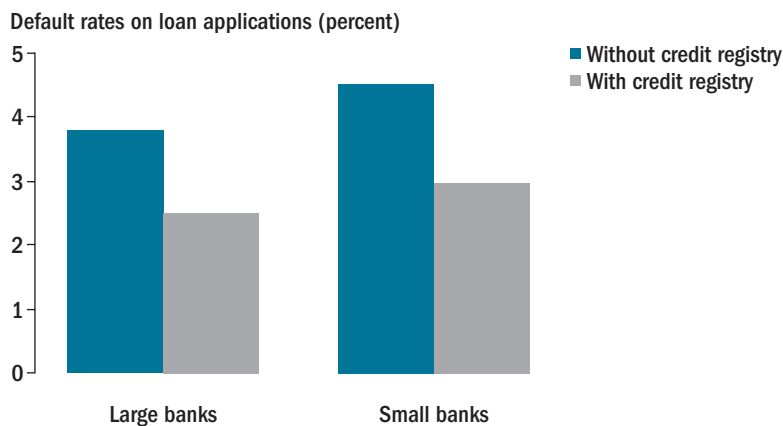
banks that would hitherto have shied away from this segment. The use of credit scoring for small business lending, often based on data collected for credit registry purposes, is growing in developing countries as well (De la Torre, Martinez Peria, and Schmukler 2007), although it has yet to reach many countries: this is banking at what is currently a very active frontier.

The more information is stored in the credit registry, the more useful it is in selecting out the risky borrowers without reducing overall access to credit. For instance, Powell and others (2004) use the actual data in the public Argentine credit registry to show that availability of systemwide registry information can substantially improve the precision of credit decisions even for a large bank (figure 2.6). In addition, they show that availability of positive information (for example, history of borrowings, not just defaults) could enable a lender to lower the default rate from 3.8 percent to 2.9 percent while still lending to 60 percent of the sample borrowers.

It is not just the lenders who benefit from better credit information sharing. Using firm-level survey data across 24 transition economies, Brown, Jappelli, and Pagano (2006) find a positive association between the quality of the credit registry and the ease of external financing (figure 2.7). This relationship was confirmed using panel data over time for a limited set of countries.

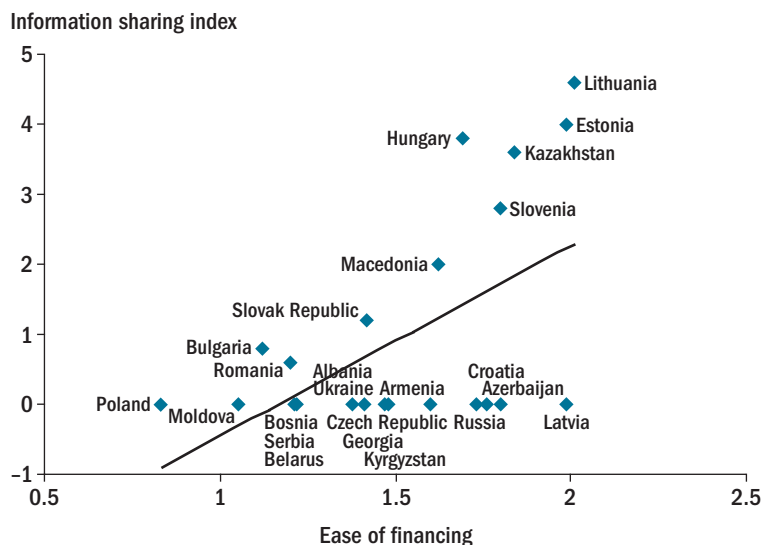
—by helping to identify risky loans

**Figure 2.6** Credit information sharing and loan losses



*Source:* Based on an experiment using actual data in the Argentine credit registry, as processed by Powell and others (2004).

*Note:* Default rate is computed for banks that are targeting a 60 percent acceptance rate of loan applications and optimizing use of a credit registry where available.

**Figure 2.7** Credit information sharing and firms' financing constraints

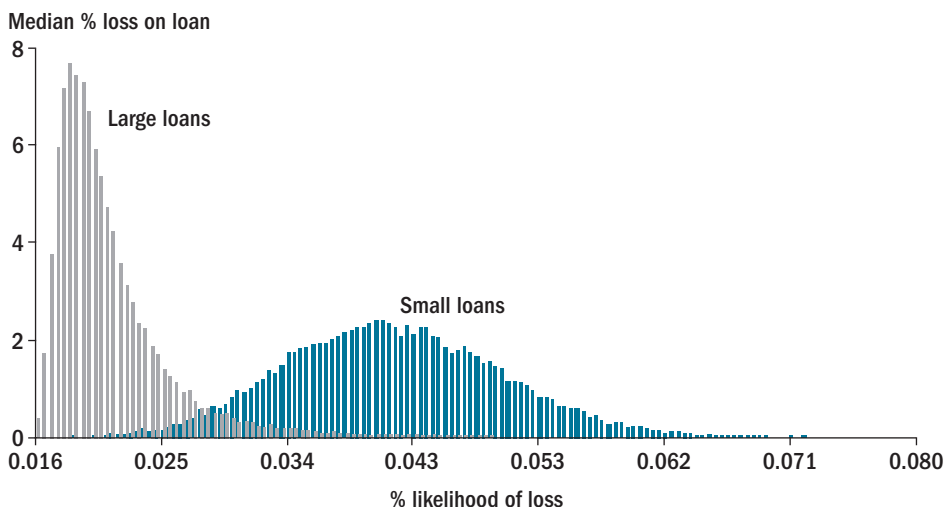
Source: Brown, Jappelli, and Pagano (2006).

Note: This figure plots the quality of credit information sharing against the across 24 transition countries. Ease of financing ranges from 0 to 3, with higher values meaning lower obstacles to financing.

While public credit registries may have some potential advantages, such as the power to compel lenders to share positive information, the experience has been that most public registries do not make as much of the information at their disposal as they might. Increasingly public credit registries are being complemented, where they exist, by private credit bureaus.

With more countries considering the move to Basel II, which can make use of private credit rating agencies, the credit information industry is likely to see considerable expansion in the years ahead.<sup>24</sup> And the more sophisticated the statistical analyses of loan loss probabilities, the more small borrowers can benefit through cheaper access to bank loans. For instance, using data from the Chilean public credit registry, Adasme, Majnoni, and Uribe (2006) have shown that the distribution of loan losses from small loans (equivalent to less than \$20,000) is much less skewed than that for large loans (figure 2.8).<sup>25</sup>

The implication is that, while banks making small loans do have to set aside larger *provisions* against the higher expected losses from small loans—and therefore they need to charge higher rates of interest to cover

**Figure 2.8** Credit loss distribution for portfolios of large and small loans

Source: Adasme, Majnoni, and Uribe (2006).

Note: This figure shows the loan loss distribution for portfolios of large and small loans based on data from Chile. Although the probability of loss on small loans is higher, the median percent loss on large loans is much higher and there are far more very high losses for large loans.

these provisions—they need relatively less *capital* to cover the upper tail of the distribution, that is, to support the risk that losses will exceed their expected value (such losses are sometimes known as “unexpected” loan losses). It is important that in making regulatory arrangements, such as those of Basel II, policy makers do not neglect such findings and unnecessarily penalize small borrowers.

### The Role of Foreign Banks

The growing market share of foreign-owned banks in developing and transition economies has resulted from a number of forces, including the privatization of long-established state-owned banks (in response to their disappointing financial and economic performance) and the aftermath of banking crises, when distressed banks were put up for sale, often after being financially restructured at the expense of the host country government. Foreign banks were often the successful acquirers, transforming the ownership structure, especially in many parts of Latin America, Eastern Europe, and Africa. Foreign banks have also entered *de novo*, although typically remaining relatively small in that case. In addition

**A growing market share  
for foreign-owned banks  
excites controversy**

to the big international banks, foreign entry has come from regionally specialized banks or those from a neighboring country often exploiting close business or cultural ties (Claessens and van Horen 2007).

Foreign owners bring capital, technology, know-how, and a degree of independence from the local business elite. It has been suggested that they can help stabilize the banking system and the macroeconomy, and they have tended to be more efficient and profitable than incumbent banks in developing countries. But have they improved access? This is a highly contested issue. Most foreign banks are relatively large (at least in their global operations) and may struggle to understand aspects of the local business culture. It is a commonplace observation in advanced countries that large banks have a comparative advantage in transactions banking based on “hard” information, whereas the comparative advantage for relationship lending to small or otherwise opaque firms lies with small, thus local, banks. The progressive extension of credit information will tend to erode these differences over time, but there is no doubt that the credit environment in developing countries tends to be considerably more opaque than in advanced economies. Could it therefore be that in countries relying heavily on foreign banks, the SME sector will experience more limited access to credit? Indeed, many foreign banks do not concentrate on SME lending but stick mainly to the banking needs of larger firms and high-net-worth individuals.<sup>26</sup> Foreign banks are more efficient and can undercut the local banks in their targeted segments. But that does not imply that foreign entry will result in lower system-wide availability of credit for SMEs. Instead, the increased competition for large customers can drive other banks to focus more on providing profitable services to segments they had formerly neglected.<sup>27</sup>

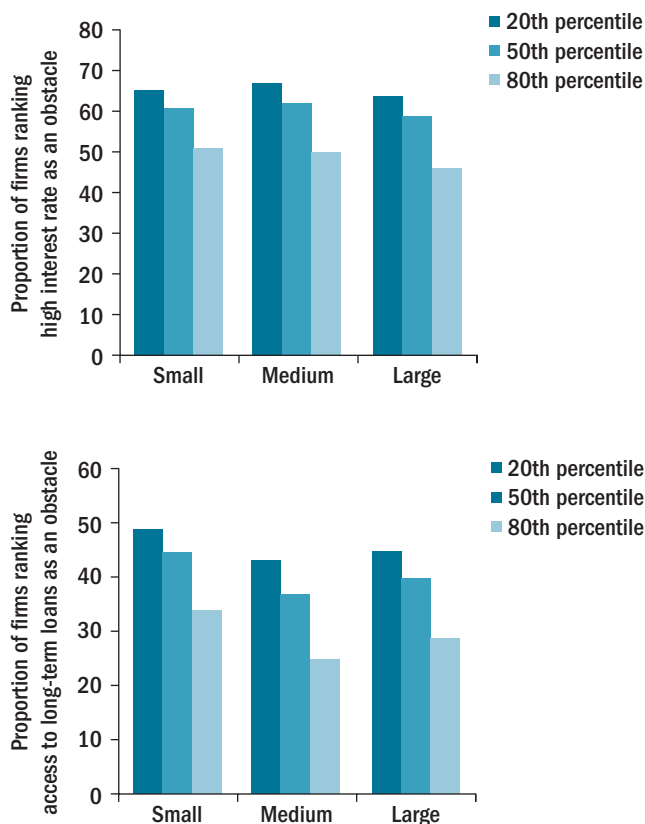
**The evidence suggest foreign  
banks benefit firms of all  
sizes—**

Ultimately this is an empirical issue, and one on which much recent evidence from developing countries has accumulated, although with somewhat contrasting results across different regions. Overall, foreign bank entry has been a welcome improvement for larger firms, and this improved credit access has in many countries extended to smaller firms. Nevertheless there are also some indications that the arrival of foreign banks has not always been good for small firm access to credit, at least at first.<sup>28</sup>

The evidence on the impact of foreign banks comes from a myriad of different types of analysis on different types of data sources; some international, some (more fine-grained) at the national or subnational level.

The benchmark research finding on the relation between financial access and foreign bank presence comes from a reanalysis of the responses to access questions in the WBES surveys. In a very direct approach that yielded striking results, Clarke, Cull, and Martinez Peria (2006) found that respondent firms were less likely to rate high interest rates and access to long-term loans as major obstacles in countries with sizable foreign bank shares. The effect was stronger for larger firms but was present even for small firms (figure 2.9).<sup>29</sup>

**Figure 2.9** Foreign bank participation and financing obstacles



*Source:* Clarke, Cull, and Martinez Peria (2006), table 3.

*Note:* This figure shows the likelihood that small, medium, and large enterprises rank high interest rates and lack of access to long-term loans as the major obstacles in developing countries at the 20th, 50th, and 80th percentile of foreign bank ownership, holding other firm and country characteristics constant. Small firms are defined as those with 5–50 employees, medium firms as those with 51–500 employees, and large firms as those with 500 or more employees.

—although the impact of foreign banks has not always been positive—

One contrary suggestion that a larger share of foreign bank ownership might not always be so good for financial development or access comes from broad-brush aggregate cross-country data. Confining themselves to low-income countries (the poorest 60 or so) Detragiache, Gupta, and Tressel (2006) found that a higher share of foreign-owned banks is significantly and negatively correlated with private credit growth, even after controlling for some other national variables. This somewhat surprising result does not hold for middle- and upper-income countries and may reflect the more cautious approach that foreign banks take in countries with deficient legal and information infrastructures.

Greater richness of evidence is obtained if bank-by-bank data for locally owned and foreign-owned banks is available for comparing behavior between the two groups and also to see whether more entry by foreign banks affects the behavior of local banks. Among recent studies taking this approach, Clarke and others (2005) collected data from bank supervisory entities in Argentina, Chile, Colombia, and Peru for the late 1990s, a period in which there was substantial foreign entry in that region. The data included each bank's origin (and, if foreign, its mode of entry; distinguishing between *de novo*, by acquisition, or long-established), and the share of its lending portfolio going to SMEs. Controlling for the bank's size, age, and financial performance, they find that, as expected, foreign banks lend less to SMEs, but that the differential is largely associated with small banks. There is little difference between the share of small business lending in the portfolio of medium and large foreign-owned and domestic banks—with foreign banks even nudging ahead in Chile and Colombia.<sup>30</sup>

—especially for smaller firms in the short term

This bank-level evidence is partly confirmed by firm-level evidence from transition economies, which have also seen rapid foreign bank entry over the past 15 years, with foreign-owned banks accounting for over 90 percent of total credit in several countries. Examination of firm-level data (from the Amadeus database) on medium and large firms in that region shows that the process of foreign bank entry has been associated with more rapid sales growth and total assets of large firms, and an increase in both firm entry and exit rates. Using 60,000 firm-year observations covering the period 1993–2002,<sup>31</sup> Giannetti and Ongena (2005) also found that these effects were stronger for firms in sectors that are more bank-susceptible (in the sense explained above). However, they also found that foreign bank entry was negatively associated with the growth of the smaller firms in their sample. It remains

to be seen to what extent this experience proves to be a transitional one, both in the sense of being specific to the rapid structural changes that were happening in Eastern Europe in those years—indications are that firms established from 1989 through 2003 did not benefit so much from foreign bank entry—and in the sense of evolving over time as the foreign banks' behavior matures. Foreign bank managers in Eastern Europe themselves report an evolution in their strategy toward a focus on smaller firms as the lending environment becomes both more competitive and more transparent.

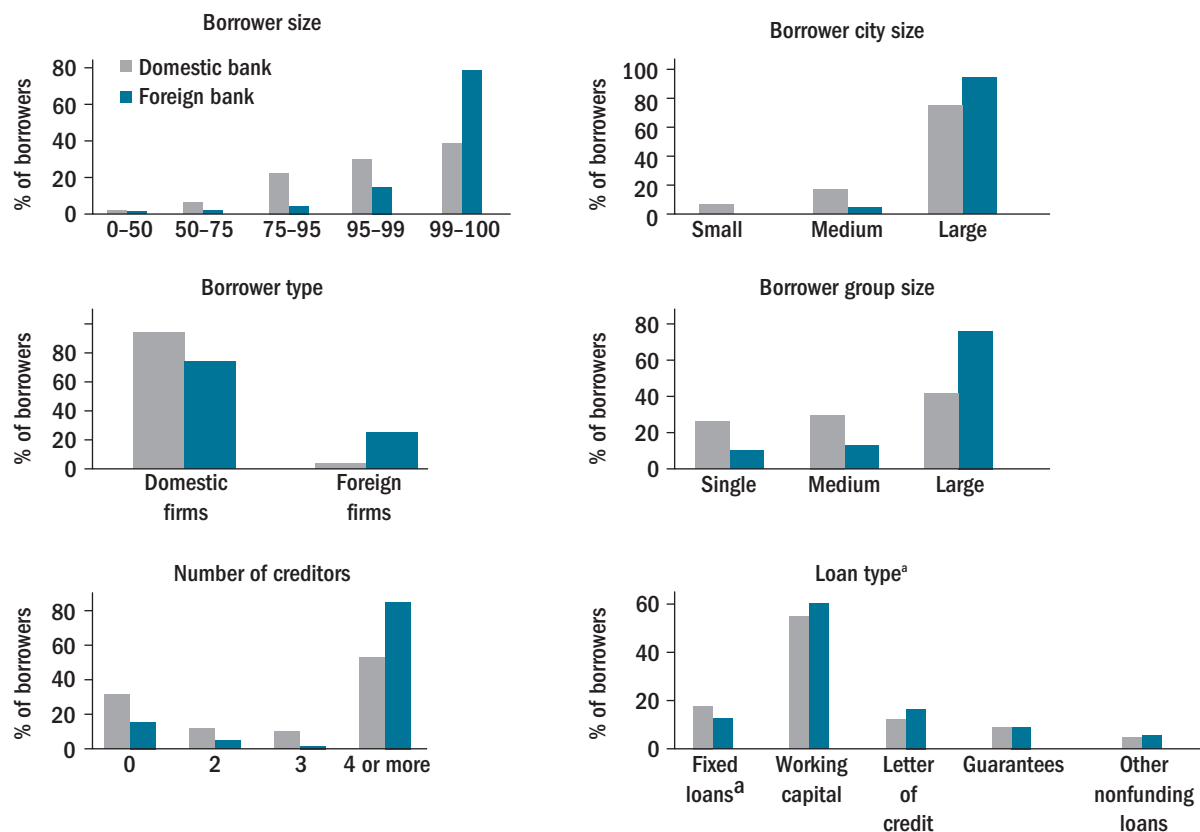
The arrival or expansion of foreign banks, however, can also be disruptive, generating extensive changes in economic behavior. A study in India by Gormley (2004) is highly instructive in this regard. He shows that the state-owned development banks reduced the volume of long-term lending in districts where foreign banks had entered. The newcomers took up only some of the slack. While they gave some firms more credit than these firms had before—in effect skimming the cream of the best clients—they did not take on all of the clients dropped by the state-owned development banks, regardless of profitability. Many of those firms that thus lost access to long-term bank finance were able to make up the deficiency, however, because they were part of an industrial group. Gormley was unable to detect any adverse consequences of the refocusing of bank lending in sales or bankruptcies.<sup>32</sup>

Gormley notes that in the years following entry the foreign banks seem to have expanded the clientele to whom they would lend, but even though the liberalization that triggered entry started in 1994, he suggests that it is still too early to determine the scale of long-term effects. Also, as observers of the Indian scene will be aware, foreign entry was not the only source of heightened competition in India; bank privatization also contributed to increased competition.

Mian's (2006) study of 80,000 bank loans in Pakistan during the period 1996–2002 throws light on the possible limitations of many international banks when it comes to lending in developing countries. He finds that foreign-owned banks were more conservative, shying away from soft-information loans; this was true even for foreign banks that had been present in Pakistan for a very long time. Specifically, they were less likely to lend to small firms, domestically owned firms, firms that were not part of a business group (that is, groups of firms with overlapping directorships), or those without other banking relationships (figure 2.10). Mian also compares foreign banks of different nationalities and finds

**Foreign banks can generate extensive changes in economic behavior**

**Foreign banks tend to avoid relationship lending**

**Figure 2.10** Bank ownership and borrower characteristics in Pakistan

Source: Mian (2006).

a. All loan types are short-term loans except fixed loans, which have a maturity of more than two years.

that non-Asian foreign banks were less likely than Asian banks to lend to Pakistani firms. Second, despite being such conservative lenders, foreign banks did not have lower default rates in Pakistan and were less likely to renegotiate and recover after default. It is not as if all the good borrowers were being served by existing locally owned banks: Mian found that during the period under review, private domestic banks established new branches from which they served new, soft-information customers rather than existing customers from other banks.<sup>33</sup>

Foreign bank entry can also influence the degree of concentration in a country's banking system (although it is only one contributory factor;

large state-owned banks, for example are another contributing factor). On the one hand, the arrival of foreign banks injects a degree of competition for the rest; on the other hand, the foreign banks tend to be large and their entry might displace others (Claessens, Demirgüç-Kunt, and Huizinga 2001; Bonin, Hasan, and Wachtel 2004).<sup>34</sup> The competitive structure of banking can also affect the degree to which firms have access, but the effect seems to be highly dependent on other characteristics of the business environment for banking. Greater concentration is often equated with greater monopoly power, but this may not be the case in banking if the various market segments are vulnerable to new entrants (Berger and others 2004). Other indicators of monopoly power are also needed.<sup>35</sup> Nevertheless, big banks almost inevitably enjoy a degree of monopoly power; indeed the logic of modern banking increasingly entails exploiting economies of scale and diversification.<sup>36</sup>

Some scholars have suggested that a degree of monopoly power for banks might even be good for small borrowers' access to credit. They argue that the investment in relationship banking required to determine whether a small borrower is creditworthy is likely to be rewarded by a stream of profits only in an uncompetitive market.<sup>37</sup> If so, only banks with monopoly power will make the effort to build the relationship. However the responses of firms to the WBES survey provide little evidence to support the idea that a more concentrated banking system is good for access. Adverse effects of concentration can be found only in low-income countries or in those countries with weak credit information or tight restrictions on the scope of banking (Beck, Demirgüç-Kunt, and Maksimovic 2004). Although small, low-income countries may stand to benefit most from greater banking competition, it is precisely in these that achieving a sufficient number of well-capitalized and qualified bankers is problematic.

A balanced overall statement of the available empirical evidence is that opening to foreign banks has the potential to convey net benefits by introducing competition and increasing efficiency and independence of local political processes and that these benefits are likely to be greater as time goes on and the entrants learn more about local conditions. The benefits are also likely to be greater in host countries that have the necessary information and contractual frameworks and incentive structures in place that facilitate foreign banks doing what they are best at, namely, automated transactions lending. While foreign entry generally generates more competition for the incumbents, the end result may not always be

**Foreign banks may increase banking concentration—and competition**

**The benefits of foreign banks are more apparent in the longer term**

an increase in competition if entry happens through acquisition, especially in a small market. Given the little empirical support for the theory that increased monopoly power improves the access of small borrowers, such entry may not necessarily lead to greater access. There are indications that foreign entry tends to make domestic financial institutions seek out nontraditional businesses, including services for previously excluded segments of the population, as these institutions find their traditional businesses coming under competition. Hence, locally managed banks with a business model focused on addressing opportunities in the local business community have the potential to survive foreign entry, adding value by broadening access, especially to the SME sector.

### Access to Nonbank Debt Finance

#### A poor business environment can inhibit long-term bank financing

Where long-term finance is available, the evidence is that it makes a positive contribution to firm growth (Demirgüç-Kunt and Maksimovic 1999). But there are numerous barriers to availability of long-term finance. It is not just that banks need to maintain liquidity, an aspect that is often stressed. In reality, well-run banks with a stable deposit base can and do lend at maturities well beyond the nominal maturity of their deposits. Indeed this maturity transformation is one of the key contributions of banking to the wider economic system. Other factors at both the national and firm-level also impose barriers to long-term finance. At the aggregate level, macroeconomic risks loom large in the decision to make a long-term loan, as do weaknesses in the credit information environment and contract enforcement.<sup>38</sup> In dealing with riskier and more opaque borrowers (for example, small or new firms, or those with an adverse credit history), banks prefer to use shorter-term loans, which can be renewed or renegotiated, so that they can maintain control over the lending relationship and retain the possibility to influence firm management during the course of the relationship.<sup>39</sup>

For long-term lending, the role for bond financing is potentially larger, can provide competition for banks, and can serve as a spare tire to be employed in the event of a banking crisis. The potential here should not be exaggerated, however, as Gormley, Johnson, and Rhee (2006), for example, point out in their study of the Korean financial crisis of 1997–98. When that crisis triggered a freeze in bank lending, a private bond market easily sprang to life, capturing households' savings and channeling them to corporations. But it was the largest corporations,

the *chaebols*, that received the financing, and the public was willing to invest in bonds because it perceived them as a safe investment, assuming that the *chaebols* would be regarded by the authorities as too big to fail. This public perception was proved correct by the bailout of bond investors after the 1999 collapse of the large *chaebol* Daewoo. Smaller firms, despite their often better corporate governance structures, were unable to access the bond market even after banks stopped lending.

Private bonds can provide a competitive alternative to banks, but banks can also use bonds to exploit their credit appraisal capacity while economizing on capital and liquidity by packaging residential mortgages and other small or medium-size loans into larger units that then can be sold to pension funds and other institutional investors. Mortgage-backed bonds issued by banks perform a similar function and can work in less sophisticated financial systems. The legal, accounting, and other requirements to make this kind of financial engineering effective,

**Bond financing can provide competition for banks**

### **Box 2.3 When access can be too tempting: risks and use of foreign currency borrowing by firms**

ONE MAJOR RISK THAT CAN ARISE FROM FINANCIAL globalization is the assumption by financial, and especially nonfinancial, firms of much greater foreign exchange risk than is prudent. The temptation to do so often arises when macroeconomic and exchange rate policy results in high and volatile nominal interest rates for borrowings in local currency, whereas creditworthy borrowers may access foreign currency borrowing either from locally based or foreign banks at much lower nominal interest rates, but accepting the exchange risk.<sup>a</sup> The combination of availability of foreign capital and high domestic interest rates has often been associated with a policy of fixing the exchange rate at what seems an undervalued rate: promoting an export and profit boom as well as capital inflows caused by expectations of a nominal currency appreciation. The combination greatly

heightens the risks, and a reversal of investor sentiment can mean very large currency movements and an economic crisis, as has been seen in such disparate cases as Chile in 1982–83 and Indonesia in 1997–98. It is not a simple task to calculate even approximately what a prudent foreign exchange exposure would be for a firm whose nonfinancial business has an international component. (South African Airlines recently incurred heavy losses as a result of treasury policies that could be characterized as overhedging of foreign exchange.) The scale of onshore dollarization of bank deposits and international fixed-interest lending has surged several times in the past couple of decades (De Nicoló, Honohan, and Ize 2005; Goldstein and Turner 2004), making currency exchange risk a problem that is likely to recur.

a. See Allayannis, Brown, and Klapper (2003) for a study of firms' strategies to hedge foreign exchange rate exposure in East Asia before and after the crisis.

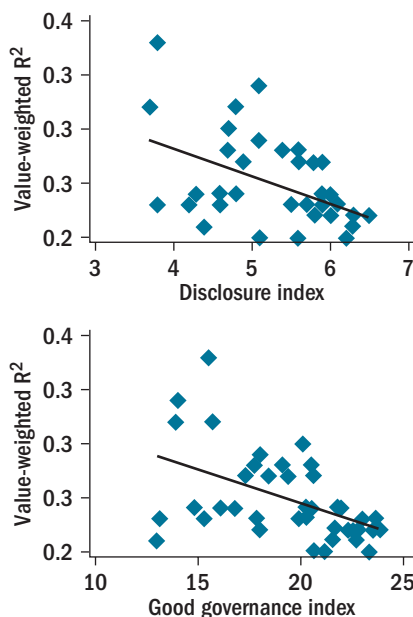
including the role of independent credit-rating firms to help investors price these bonds, are considerable and beyond the reach of smaller or less advanced markets, but the details need not concern us here. Where bond financing is possible, it can improve the price and availability of longer-term credit to smaller borrowers.

### Access to External Equity

Even start-up firms need equity to finance working capital; entrepreneurs everywhere have recourse to relatives and friends for initial equity to supplement their own resources. The quantitative importance of internal financing from retained earnings to help support the growth process has already been discussed. As firms grow, so too does the importance of having access to sources of external equity. Bank loans cannot perform this function. In most countries there are individuals and firms who, in one way or another, arrange private equity for some of the most promising growth firms, but a wider investor clientele can be tapped through a listing on an organized stock exchange.

**Stock market development  
requires a sound regulatory  
environment**

The development of shareholder capitalism depends on strong *investor rights* and on adequately enforced public disclosure of the financial condition of public companies (Morck and Steier 2005). Reliance on disclosure and private enforcement mechanisms seems more effective than public enforcement policies and restrictions imposed by authorities (La Porta, Lopez-de-Silanes, and Shleifer 2006). In many countries, information and investor protection are not adequate to allow the stock market to fulfill its full potential in establishing the full price of each equity stock. As Morck, Yeung, and Yu (2000) and Jin and Myers (2006) show, stock prices of different firms move closely together in the stock exchanges of many countries and especially in countries with weak shareholder rights and lack of firm transparency (figure 2.11).<sup>40</sup> This contrasts to the situation in advanced economies, where the correlation of individual stock prices with the average of the market tends to be rather low. The strong co-movement of stock prices may mean that little firm-specific information comes into the public arena. As a result, individual firm equity is not, on average, fully priced, and the discount is likely to be greater, the greater the firm's growth prospects. It is not surprising, then, that most of the largest firms in the corporate sector of such countries tend to be controlled by a small elite group of families, as outsiders doubt they will benefit from holding shares—with reason,

**Figure 2.11** Stock price synchronicity with disclosure and governance

Source: Jin and Myers (2006).

Note: This figure compares the degree to which stock prices tend to move together in each of 40 stock exchanges with indicators of disclosure and governance.

as Desai and Moel (2007) document in several spectacular cases. The consequences can be lower investment than optimal.<sup>41</sup>

Investor rights and transparency might not be enough to foster liquid equity markets. Rather, a critical mass of issues, issuers, and investors seems to be necessary (De la Torre and Schmukler 2007). The recent merger wave among the stock exchanges of developed countries and the deepening of a rather limited set of emerging stock exchanges raise questions about the extent to which smaller emerging countries will have the critical mass to support national stock exchanges or will need to rely on regional or foreign exchanges for firms' funding needs.

These findings confirm the importance of shareholder protection and information for ensuring that the stock market makes external capital available to firms with growth prospects. However, making reforms is not an easy matter. Controlling families often do not seem interested in increasing the transparency of the market or in boosting the rights of minorities (even though such actions could make cheaper capital available). Indeed, they seem to be effective in blocking, through their

**Small economies may benefit from regional exchanges**

rent-seeking activities, a strengthening of the financial system for fear that a stronger system would allow the emergence of challengers to their incumbency.<sup>42</sup> Venture capital is also more effective when underlying legal protections are present (Cumming, Schmidt, and Walz 2006).

**External listing by larger firms  
might not be good for equity  
access of smaller firms**

Opening up equity markets to the outside world has made a big contribution to improving access and cost of equity finance for larger local firms.<sup>43</sup> A listing (or ADR<sup>44</sup>) in a foreign market by such firms improves their access to equity by increasing the share price and making them more attractive for institutional investors, thus generating an incentive for firms to expand (Aggarwal, Klapper, and Wysocki 2005; Levine and Schmukler 2007a). Such listings can import corporate governance (Coffee 2002), although this finding is not reflected in any sustained increase in the market value of the firm (Levine and Schmukler 2007a). These gains, however, might be partly offset by loss of liquidity in local markets, potentially limiting access to outside equity for smaller firms (Levine and Schmukler 2007b). The net overall impact on the access of small firms is not clear; after all, improved access by large firms may spill over to small ones through trade credit. Furthermore, as larger firms have greater access to, and substitute, these alternative sources of funding for bank finance, banks are likely to become more interested in serving smaller clients.

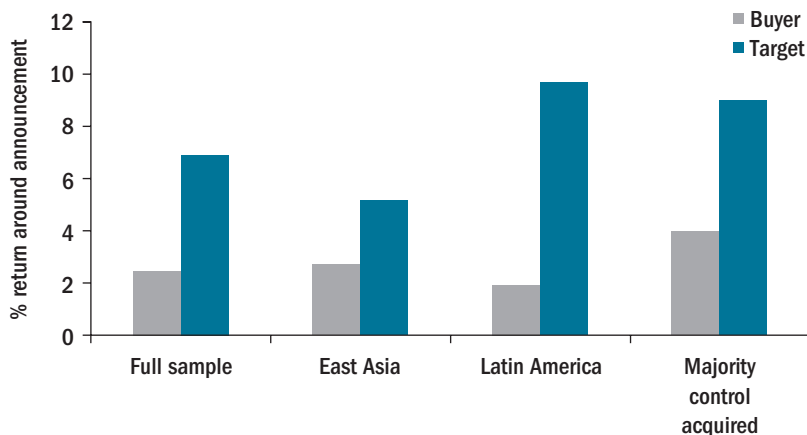
**FDI may ease financing  
constraints—**

Foreign direct investment offers a partial substitute for local finance, a fact that has proved important in some countries, where it appears to have eased financing constraints, at least for large, publicly listed firms.<sup>45</sup> To be sure, foreign investors likely choose some of the best-performing local firms in which to invest, so this selection bias needs to be taken into account (Weiss and Nikitin 2004). However, FDI transactions in which firms in advanced economies have acquired listed firms in developing countries have been associated with sizable stock market gains for both acquirer and target. That finding implies consequential gains in profitability over time, according to a study by Chari, Ouimet, and Tesar (2005) of 1,629 acquisitions in Argentina, Brazil, Chile, Indonesia, Republic of Korea, Malaysia, Mexico, the Philippines, and Thailand (figure 2.12).

**—and improve firm  
management and use of  
technology**

The mode of entry can be influential in determining how productive the investment will be. A particular issue is whether insisting on joint ventures rather than allowing foreign control of the enterprise is better for the host country overall. Moran (2005) has observed that target companies that have been integrated into the foreign acquirer's worldwide

**Figure 2.12** Returns to shareholders in acquiring and target firms around the date of FDI announcement



Source: Chari, Ouimet, and Teas (2005).

operations tend to be larger, better managed, and more technologically advanced than those whose purpose is to serve protected domestic markets in the host country. Many of the most effective FDI transactions, therefore, go well beyond providing financial access to the target firms, which instead are swallowed up.

With the emergence of large private equity firms in the advanced economies temporarily taking majority stakes in firms in the developing world (such as banks in Korea, following the crisis of 1997–98), the dividing line between FDI and other equity investment has become somewhat blurred. At the same time, locally controlled private equity funds, often affiliated with banks or other financial service providers, have also been created in numerous countries. One way or another, venture capital and private equity (including venture capital for near start-ups) have been an increasingly important source of finance for certain categories of firms in developing countries, although such investment has been subject to waves of enthusiasm (the mid-1990s, for example) followed by valley periods. These transactions are not very fully documented in available data, so they have not been subjected to the same kinds of econometric analysis discussed in this chapter.<sup>46</sup> A half-dozen large emerging economies currently receive most of the flow of FDI—Brazil, China (including Taiwan), India, Korea, Russia, and South Africa. This geographic concentration is likely to persist, because

of the size of these economies, the availability (in some of them) of large, capital-hungry, natural resource-based projects for foreigners to invest in, and the perceived quality of the overall investment environment, including the availability of local currency debt financing to complete the package and a market on which the equity stake can be floated in due course (Rubenstein 2006). Nevertheless, private equity firms have been looking at most countries with increasing interest since 2003, and, while there may be interruptions, private equity may become an increasingly important source of financing for larger firms with growth potential.

## Conclusions

**Barriers to finance are a major obstacle, especially for new and small firms**

Availability of external financing for firms depends on the wider institutional environment; lack of availability does constrain firm growth, and it is one of the more important business obstacles firms have to overcome. Access to finance contributes to firm entry, growth, and innovation, among other things. Small and new firms are affected the most by financing constraints. Yet they also benefit the most as financial systems develop and financing constraints consequently ease. Empirical evidence suggests that it is through improving access for enterprises that financial sector development makes an important contribution to economic growth.

**Foreign banks improve access to finance, especially in the longer term**

While relationship lending remains important in many parts of the world, the modern trend is increasingly toward transactional lending. In this regard, good credit registries can be a powerful force for expanding the reach of lenders. Not least because international banks have a comparative advantage in transactional lending, their arrival or expansion in a country can cause natural apprehension about their possible effect on broad access to credit. However, the balance of a large body of evidence is that even where foreign entrants are highly selective in their target credit market, access to credit from the system as a whole usually improves. And it is increasingly likely to do so as time goes on. In contrast, the performance of state-owned banks in this dimension has tended to be poor.

**Nonbank finance has a growing role to play**

Nonbank finance remains much less important in most developing countries, but that too can be expected to change. Bond finance is an increasingly important alternative to bank finance, mainly for large firms. Access to external equity requires strong investor rights; where these are

present, opening to capital inflows can greatly improve access and lower the cost of capital. That is true both for portfolio equity investments and for foreign direct investment and private equity, which are likely to become increasingly important. While bond and equity markets are most directly relevant for improving access to finance for larger firms, these markets are also likely to have an indirect effect on access for small firms, as trade credit represents an important source of external finance for many small firms.

## Notes

1. There is a large empirical literature on financing constraints that arise because of information asymmetries and on the resulting agency problems between lenders and borrowers (see surveys by Schiantarelli 1995; Blundell, Bond, and Meghir 1996; Hubbard 1998; and Bond and Van Reenen 1999). While most of this literature has tried to infer financing constraints indirectly from investment–cash flow correlations or deviations from optimal investment patterns, studies highlighted in this chapter use more direct measures. Also see Beck and others (2006), who use the WBES survey data discussed in the text and show that self-reported financing constraints are robustly correlated with firm size, age, and ownership (domestic or foreign).

2. The increase in sales was proportional to the increase in bank credit, another piece of evidence to support the authors' hypothesis that credit constraints were at work. While the increase in profits might be partly explained by the subsidized interest on directed lending, the magnitude seems too large to be the sole factor.

3. Surveyed businesses in the WBES were asked (among other things) to rate financing, legal, and corruption obstacles, as well as others, on a scale from 1 (no obstacle) to 4 (major obstacle), to reflect the extent to which these obstacles affected the growth of their business. Regressing firm sales growth on financing, corruption, and legal obstacles, while controlling for firm and country characteristics, shows that all three obstacles significantly constrain firm growth. If all three obstacles are entered in the regression, financing and legal obstacles still remain negative and significant, while the corruption obstacle loses its significance.

4. This is evidenced for example by the increased willingness of firms to diversify by acquiring intangible assets in countries where property rights are secure (Claessens and Laeven 2003).

5. Using household survey data from Bosnia and Herzegovina, Demirgüç-Kunt, Klapper, and Panos (2007) study determinants of self-employment for

individuals. They find that personal wealth predicts the choice of becoming an entrepreneur, as does receiving remittances (although negatively). However, access to bank finance predicts survival as an entrepreneur beyond the first year.

6. Specifically, respondents were asked whether they had (i) developed a major new product line; (ii) upgraded an existing product line; (iii) introduced new technology that has substantially changed the way that the main product is produced; (iv) discontinued at least one product (not production) line; (v) opened a new plant; (vi) closed at least one existing plant or outlet; (vii) agreed to a new joint venture with a foreign partner; (viii) obtained a new licensing agreement; (ix) outsourced a major production activity that was previously conducted in-house; or (x) brought in-house a major production activity that was previously outsourced.

7. Measurement error in a causal variable tends to bias the OLS (ordinary least squares) estimates downward, whereas reverse causality or an unobserved common causal factor would tend to bias the OLS estimates upward. This downward bias has been noted in econometric studies of other supposed causes of growth as well (Pande and Udry 2006). Note however that this interpretation depends on the use of valid instruments in the attempt to adjust for endogeneity. Using an invalid instrument (for example, one that should really be included in the equation as an explanatory variable) will bias the adjusted (instrumental variables) estimate.

8. The supposed inefficiency of Chinese bank lending should not be overstated, though, especially for recent years. Using firm-level survey data, Cull and Xu (2000, 2003) find that bank finance was associated with higher subsequent firm productivity in the 1980s, while government transfers were not. This relationship, however, weakened in the 1990s. Drawing on a sample of mostly small and medium Chinese firms, which account for the most dynamic part of the Chinese economy, Ayyagari, Demirgüç-Kunt, and Maksimovic (2007b) show that those receiving bank credit around 2002 did tend to grow more quickly than the average firm, whereas those receiving funds from informal sources did not. This suggests that even if the bulk of Chinese bank credit has not been directed to financing the most productive firms, credit decisions of Chinese banks regarding smaller enterprises have been associated with faster firm growth, and the formal financial system is still better than the informal one in picking the best performers.

9. That Vietnam has also seen perverse flows of credit is argued by Malesky and Taussig (2005), who find that despite rapid increases in both bank deposits and credit in recent years, suggestive of financial development, this additional credit does not seem to have found its way into the provinces where it is most needed, that is, provinces with the highest share of private entrepreneurs. Private entrepreneurs seem to be crowded out systematically by state-owned enterprises. Connection to the government and the party, in contrast, seem to

help private entrepreneurs gain access to credit. These authors also find a negative relationship between access to credit and investment growth. Simply put, firms receiving bank finance in Vietnam are not the engines of growth. At the same time, expanding private firms seem to rely mostly on retained earnings and personal savings to finance investment. There is one positive exception to this disappointing picture: in more competitive provinces, that is, in those where there are more private entrepreneurs per capita competing for credit, easier access to credit is positively related to investment growth. Overall, these results point to a misallocation of banking credit to connected firms in less competitive regions of the country.

10. Also, Rajan and Zingales (1998) find the growth effect of finance only on industries that need it most, and not on all industries, suggesting that it is the efficiency of financial intermediation that matters, not simply capital accumulation.

11. See, for example, Rioja and Valev (2004a, b).

12. Noting that most enterprises need some initial wealth, Aghion, Fally, and Scarpetta (2006) see the financial system as allowing entrepreneurs to leverage this initial wealth—the better developed the financial system, the higher the leverage, a phenomenon that allows efficient newcomers to displace even well-financed but inefficient incumbents. Working with data on more than 10,000 firms drawn mainly from national business registries and administrative records in 16 countries, including 7 developing or transition economies (and using the susceptibility measure of Rajan and Zingales, mentioned in box 2.1), they find that national policies that restrict credit availability tend to limit entry and growth of small firms to a much larger extent than do labor market regulations. On the other hand, large firm entry is not affected by financial development.

13. Given that exporting firms face fixed costs and might therefore depend more on external finance than other firms, Becker and Greenberg (2005) conjectured that countries with higher levels of financial development should have higher exports. And indeed—using bilateral trade data and controlling for other variables in a gravity regression—they find that countries with higher levels of financial development export more. This effect is stronger in industries in which exporters potentially face higher fixed costs, as proxied by the lack of standardization, or for exports to nonneighboring countries or countries with a different language.

14. Using the Rajan and Zingales methodology, Beck (2003) shows countries with better-developed financial systems have a comparative advantage in industries relying more on external finance.

15. These results are reported by Beck and Levine (2002), who used the same sectoral data source for 42 countries as Rajan and Zingales (1998) (see

box 2.1), but added measures of the relative size or activity of the securities markets and the banking system.

16. Specifically, Demirgüç-Kunt and Maksimovic (2002) found no additional explanatory power when they added a variable indicating the relative size of securities markets and banks to their analysis of the proportion of each country's firms that were growing faster than could be achieved solely with internal resources. But the equations, containing both banking depth and stock market turnover as independent explanatory variables in quadratic form, did suggest that stock market development might be more important than bank development in allowing firm growth that required long-term financing. (For their dependent variable, they counted the number of firms—out of a total of more than 10,000 from 32 countries—that were expanding sales faster than would seem supportable from internal resources or short-term borrowing, as modeled by a standard financial planning model. (This study built on a paper they published in 1998; see box 2.1).

17. Of course the dichotomy between banks and markets is also too simplistic. Many nonbank institutions, including nondepository mortgage lenders, leasing, and factoring companies, are involved in specialized forms of asset-based finance. And important channels of equity finance—venture capital, business angel finance, and other forms of private equity—can operate without much use of organized securities exchanges. Institutional investors too are important providers of several forms of financing. The bank-market distinction is nevertheless a useful handle: much of what can be said about bank finance applies to nonbank lenders; much of what is important for securities markets is also relevant for private equity.

18. There are good theoretical reasons for debt finance to be the major source of external finance, not least because, relative to other forms of sharing the returns on a project, the debt contract economizes on precise monitoring of project performance (Diamond 1984).

19. De la Torre, Martinez Peria, and Schmukler (2007) show that banks in two very different institutional environments (Argentina and Chile) adapt to lend to SMEs and overcome institutional weaknesses. Banks do so by lending short term, collateralizing their loans, or securing their loans in some other forms.

20. It is perhaps worth emphasizing the difference between relationship lending and *related-party lending*, which is a form of self-dealing. Although banks often resort to related-party lending where information about other borrowers or contract enforcement is lacking, such lending can ultimately impose social costs, as is well illustrated in the discussion by Maurer and Haber (2004) of Mexico's experience in the early 1900s and by La Porta, Lopez-de-Silanes, and Zamarripa (2003) of the more recent experiences in East Asia in the 1990s.

21. A classic account of the Jewish Maghribi traders' network in the late Middle Ages is in Greif (1993).

22. These Regional Program on Enterprise Development surveys were carried out in five African countries during the 1990s. For a book-length discussion of the findings, see Fafchamps (2004).

23. Fisman (2003) controls more carefully for unobserved firm quality and still finds that firms are more than twice as likely to receive trade credit from within their ethnic community than from outside. However, he also finds that these ethnic ties account for only 15 percent of the overall preferential credit access enjoyed by entrepreneurs of non-African descent.

24. Ensuring that the growth of this industry is based on trustworthy rating agency firms is a nonnegligible challenge (Honohan 2001).

25. Bebczuk (2007) undertook a similar exercise using Argentine data and reported similar findings.

26. In some countries foreign banks have entered the SME lending market themselves (De la Torre, Martinez Peria, and Schmukler 2007). This does not only imply relying on the transaction-lending techniques mentioned above, but it does imply a learning process for foreign banks. Similarly, bank-survey evidence from transition economies has shown that many foreign banks are taking advantage of the improving contractual and information frameworks in these countries and are applying business models from their mostly West European home countries and (de Haas and Naaborg 2005). Some banks in transition countries also have been expanding intraregionally and moving beyond a traditional focus on large corporations to provide more financial services geared to SMEs in host countries. In Sub-Saharan Africa, where foreign banks have long been criticized for neglecting all but the large, international borrowers, a more differentiated picture has been emerging in recent years (Honohan and Beck 2007).

27. In most cases, an important market segment typically remains to be served by locally owned and smaller banks. Indeed, cross-country evidence (Berger, Hassan, and Klapper 2004) suggests that where smaller non-state-owned local banks have a higher market share, economic growth is stronger, although it has not proved possible to establish that this growth is attributable to more SME lending.

28. The Mexican case, where foreign banks spent \$30 billion between 1997 and 2004 and increased the foreign ownership of the Mexican banking system from 11 to 83 percent, provides an interesting illustration of the fact that large-scale foreign entry is not a panacea even for a highly distressed banking system. Tracking each bank in Mexico, Schulz (2006) shows that, over the period 1997–2004, bank capital strengthened, the quality of the loan portfolio

improved, and there appears to have been a modest increase in productivity (the latter always hard to measure in banking because of its multiple joint outputs). During this period, bank lending to the private sector continued the slump that had begun with the crisis of 1994; there has since been a recovery. But Haber and Musachio (2005) find it impossible to detect any indication in the data that foreign acquisition slowed credit granting by a bank, although the foreign banks did effectively screen out problem borrowers and were ahead of the others in achieving reduced loan losses.

29. Of course one might get such results if foreign banks tend to be attracted to countries where the financial market works well anyway. To control for this, Clarke, Cull, and Martinez Peria (2006) also looked at firms' opinions about access to nonbank finance. It turns out that the presence of foreign banks has no significant impact on the responses to the control question.

30. It is not so easy to draw conclusions about the interest rates charged. For example, using the same basic data sources, Martinez Peria and Mody (2004) found that whether bank entry was by merger, acquisition, or *de novo*, foreign-owned banks charge narrower margins, by 50 basis points on average, than domestic banks; and the difference is even larger for *de novo* foreign banks. Of course, with interest rates differing widely between customer types, it is difficult to be sure that the control variables are adequate to reveal a true price differential, rather than a reflection, for example, of foreign banks lending to low-risk, low-spread borrowers, and funding on wholesale terms.

31. And using instruments that predict foreign bank entry, but not firm growth, in a convincing attempt to ensure that the measured effects were not attributable to a common hidden cause.

32. Even firms outside a formal group structure can indirectly access bank credit if they are granted increased trade credit from firms with growing bank borrowings. Trade credit in effect offers credit access to an additional layer of firms, exploiting information and other bilateral relationships (Fisman and Love, 2003; Love, Preve, and Sarria-Allende 2007; Burkart, Ellingsen, and Gianetti; 2004; Omiccioli 2005).

33. But the same database from Pakistan has also thrown light on the potential deficiencies of state-owned banks and specifically on the nexus between politicians and state-owned banks (see chapter 4).

34. Levy Yeyati and Micco (2007) argue that the extensive foreign bank entry in Latin America in the 1990s resulted in a less competitive banking system overall, although this contention is not undisputed. Their evidence comes from showing that bank revenues became less sensitive to variations in input costs, as happens with a monopolist charging "what the market will bear," in contrast to a competitive system that effectively fully passes on changes in input prices to the customer.

35. For example Demirgüç-Kunt, Laeven, and Levine (2004) show that restrictions on bank entry, measured by the fraction of entry applications rejected by the regulatory agency, are more closely correlated with interest margins than with concentration. Using data on net interest margins of some 1,165 banks from 47 countries, they find that countries that restrict foreign bank entry end up with higher bank margins.

36. It seems that transactions costs, including those of acquiring information, are strongly related to distance, resulting in a degree of monopoly power for local banks. Very convincing evidence on this point comes from a market as developed as Belgium, for which Degryse and Ongena (2005) document how the lending rates charged by one bank vary according to the physical distance between the customer and the nearest competitor bank.

37. Studies of this proposition for the United States and other advanced economies show that its applicability is context specific, with few simple lessons directly applicable to all developing countries. For instance, Cetorelli and Strahan (2004) show that new entrants found it more difficult to get finance in U.S. states with less competitive banking markets, but Zarutskie (2005), using data based on corporation tax returns, finds less investment (as indicated by higher rates of return) and less external financing for small firms following increases in competition resulting from the liberalization of U.S. interstate banking. Using data from different Italian regions, Bonaccorsi di Patti and Dell'Ariccia (2004) find that bank concentration can have a positive effect on firm entry where information is opaque. Bertrand, Schoar, and Thesmar (2007) show that the far-reaching French banking liberalization of the 1980s did not uniformly increase credit availability but made it more sensitive to borrowers' business prospects.

38. Using data on 27,000 publicly listed firms in 27 developed economies and 18 developing economies, Sorge and Zhang (2006) find that countries with better quality of credit information (broader coverage of public and especially private credit registries as well as better accounting standards) are characterized by a higher share of long-term debt as a proportion of total corporate debt.

39. Based on an extensive U.S. survey of small business finance, Ortiz-Molina and Penas (2006) provide evidence that loan maturity is positively correlated with firm size and age and with the amount of collateral posted—though personal guarantees do not have this effect. Firms that have had a loan delinquency in the previous three years had shorter maturities.

40. The Jin and Myers (2006) results are based on data from 40 stock exchanges and use a variety of measures of opacity, including the diversity of analysts' forecasts, accounting completeness, and auditing activity.

41. Himmelberg, Hubbard, and Love (2002) examine the return on capital for a panel of more than 6,000 listed firms on 38 stock exchanges and detect

a strong and sizable positive relationship between the share of stock held by insiders and the accounting return on capital, suggesting underinvestment in the most closely held firms. With such a high return, they “should” have invested more. The degree of ownership concentration is also strongly correlated with an index of shareholder protection (measuring, for example, whether voting is proportional to shareholding, use of proxy voting, and the right of minority shareholders to challenge oppressive majority decisions in court). See also Burkart, Panunzi, and Shleifer (2003) and Nenova (2003).

42. For a review of these and other issues related to family control, see Morck and Yeung (2003).

43. See overviews by Bekaert, Harvey, and Lundblad (2005) and Gupta and Yuan (2005).

44. An American Depository Receipt (ADR) is, in effect, a repackaging of a non-U.S. equity into a convenient form for U.S. investors to trade in U.S. stock markets. Depository receipts are also traded in the securities markets of some other advanced economies.

45. This, at least, was the finding of Harrison, Love, and McMillan (2004), who took data for 7,000 firms from 40 countries and estimated the sensitivity of each firm’s investment decisions to its available cash. The authors were exploiting the idea that if a firm has easy access to finance, it should be able to finance profitable investment opportunities regardless of the immediate availability of cash balances. In practice, firms’ investments do tend to be sensitive to their cash holdings. But this sensitivity proves to be lower for firms in countries with high inward FDI. Contrary, then, to the fears of some that inward FDI would tap local capital markets, diverting funds from incumbent firms, it seems that FDI does bring its own funding with it. In specific cases, though, borrowing from banks by foreign-owned firms could crowd out local firm financing. Another paper by Harrison and McMillan (2003) finds this crowding-out effect for Cote d’Ivoire, which the authors conjecture may result from the existence of interest ceilings and the links between many of the foreign-owned firms with the French parents of the local banks.

46. An interesting study by Da Rin, Nicodano, and Sembenelli (2004) shows the way. It uses information on the size of private equity investments in 14 European countries. The authors track the impact of policy and other variables on the division of these funds between early stage (seed and venture capital) and late stage, and between high-tech and other sectors.