

Financial Markets and Economic Freedom

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The central point of Milton and Rose Friedman's best seller *Free to Choose* is that markets leave freedom of choice to individuals, while governments negate it. While this basic argument is clearly right, it is often objected to on grounds that it holds only for the well-offs. For many poor people around the world, the freedom markets grant seems to be more theoretical than real.

Consider, for instance, Sufiya Begum, a poor Bangladeshi stool maker. Theoretically, she is free to choose what to produce and for whom to produce. But she lacks the twenty-two cents necessary to buy the raw material for the stools she makes. Not having that money and lacking any opportunity to borrow it, Sufiya has no other choice but to accept the terms offered by the only middleman in town. He lends her the raw material but requires her to sell the stools back to him. Of course, he sets the price. Thus, lacking the initial resources, Sufiya is de facto enslaved to the middleman, who pays her only two cents for a hard day's labor.

One could quickly dismiss this argument on the basis of its assumption. Why is there only one middleman in town? Markets provide freedom of choice only when there is competition. Without competition, there is no freedom. Milton and Rose would certainly agree with that. Does this imply, however, that Milton and Rose's argument in favor of markets depends crucially on the feasibility of competitive markets? If so, its power might be significantly reduced. While Milton and Rose probably do not believe in the existence of natural monopolies, many economists do, especially when we are talking about poor developing countries. And regardless of the theoretical arguments, there are the facts. In Jobra, Sufiya Begum's village, there *was* only one middleman. So what freedom did markets offer to her?

We think instead that the major obstacle to Sufiya Begum's freedom of choice is not the existence of just one middleman in town but the lack of access

to finance. If she could have access to some form of borrowing, Sufiya Begum could shop around for better prices and free herself.

If you had any doubt, consider the way access to finance has changed the life of another Bangladeshi woman, Delora Begum (no relationship with Sufiya). Delora was no different from Sufiya and millions of Bangladeshis, living in a straw hut with a corrugated metal sheet for a roof, a mud floor, and no toilet or running water. Thanks to a loan from the Grameen Bank (a development bank promoted by Bangladeshi economist Muhammad Yunus), however, she was able to acquire a Nokia cellular phone.¹ In a region of the world where it would be a compliment to call the traditional telephone network unreliable, the phone has made a world of difference in her life and in the lives of her fellow villagers.

The phone brings information at low cost to the farmers and tradesmen in the village; farmers can learn the fair value of their produce in the market, giving them an edge in bargaining with the notoriously exploitative middlemen; carpenters can find the current price of wood so they can get a better price for their furniture. The phone also reduces the cost of doing business. A local brick factory owner can order supplies on the phone rather than wasting time making the two-and-a-half-hour, bumpy, biweekly trip to Dhaka. Perhaps even more important, the phone helps save lives. A pregnant woman's life was saved when a call on the phone brought a doctor who could help.

The phone costs \$375, and the monthly profits Delora Begum makes on it are about twice the average national monthly income. It has changed her life. Not only has she bought new possessions like a table and chairs, she now has status: "People consider me a person of honor," she told the *Wall Street Journal* staffer who reported the story.

While the cellular technology that frees her from the tyranny of the state-owned phone lines plays a big part in this story, the availability of finance plays an even bigger one. The availability of finance ensures the maximum individual economic freedom possible. In the words of Mohammed Yunus, the founder of the Grameen Bank:²

If we imagine a world where every human being is a potential entrepreneur, we'll build a system to give everybody a chance to materialize his or her potential. The heavy wall between the "entrepreneur" and "labor" will be meaningless. If labor had access to capital, this world would be very different from what we have now.

Yunus' inspiring words nicely summarize the centrality of access to finance to economic freedom. Yet is there any systematic evidence to support his statement? This is what we turn to next.

FINANCE AND COMPETITION

Competition is what ensures our economic freedom. Competition gives us choices, improves the quality of the goods and services we buy, protects us against exploitation. Does greater access to finance promote competition?

Financial development seems to facilitate new entry. The deregulation of U.S. banking led to a substantial increase in the degree of development and competition in the financial sector in states that deregulated. These states experienced a significant increase in the rate of creation of new enterprises after deregulation.³ Similarly, more new establishments are created in countries with more advanced financial systems, and this effect is more pronounced in industries that depend more on external finance, suggesting that availability of finance is indeed the cause of this increase.⁴

That financial development facilitates new entry, however, does not mean it necessarily reduces economic concentration: Established firms could benefit even more from financial development than entrants, acquiring a greater share of production and squeezing out competition. We can therefore look at the effects of financial development on competition more directly.

One measure of the degree of competition is the profit margin. All other things being equal, a firm in a more competitive market should have a lower profit margin. If firms in areas that have better access to finance have lower profit margins, this would suggest access to finance makes competition more intense. To check this, let us go to Italy, where there are tremendous variations across regions in the quality of the financial system. (Milton and Rose would not be surprised to learn that such difference was caused by a 1936 government regulation.)⁵ As a result of these differences, an individual with similar personal characteristics has twice the probability of being rejected for a loan in certain Italian regions than in others, even after adjusting for economic factors that should matter.

These regional differences in access to finance seem to affect competition at the local level. Firms in the most financially developed regions have a profit margin 1.6 percentage points lower—about a third below the average profit margin of 5.9 percent—than in the least financially developed region. Reassuringly, this effect is present only for small and medium firms. Large firms can raise funds nationwide, and competition in industries with large firms should not be affected by local financial development.⁶

Perhaps the most reassuring evidence of the effects of finance on competition would come if we found an industry where access to capital is the primary barrier to entry and then compared competition in this industry across a number of countries over time.

Such an industry indeed exists—the cotton textile industry—and it has been studied by Stephen Haber.⁷ The minimum economic scale of production

in this industry has, historically, not been large; therefore, incumbent firms could not build tremendous barriers to entry by setting up massive plants. Moreover, over the period it was studied—approximately the second half of the nineteenth century and the first half of the twentieth century—there were few important patents in the industry and advertising did not play a major role. As a result, the main barrier to entry was the financing required to acquire the small but not insignificant amount of plant, machinery, and working capital needed for production. Haber compares the industry in two countries (Mexico and Brazil) at a similar level of economic development.

In 1883, Brazil had forty-four textile firms with approximately 66,000 spindles. The fraction of sales accounted for by the four largest firms was as high as 37 percent. In 1878, Mexico had almost twice as many firms, four times as many spindles, and its four largest firms accounted for only 16 percent of sales. Thus, the Mexican textile industry started out much bigger and less concentrated.⁸

In 1883, however, Brazil liberalized entry in its banking sector, while Mexico did not. A few decades later, the relative position in the textile industry was reversed. In 1915, Brazil had 180 firms, nearly 1.5 million spindles, and the four largest firms accounted for only 16 percent of sales. By contrast, in Mexico in 1912, there were only 100 firms, approximately three-quarters of a million spindles, and the four largest firms now accounted for 27 percent of sales.⁹ Not only did Brazilian industry grow faster, it also became less concentrated!

FINANCE AND INDIVIDUAL MOBILITY

What we have just seen is that finance helps upstart corporations enter and challenge the establishment, thus keeping competition keen and refreshing. Let us now see if it also helps expand opportunity for individuals.

One obvious way to measure how finance expands opportunities is to assess its impact on the probability that individuals will start out on their own. Self-employment, whether as a plumber or a storekeeper, typically requires initial funds. For all but the lucky few who were born wealthy, the financial system is the only source for these funds. Thus, a more developed financial system should make it easier for individuals to become self-employed. What is the evidence?

Across Italian regions, differences in availability of finance translate into differences in individual mobility. Even after controlling for other regional differences, an individual living in the most financially developed region is 33 percent more likely to start out on her own than an individual with the same characteristics living in the least financially developed regions.¹⁰ By reducing the importance of initial wealth, financial development also allows people to start out younger on their own. In the most financially developed regions, entrepreneurs are on average 5.5 years younger. Thus, financial development has a significant impact on economic mobility.

Another way to measure mobility is to look at the very rich and see how they came by their wealth. Since 1987, *Forbes* has put out a list of the world's richest people, indicating whether they inherited the bulk of their wealth or whether they are self-made. The last year for which *Forbes* reported all the people whose wealth exceeded \$1 billion was 1996 (after that, the number of billionaires became too large). We start by looking at the number of billionaires present in each country in 1996. This is largely before the Internet boom created a whole new generation of instant (and ephemeral) billionaires. To compare countries with very different sizes, we divide the number of billionaires by how many million people live in that country.

The country with the highest frequency of billionaires per million inhabitants is Hong Kong (2.6), followed by Bahrain and Switzerland (1.7), and Singapore (1.4). At the bottom of the distribution we find poorer countries like Peru (0.04) but also rich countries like Norway (0) and South Africa (0.05).

More revealing than the frequency of billionaires is the frequency of *self-made* billionaires per million inhabitants. Not surprisingly, countries that have grown fast recently, such as Japan and the Asian Tigers—Hong Kong, Singapore, South Korea, and Taiwan—tend to have a high frequency of self-made billionaires. What is interesting is that the frequency of self-made billionaires per million inhabitants in the United States (0.26 per million) is much higher than that in the large European countries; the United Kingdom, Germany, and France have on average 0.08 self-made billionaires per million.

There is a very strong positive correlation between the frequency of self-made billionaires in a country and the size of its equity market. This correlation is not just due to Hong Kong, which stands out on both measures. If we eliminate the former British colony, the positive correlation persists. An increase in the size of the equity market from the level in France (50 percent of GDP in 1996) to the level in the United States (140 percent of GDP) would be associated with an increase in the frequency of self-made billionaires in France from 0.07 per million to approximately 0.3. All the difference between the United States and France in the frequency of self-made billionaires per million inhabitants can be explained by the better-developed financial markets in the United States!¹¹

All we have is a correlation, which, as we have previously emphasized, is not evidence of causation. A lot of other factors, such as the extent to which a country favors free enterprise, may affect the ability of an individual to accumulate a fortune during her lifetime. As long as these other factors are relatively constant, however, we can eliminate their influence by looking at changes in the frequency of billionaires per million people over a certain period of time. Since the earliest survey conducted by *Forbes* is in 1987, we look at the changes in the frequency of self-made billionaires between 1987 and 1996. During this decade, the frequency of self-made billionaires tends to increase most in coun-

tries that started the decade with a more developed financial system. The effect on the frequency of inheriting billionaires is much smaller.

THE INCREASED VALUE OF HUMAN CAPITAL

Until around the middle of the nineteenth century, the U.S. (and world) economy had few firms with more than a hundred employees. Most were managed by their owners. In the latter half of the nineteenth century, a new organizational form emerged: large, vertically integrated firms that Alfred Chandler calls the *modern business enterprise*. One of the key characteristics of this new form of organization was its capital intensity. Between 1869 and 1899, capital invested per worker in the United States nearly tripled in constant dollars.

This capital intensity coupled with the underdeveloped stage of finance gave these firms an enormous staying power. Of those firms on the U.S. Fortune 500 in 1994, 247, or nearly half, were founded between 1880 and 1930. The early firms include Kodak, Johnson & Johnson, Coca-Cola, and Sears, all founded in the 1880s, and General Electric, PepsiCo, and Goodyear in the 1890s.¹² Firms have been even more durable in Germany. Of the thirty largest German firms ranked by sales in 1994, nineteen were founded between 1860 and 1930 and four even earlier. The nineteen firms include household names like Daimler Benz, BMW, Hoechst, Bayer, and BASF.¹³

As a result, workers, even very senior managers, could not contemplate life outside the firm. The only source of protection was coming from competition from other firms, not from the possibility of breaking away and creating their own firm. Competition works best for more homogenous products, so unskilled workers were relatively better protected than more senior managers, who had more firm-specific human capital. Consistently, between 1890 and 1950—the period of the rise of Chandler's large industrial enterprise—there was a tremendous compression of the wages of educated white-collar workers relative to blue-collar workers.¹⁴ The ratio of wages of clerical employees to those of production workers fell from approximately 1.7 to 1.1 between 1890 and 1950. Because typically the educated are also relatively more skilled, these facts are consistent with the consolidation of industry into large, monolithic organizations shackling the skilled and compressing the wage differential. Of course, other factors also partly account for this compression. As with all economic resources, demand and supply ultimately determine the relative prices of skilled labor. Our point is simply that access to finance may have had a profound influence on both demand and supply.

Developments in finance in the last three decades, however, have inverted this trend. With the diffusion of leasing arrangements and highly leveraged transactions, alienable assets such as plant and equipment have become less unique, especially to those with specific skills. This has reduced the barrier to

entry created by high capital intensity. As a result, managers in a division are no longer beholden to the parent because the latter owns their assets. If need be, they can break away, raise finance directly in the market, and replicate the assets. The possibility of starting up on one's own has opened up new possibilities for those who, hitherto, were locked into their firms because of specialization—in particular, the older workers whose mobility seems to have increased. From the firm's perspective, resources other than alienable assets have become more critical to its ability to survive competition. From the owner's perspective, these resources—people, ideas, strategies—are harder to control directly. Because specific skills are not only more valuable in this era but also more mobile, it is no wonder that skilled workers are being paid more. This rise in competition has put a premium on skills. Consistently, between 1979 and 1987, the average weekly wage of college graduates with one to five years of experience increased by 30 percent relative to the average weekly earnings of comparable high school graduates.¹⁵

Even more important, the options created by the availability of finance have altered the balance of power between capital and labor, in favor of the latter. The single biggest challenge for owners and top management today is to manage in an atmosphere of diminished authority. Authority has to be gained by persuading lower managers and workers that the workplace is an attractive one and one that they would hate to lose. To do this, top management has to ensure that work is enriching, that responsibilities are handed down, and that rich bonds develop between workers and between themselves and workers. The emphasis on a kinder, gentler firm in most recent management tomes is not without foundation.

Finally, in addition to increasing the wages of the skilled and increasing their power within firms, these changes have also increased the opportunities for innovation. Inventors in high-tech firms who do not feel their ideas are appreciated or rewarded can leave and get them financed elsewhere. Intel—one of the most innovative and profitable firms of our time—was started by Gordon Moore and Robert Noyce because they felt their employer, Fairchild Semiconductor, was ignoring important new technologies they believed in. More generally, a recent study reports that 71 percent of the firms included in the U.S. Inc. 500 (a list of young, fast-growing firms) were founded by people who replicated or modified an idea encountered in their previous employment.¹⁶

In a sense, therefore, improvement in finance has ensured the maximum individual economic freedom possible.

WHY WE DO NOT SEE MORE FINANCE

Given all the benefits finance brings to people, why don't we see more of it? Why between 1880 and 1915 did Mexicans have to suffer more than Brazil-

ians? Why does access to finance differ so much across Italian regions? Why did it take Mohammed Yunus to give Delora what Sufiya does not have?

The Roadblock to Finance

As Raghuram Rajan and I elaborate in our book *Saving Capitalism from the Capitalists*, the answer is very simple. Financing is a very risky and complex activity. It implies exchanging a sum of money today for a promise of a bigger sum in the future. This promise is fraught with risks: the risk that people borrow with the intention of not repaying (adverse selection), the risk that they might not work as hard in repaying it (moral hazard), and the risk that the government intervenes, reducing the value of that promise. While the first two types of risks seem greater, it is the third one that creates the main obstacle to the development of finance. In fact, human ingenuity has created a lot of mechanisms to reduce adverse selection and moral hazard.

Consider, for instance, the tremendous challenge of lending in Bangladesh. Given the creaky pace of the legal system, it is all too easy for a borrower to take a loan, consume the proceeds, and then default. Hence, no honest banker is willing to lend unless the borrower is already trusted or wealthy. Corrupt bankers are willing to lend, of course, but the borrower has to kick back so much of the loaned amount to the banker for him to ignore credit standards that only borrowers who do not intend to pay loans back take them. Ordinary decent people like Sufiya Begum have to rely on local moneylenders who levy usurious rates of interest and use extralegal threats of violence to extort repayment.

Even in this extreme situation, human ingenuity has created an alternative. The Grameen Bank, the institution that lent money to Delora Begum, works on the same principle as the moneylender—the borrower should have an incentive to repay—but is much more civilized in its methods. Here is how it operates: A woman who wants to borrow (the Grameen Bank finds women more reliable) must find four other friends who are eligible for membership. The women cannot be related to each other, and they must agree to help each other when in difficulty. If any member of the group cannot repay, the others must help repay the defaulter's loan or risk seeing their own credit lines diminished. Not all the group get loans at the same time. Two members get a loan, and when they have established a record of prompt payment, the next two become eligible, and eventually the last member. As the group repays, it becomes eligible for larger and larger loans.

The beauty of this method is that initially, peer pressure from members within the group—who are often in the same social circles—forces repayment. Because the initial loans are for small amounts, peer pressure works. Moreover, there is group support in the case of untoward accidents, which occur all too

often when one is living at the margin. But eventually, the group's excellent record of past repayment becomes an asset—its reputation—that is worth preserving in its own right because it is the source of access to credit. While the bank has to coach the group intensively at high cost for the first few loans, eventually the group becomes as creditworthy as any rich rice merchant in Dhaka and graduates to larger, more cost-effective loans. Repayment rates on loans to even the very poor are extremely high, allowing the bank to charge moderate rates of interest.

So creative arrangements can overcome many of the challenges posed by moral hazard and adverse selection. They find it impossible, however, to overcome the interference of the government. Consider, for instance, the case of another developing country with poor law enforcement: Paraguay.¹⁷ In that country, the major obstacle to lending is not due to the absence of proper laws but to the presence of crazy ones. One law, for instance, allows creditors who lend small amounts (up to \$2,650) to take as collateral only small assets such as appliances and prevents them from collecting more than 25 percent of the value of these assets. To make the problem worse, the lack of public registry allows borrowers to trade the goods posted as collateral without the lender's knowledge. So the collateral often disappears by the time the creditor realizes the borrower intends to default. The result is that creditors are reluctant to make loans even if the borrower has the collateral to pledge. While this law was sold as a way to protect the poor from the rapacity of the financiers, it ended up damaging the very people it allegedly wanted to help.

Paraguayans' ingenuity, however, found a way around these restrictions by using postdated checks. Until 1996 checks written against accounts without funds in them (bounced checks) were considered a form of swindling, and those who wrote such checks could go to jail. So debtors who had no collateral could sign a check for the principal amount to be repaid with the future date on which the loan matured on it. If on that date the borrower did not have the money to pay, lenders could go to the bank, present the check, and have payment formally refused by the bank because of inadequate funds in the account. They could then take the bounced check to a judge, who would issue an order of arrest. If the debtor still did not pay, the lender could put him in jail. This threat ensured that borrowers would pay up if they could because they would do anything to avoid going to prison.

The outcome if the lender defaults is, of course, not civilized. It harkens back to Dickensian times and the debtors' prisons that Mr. Micawber frequented. And defaults are not infrequent, suggesting that many on the margin are willing to take the risk of incarceration just to obtain financing. One estimate of the criminal proceedings in Paraguay that relate to bounced checks is between 30 and 40 percent. In the 1990s, about 10 percent of the National Penitentiary population was imprisoned because of checks issued without funds. That so many

were willing to take the risk of losing their freedom to obtain financing suggests how important it is in ameliorating their lives.

In 1996, however, the Paraguayan parliament eliminated the criminal sanction on bounced checks. While this might appear as a very humanitarian measure meant to reduce the number of inmates, it had devastating effects on the credit market. Without the criminal penalty, entrepreneurs could not post their future livelihood as collateral. But because the other law, limiting the ability to collateralize assets, was not repealed, they had no collateral to post. It is no surprise that the volume of lending dropped.

At first sight, the perverse effect of the repeal of one law and the upholding of the other could be perceived as an innocent mistake of a well-meaning Paraguayan government. Unfortunately, these “mistakes” are so common and so pervasive, even in more developed countries, that it is hard to believe in sheer bad luck.

For example, in an attempt to protect households from the consumer credit industry that “forced” them to take too much debt, the Commission on the Bankruptcy Laws of the United States argued in 1973 that it would be beneficial for less-well-off households if they could retain some assets after filing for bankruptcy. Following these recommendations, a number of states adopted exemptions. Some of these were extremely generous. For instance, in Texas, a bankrupt person can retain his house no matter how expensive it is, in addition to \$30,000 of other property. A bankruptcy exemption is a form of insurance—it prevents the borrower from losing everything in case of a personal calamity. This can make borrowers more willing to tolerate high debt levels. But it also prevents the exempt assets from serving as collateral, making lenders less willing to offer loans. Not surprisingly, higher state bankruptcy exemptions led to a significantly higher probability that households would be turned down for credit or discouraged from borrowing.¹⁸

More interestingly, poor households were disproportionately adversely affected. Because their house is often their only form of collateral, the exemption laws effectively deprived them of their only means of obtaining finance. They had much less access to borrowing in the high-exemption states, and paid higher interest rates, than in the low-exemption states. By contrast, rich households typically have enough unprotected assets to borrow. The diminished willingness of financiers to lend after the passage of the exemptions did not affect them much. In fact, their debt went up in high-exemption states: Rich households became more willing to borrow because more of their assets could be protected from seizure. Thus, financial legislation that was intended to help poor households ended up hurting them and benefiting the well-to-do. These examples are more common than one could ascribe purely to legislative ignorance of economics.

Cui Prodest?

In every good mystery novel, when coincidences become overwhelming, the detective starts looking for a motive. Why do governments throughout the world, with the pretense of helping the poor, hurt them by depriving them of access to finance? Who benefits from it?

If finance does indeed breed competition and favors social mobility—as we argue it does—the people who will lose from financial development are those currently well-off, the owners of the established firms, who fear competition and would like to freeze societal and economic positions at their current level.

Consider, for instance, established large industrial firms in an economy, a group we will call industrial incumbents. In normal times, these incumbents do not require a developed financial system. They can finance new projects out of earnings—as most established firms do—without accessing external capital markets. Even when their business does not generate sufficient cash to fund desired investments, they can use the collateral from existing projects and their prior reputation to borrow. Such borrowing does not require much sophistication from the financial system—even a primitive system will provide funds willingly against collateral. Because of their privileged access to finance in underdeveloped financial systems, incumbents enjoy a positional rent. Anybody else who starts a promising business has to sell it to the incumbents or get them to fund it. Thus, not only do incumbents enjoy some rents in the markets they operate in, but they also end up appropriating most of the returns from new ventures.

These rents will be impaired by financial development. The better disclosure rules and enforcement in a developed financial market will reduce the relative importance of incumbents' collateral and reputation, while permitting newcomers to enter and compete away profits.

Similar arguments apply to incumbent financiers. While financial development provides them with an opportunity to expand their activities, it also strikes at their very source of comparative advantage. In the absence of good disclosure and proper enforcement, financing is typically relationship-based. The financier uses his connections to obtain information to monitor his loans and uses his various informal levers of power to cajole repayment. Key, therefore, to his ability to lend are his relationships with those who have influence over the firm (managers, other lenders, suppliers, politicians, etc.) and his ability to monopolize the provision of finance to a client (either through a monopoly over firm-specific information or through a friendly cartel among financiers). Disclosure and impartial enforcement tend to level the playing field and reduce barriers to entry into the financial sector. The incumbent financier's old skills become redundant, while new ones of credit evaluation and risk management become

necessary. Financial development not only introduces competition, which destroys the financial institution's rents and its relationships, it also destroys the financier's human capital.

After the 1994 Mexican crisis, for instance, the World Bank decided to help the government improve the financial infrastructure. One of the fundamental institutions that were missing was a credit registry, where assets posted as collateral for a loan could be officially recorded so that any potential lenders could be aware of what a borrower had already pledged. In setting up this registry, the World Bank experienced strong resistance from the existing banks. Why? Existing banks had enough clout that they could get this information regardless of the credit registry. Not only would they not benefit from it, but they would see their competitive position eroded as less established lenders could access that information and compete for business on an equal footing. Access to credit was curtailed to support the interests of the few!

In sum, a more efficient financial system facilitates entry and thus leads to lower profits for incumbent firms and financial institutions. From the perspective of incumbents, the competition-enhancing effects of financial development may offset the other undoubted benefits that financial development brings. Moreover, markets tend to be democratic, and they particularly jeopardize ways of doing business that rely on unequal access. Thus, not only are incumbents likely to benefit less from financial development, they might actually lose. This would imply that incumbents might collectively have a vested interest in preventing financial development and might be small enough to organize successfully against it.¹⁹ In doing so, they will be able to rely on other incumbent groups such as organized labor that previous studies have shown benefit from an economy with limited competition.²⁰

The Spreading of Financial Markets

In spite of this strong opposition to finance, a veritable revolution has taken place in this field throughout much of the developed world in the last three decades. In 1970, the ratio of the value of all listed U.S. stocks to GDP was 0.66; by the year 2000 it had climbed to 1.5.²¹ The increase in other countries is even more dramatic. In France, stock market capitalization rose from just 0.16 of GDP in 1970 to 1.1 times GDP in the year 2000.²² The explosion in the size of stock markets is just one indication of what has happened. Entire new markets such as Nasdaq have emerged, catering specifically to young firms. Institutions such as money market funds did not exist in the early 1970s; now they hold over \$2 trillion in assets in the United States. A large number of financial derivatives that are commonplace today, such as index options or interest rate swaps, had not been invented three decades ago. The turnover in the trading of such derivative instruments was \$163 *trillion* in the fourth quarter of 2001,

about 16 times the annual GDP of the United States.²³

In the same way as corporations have obtained new instruments with which to raise finance and allocate risks, individuals also now have expanded choices. Revolving consumer credit such as credit card debt exploded from near nothing in the United States in the late 1960s to nearly \$700 billion in late 2001.²⁴ Firms and individuals can borrow not just from domestic institutions but also from foreign markets and institutions. Gross cross-border capital flows as a fraction of GDP have increased nearly tenfold in developed countries since 1970 and more than fivefold for developing countries. In the decade of the 1990s alone, these flows more than quadrupled for developed countries.²⁵

Why have politicians in countries as diverse as France and Germany or Korea and India embraced the market and attempted to provide the governance markets need? It is difficult to imagine that politicians have suddenly become more public-spirited. The answer, we believe, is that the interests of the elites have changed with the opening of borders to goods and capital. This has made domestic elites press their politicians to enact market-friendly legislation.

The effect of open borders on government policy can be clearly seen in the Indian software industry. Unlike much of Indian industry, which for years had been held back by government regulation intended to protect the positions of a few existing family-owned firms, there were no incumbents in this sunrise industry. Smuggling provided an initial impetus as cheap computer parts were brought in, bypassing extortionate tariffs and giving software engineers access to cheap computers. But as the industry grew, it gained political clout. Tariffs were brought down so the industry could work more legitimately. The industry also became internationally competitive.

Now, even when some players in the industry have become dominant, they are not particularly interested in suppressing domestic competition. Instead, people like Narayan Murthy, the head of Indian software giant Infosys, are pressing for better infrastructure, such as better corporate governance that will let them raise finance more cheaply and more educational institutions that will allow them to train their personnel. Everyone, including their domestic rivals, benefits. The software industry is pushing India toward building infrastructure for the market. Openness has been critical to this process.

In sum, as borders open up to the flow of goods and capital, incumbent firms now need well-functioning domestic markets so that they can take advantage of the opportunities provided by the global market, as well as meet foreign competition head-on. The prospect of increased domestic competition matters less when they are fighting on the world stage. They now back rather than oppose domestic markets. Put differently, competition between economies through open borders forces politicians to enact the rules that will make their economies competitive. This typically means enacting market-friendly legislation and making markets accessible to all.

CONCLUSIONS

Widespread access to finance is an integral pillar of our freedom to choose. Without it, many of the opportunities offered by the market are more hypothetical than real. In spite of the enormous challenges intrinsic to the financing activity, human ingenuity, when allowed to work freely, is able to devise many mechanisms to enlarge access to finance. It cannot, however, overcome the power of the government, when this is determined to block finance. Unfortunately, governments are too often captured by rich incumbents, who stand to gain very little and risk a lot from the development of finance.

Openness is a powerful antidote against the power of incumbents. International competition weakens both the incentives of incumbent firms to oppose financial development and their ability to do so. Not coincidentally, the last twenty-five years, which have witnessed an opening up of world trade, have also experienced a surge in financial development.

Unfortunately, international tensions and recent economic downturns have slowed down and threatened to reverse the process of world market integration. As economists, as disciples of Milton Friedman, but most important, as citizens, we have to fight this trend, which can significantly affect the freedom to choose of generations to come.

NOTES

- ¹ The description of Delora Begum's cell phone and its effects is from a *Wall Street Journal* article by Miriam Jordan, published in the June 25, 1999, edition and entitled "It Takes a Cell Phone: A New Nokia Transforms a Village in Bangladesh."
- ² Alex Counts, 1998, *Give Us Credit: How Muhammad Yunus's Microlending Revolution Is Empowering Women from Bangladesh to Chicago*, Random House Value Publishing.
- ³ Sandra Black and Philip Strahan, 2002, "Entrepreneurship and Bank Structure," *Journal of Finance*, December.
- ⁴ Raghuram Rajan and Luigi Zingales, 1998, "Financial Dependence and Growth," *American Economic Review* 88, Issue 3: 559–86.
- ⁵ See L. Guiso, Paola Sapienza, and Luigi Zingales, 2003, "The Costs of Banking Regulation."
- ⁶ See L. Guiso, Paola Sapienza, and Luigi Zingales, 2002, "Does Local Financial Development Matter?" NBER Working Paper No. 8923.
- ⁷ Much of what follows draws on the work of Stephen Haber, an economic historian at Stanford University.
- ⁸ Stephen Haber, ed., 1997, *How Latin America Fell Behind: Essays in the Economic Histories of Brazil and Mexico, 1800–1914*, Stanford University Press, 162–63.
- ⁹ Ibid.
- ¹⁰ This effect is present even controlling for other regional differences in economic conditions. See

L. Guiso, Paola Sapienza, and Luigi Zingales, 2002, "Does Local Financial Development Matter?" NBER Working Paper No. 8923.

- ¹¹ The pattern persists after we account for the influence of a country's per capita GDP and its recent growth rate. One obvious explanation is that billionaires are more likely to own publicly traded firms, and their stock prices tend to be high when the country's equity markets are high. Those who inherit wealth, however, also tend to own stock—the heirs of Sam Walton, the Fords, and the Siemens come to mind—but the relation between frequency of inherited billionaires per million people and stock market capitalization is much weaker. More important, the relationship exists even if we measure financial development in a way that is not directly affected by the level of stock market valuations—such as the number of listed firms per million of population. Countries with better accounting standards also have more self-made billionaires.
- ¹² See Harris Corp., 1996, "Founding Dates of the 1994 Fortune 500 U.S. Companies," *Business History Review*, Spring: 69–90.
- ¹³ See J. Fear, 1997, "German Capitalism," in *Creating Modern Capitalism: How Entrepreneurs, Companies, and Countries Triumphed in Three Industrial Revolutions*, ed. T. McCraw, Cambridge: Harvard University Press, 181.
- ¹⁴ Claudia Goldin and Lawrence Katz, 1999, "The Returns to Skill in the United States Across the Twentieth Century," NBER Working Paper No. 7126.
- ¹⁵ L. Katz and K. Murphy, 1992, "Changes in Relative Wages, 1963–1987: Supply and Demand Factors," *Quarterly Journal of Economics* 107: 33–78.
- ¹⁶ A.V. Bhide, 2000, *Origin and Evolution of New Business*, New York: Oxford University Press, 94.
- ¹⁷ Our account is based on Stephanie Straub and Horacio Sosa, 2001, "Ensuring Willingness to Repay in Paraguay," in *Defusing Default: Incentives and Institutions*, ed. Marco Pagano, Inter-American Development Bank.
- ¹⁸ R. Gropp, J. Scholz, and M. White, 1997, "Personal Bankruptcy and Credit Supply and Demand," *Quarterly Journal of Economics* 112: 217–51.
- ¹⁹ For example, see Mancur Olson, 1965, *The Logic of Collective Action: Public Good and the Theory of Groups*, Cambridge: Harvard University Press; and George Stigler, 1971, "Theory of Economic Regulation," *Bell Journal of Economics* 2: 3–21.
- ²⁰ For evidence that unions share in rents from industrial concentration, see, for example, Michael A. Salinger, 1984, "Tobin's q , Unionization, and the Concentration–Profits Relationship," *Rand Journal of Economics* 15: 159–70; and Nancy L. Rose, 1987, "Labor Rent-Sharing and Regulation: Evidence from the Trucking Industry," *Journal of Political Economy* 95: 1146–78.
- ²¹ For year 1970, R. Rajan and L. Zingales, "The Great Reversals: The Politics of Financial Development in the 20th Century," forthcoming in the *Journal of Financial Economics*, and for year 2000, data are from International Federation of Stock Exchanges.
- ²² *Ibid.*
- ²³ Bank for International Settlements *Quarterly Review: International Banking and Financial Market Developments*, March 2002.
- ²⁴ Economic Report of the President, February 2002, 412.
- ²⁵ *Ibid.*, 261.