Chapter 3

Crises and Inequality

[...]

To see why individuals in the middle of the economic scale are the ones whose support is critical for financial markets and why they are also most likely to push for reforms after a financial debacle requires a look at how crises, inequality, and institutions interact. Typically, crises redistribute wealth and inflate the ranks of the poor. Yet precisely who bears most of the risk depends on financial institutions, which in turn affect how individuals react after the crisis. The demand for financial reorganization afterwards is also related to inequality. That the poor rarely clamor for financial innovation is hardly surprising, but what has not been appreciated is how sensitive reform is to the size of the group in the middle—the borrowers, lenders, investors, and entrepreneurs who are neither rich nor poor. If this group is big, it will be a powerful force for vigorous capital markets and for financial innovation, and it will be larger in societies where there are alternatives to being either rich or poor.

[...] Financial systems are more likely to thrive when the middle class is not too small, for a tiny middle class weakens capital markets and cuts the demand for financial innovation. That is one reason why crises can do such lasting harm, for they can wipe out the middle class and heighten inequality. But in financial markets, good and bad are often intertwined, and crises are no exception. Even though they can wreak enormous havoc in financial markets, crises can also sometimes trigger beneficial reforms, provided the middle class is large enough.

How Inequality Affects Financial Markets: A Simple Model

Making sense of how crises and inequality interact requires a bit of simplification. The easiest way to grasp what is going on is to focus on a straightforward example or model—a make believe market in which the only financial contracts are loans. [...] Let us suppose that someone in this imaginary world wishes to raise some money. [...] He has to borrow, but potential lenders or investors will naturally worry about his willingness to repay. Broadly speaking, there are two ways to calm their fears, either via collateral or via a reputation for creditworthiness. When our borrower pledges collateral, he offers lenders his wealth as a hostage. They can then seize it if he fails to pay back the loan on schedule. If, by contrast, he relies on his reputation, then he puts his future access to credit at risk. Failure to keep up with the loan will make it hard—if not impossible—to borrow in the future.

Whether the borrower uses collateral or reputation will depend on several factors. It will be affected, for instance, by the nature of the loan. Consider what would happen, for example, if the borrower is a woman borrowing to expand a dresss making buisiness and if surging orders for dresses lead her to hire some temporary workers. She may have to pay the workers before the dresses are sold and may have to borrow to do so. Yet it may be impossible to use the dresses as collateral because they are not finished. Offering her home as collateral—another possibility—may take too long and impose prohibitive legal costs on what needs to be a quick and inexpensive transaction. If so, she may be forced to rely on her reputation in order to borrow. If she has paid loans back in the past, potential creditors may conclude that she values her reputation highly and may therefore grant her a new loan. But if she has never borrowed, she may be out of luck.

Ideally, she will have arranged sources of credit that can be tapped when she opens her business that can be tapped if needed. Whatever the source of her loan, she will usually be able to borrow more and at a lower interest rate if she has some collateral that she can pledge, provided the associated legal costs are not too high. To get the lower interest rate or larger loan, she will of course need property that can serve as collateral, such as business assets or a house.

Collateral thus implies that our borrower has some resources. Her resources—her wealth—are valuable not only because they can be used or consumed but because they give access to credit. Our dress maker's house, for instance, not only provides shelter but it can be mortgaged too. Amassing property like it will therefore be appealing for nearly everyone, because it makes it easier to borrow.

In the long run, one might assume that wealth would distribute itself in an "efficient" way, as talented and eager entrepreneurs like our dress maker stinted and saved enough collateral to be able to borrow and thereby finance their own businesses. As their businesses grew profitable, the distribution of wealth would even out, leaving most people able to borrow. With credit available for anyone willing to endure a little self privation, the distribution of wealth and the financial system itself would eventually look the same everywhere, at least in our imaginary world.

In reality, however, we observe little such convergence. One reason is that it may be impossible to run a business small enough to be financed out of one entrepreneur's savings, particularly if the entrepreneur starts off with no wealth. Consider, for instance, that the borrower is a young man who aims to start a delivery business. He has to come up with enough money—either by borrowing or saving—to buy an entire truck. It will not do to have half a vehicle. The truck itself can of course serve as collateral, but it may still be impossible for him to take out a loan if he has no other wealth and has not yet earned a reputation as a trustworthy borrower.

Moreover, in the real world, societies with puny financial sectors and huge disparities of wealth tend never to escape inequality and financially frailty. Latin America is a prime example, as we shall see, for inequality there is worse there than in any other continent, and most Latin American countries have never developed the financial institutions that would help their citizens start businesses and amass wealth. By contrast, societies lucky enough to enjoy both equality and an advanced financial system —Western Europe will turn out to be a good example here—usually retain both advantages over time. And as we shall discover, more equal societies are likely to benefit from having more collateral lending, more financial intermediation of all sorts, and more credit overall. The only cost they will face will be a greater vulnerability to crises because they will depend on intermediaries who do sometimes fail.

Credit: the Poor, the Rich, and the Middle Class

To see why inequality and financial frailty go hand in hand, let us suppose that there are three types of actors in our imaginary world of lending—the poor, the rich, and what we will term the middle class. Although it is easiest to think of these actors as individuals, they can be firms too. Calling one set of actors the "middle class" may of course bring to mind certain notions from classical sociology, but we actually have something very different in mind. Our three types are simply labels describing the amount of wealth and kinds of assets that our actors possess. They will all have other important characteristics as well—family ties, political associations, connections to particular trades or industries—which our labels overlook in order to keep things simple.

Our first group, the poor, often includes more than half the population, but they have little wealth and no tangible assets that can be used for collateral. Their sole possession is a meager amount of skill or education—what an economist would call human capital—but it cannot be used as collateral, at least in most modern economies. Hence the only way the poor can borrow is via their reputations. Many of them will undoubtedly want to take out loans, for they have no savings to tide themselves over when they get sick, lose their jobs, or fall victim to some other economic shock. Who then are the poor? They might be workers in developed countries, whose only "savings" are the rights they have to government sponsored social insurance programs and who must rely on their credit cards if the government cannot help them during a crisis. Or they might be farmers in less developed economies, who borrow from their landlords in times of dearth. In either case, such have-nots do have a demand for credit, even if they never want to become entrepreneurs, and it is largely a demand for loans that serve as insurance in times of crisis or economic shock.

The second group, the middle class, is wealthier than the poor. They possess tangible assets, in addition to having more human capital than the poor. Today their ranks include the Iowa farmers, local manufacturers, home owners.[1] Similar figures would belong to the middle class in the past, as would merchants or small scale savers in early modern European cities. The size of the resulting group will greatly vary from society to society. In some cases, it encompasses more than half a society's population (as was the case in the nineteenth-century countryside both in France and in the United States), while in others (nineteenth-century Paris, much of current day Latin America) it is less than a fifth of the population. Whether it is big or small, many members of the middle class will want to carry out some project requiring money, such as starting a business or purchasing a house. The amount they need will not be enormous but it will usually exceed what they can fund out of their own savings. These middle class actors will therefore want to borrow. Others, by contrast, will have savings to invest. In either case, they will usually turn to local capital markets, for the sums involved will not be big enough to justify taking out a loan or making an investment in a foreign country or some other distant market. The costs of scouting out investments or of finding inexpensive lender or reliable financial intermediaries will loom so large relative to the size of the transaction that it will simply not be economical to go elsewhere. Because they depend on local capital markets, the middle class will therefore care deeply about their quality.

Dependence on local capital markets will leave many middle class investors undiversified, with too much of their savings sunk into their home, their business, and local financial intermediaries. What a nightmare it will be, after all, if, as in Iowa, local businesses fail and drag the local banks down in their wakes. Risk will therefore be a major worry.[2]

Borrowers in the middle class will have certain common characteristics too. Although they may use reputational credit to fund their projects, they will typically resort to loans backed (either implicitly or explicitly) by collateral. One reason is that pure reputational loans will usually be too small the fund their projects. Today, for example, credit card debt is usually reputational, for although credit card companies can go to court to seize assets, they usually depend on the threat of cutting off future credit to get borrowers to repay. The card limits are too small, though, to purchase a home or start most businesses. Fortunately, middle class borrowers have tangible assets that can serve as collateral, and they will often prefer to keep their reputational credit in reserve for use in case of an economic shock. When they borrow, their loans may be secured by a specific asset, as with a home mortgage providing start up capital for a middle class entrepreneur, or they may be backed by all of their wealth.

Our third group, the rich, has human capital and tangible assets, and much more wealth than the middle class. These are the people featured in most financial histories or lists of the wealthiest people and biggest corporations. Although they never make up more than 1 percent of the population, they may own up to half of an economy's material goods in parts of Latin America, and they have owned even more in past societies.[3] They possess less, however, in most modern western democracies. In the United States, for instance, the richest 1 percent of all households held some 34 percent of the country's net worth in 1998—a bigger share than in the 1970s. Contemporary Europe is even more egalitarian, with the wealthiest 1 percent's portion ranging from 26 percent in France to 10 percent in Ireland.[4]

Wealth opens doors for the rich that are closed to the middle class. In contrast to the middle class, the rich can usually start a business or buy a home without taking out a loan, because their enormous fortunes allows them to finance most of their own projects out of their own pockets. Their wealth also has implication for the markets that they participate in. Whereas middle class investors are scared off by the costs of scouting out foreign or distant markets, the rich are not. The reason is that the costs are small relative to huge sums they will invest. The rich can therefore spread their portfolios over multiple markets and benefit from diversification.

They will consequently worry less about any particular local market's short term performance and need less insurance too. But they will be the ideal group to offer insurance to the poor and middle class if the state does not do so: all they need do is move resources from prosperous markets to one laid low by a crisis. That is what happened in nineteenth-century France when wealthy landlords such as the La Rochefoucault family let their tenants fall behind in the rent during an agricultural crisis in 1870-71. Arrears, which had been averaging 20 percent of the rent due, jumped to 76 percent in 1870 and 60 percent in 1871—in effect, loans that the family was making to tenant farmers.[5]

With enormous fortunes, the rich can also afford to keep financial intermediaries on retainer or to hire personnel who improve the performance of their investments. The fixed costs of hiring experts shrink to insignificance relative to the size of their portfolios, and they can therefore invest heavily in financial intermediation. (Fixed costs refer to expenses that do not rise with the scale of transactions; here they refer to the cost of hiring, say, a full time banker or investment adviser to manage a portfolio.) The rich do not even have to take financial institutions as given; indeed, they can go so far as to open a bank if they think it worthwhile.

The affluent Brown family took just this step in late eighteenth-century Providence, Rhode Island. Having succeeded as merchants in the colonial era, they wanted to shift into manufacturing after the American Revolution. Their commercial success gave them enough money to fund any single manufacturing project, such as a textile mill. But their ambitions went well beyond one lone enterprise. To expand rapidly, they therefore needed additional capital, even though they possessed considerable wealth. Banks, however, were almost unheard of in the new republic. Not to be stopped, they and likeminded allies therefore decided to create their own bank, the Providence Bank, which they founded in 1791. Drawing its capital and deposits from the local community, the bank invested most of its resources, at least initially, in the highly successful businesses that the Browns and their allies controlled.[6]

Founding a bank is not the only option for the rich. They can develop special relationships with financial intermediaries and if their fortunes are truly immense they can even employ financiers full time. Take for example the Orléans, close relatives to the king and one of the most well-heeled families in eighteenth-century France. The Orléans owned huge tracts of real estate, along with a major canal. To manage their extensive holdings, they employed a large staff, including a full time financial specialist, Etienne de Silhouette, who later took charge of the government's own finances. But their capacity to deal with financial markets on favorable terms did not stop there, for they were also the principal clients of two of Paris's major loans brokers (notaries). Because there were few families of such extraordinary opulence in France, most Parisian notaries had to make do with a diversified clientele. The Orléans' two notaries, however, were an exception. They were in fact among a dozen or so notaries who owed their prosperity to the continued business of the very rich, and they also benefited from work for the Orléans' business partners, political allies, and artistic clients.[7]

There was one final benefit to the Orléans' gargantuan wealth. When they needed to borrow (say to meet a temporary cash requirement or to engage in real estate development without having to sell too many other assets), they had no trouble and could even choose among a variety of exotic financial instruments. Consider, for example, the Duke of Chartres, the heir to the Orléans title and the family fortune. Both he and his wife stood to inherit enormous wealth, but he spent so heavily in anticipation of the legacy that he found himself squeezed for cash. He therefore decided to develop some of his family's property in Paris to increase its commercial value. He convinced his father, the Duke of Orléans, to turn the property over to him in 1780, and the result was the Palais Royal. Since he was short of cash, he did have to borrow, but the financing for this eighteenth-century Las Vegas was not arranged via reputational loans or even the usual land backed mortgages that funded most real estate development. Rather, Chartres chose the innovative route of selling life annuities, a popular (and presumably cheap) way of raising money at a time when government pensions did not exist and individuals were consequently eager to buy anything like an annuity, which would provide for their old age. He also borrowed from bankers in Genoa. The sums he mobilized amounted to millions of livres, at a time when a typical borrower in France would take out a loan for only 841 livres.[8] Because he sold so many annuities, he could protect himself against the likelihood that all the purchasers would live to a ripe old age, a form of diversification that was beyond the reach of most other private borrowers. Furthermore, the scale of his operation reduced fixed costs to small change and thereby made it possible for him to utilize other sources of funding as well, such as the Genoese bankers.

Today, large firms engage in similar behavior.[...]

Collateral and Reputational Lending

The rich, the poor, and the middle class all behave differently in the credit market. They do not have the same demand for credit, and they do not take out the same kind of loans, if they borrow at all. What they use loans for differs too—in particular, whether they borrow to start businesses or to protect themselves when economic shocks strike. If it is for protection, the borrowing is a form of insurance, and the poor have an enormous demand for it, a demand that they can only satisfy by taking out reputational loans, since they lack collateral. True, the middle class will also fear shocks, but they will not seek as much insurance as the poor, because they have more wealth—in particular, tangible assets that can serve as collateral and also offer some protection and diversification. The middle class can thus take out both reputational and collateral loans, and they will turn to the collateral market when they want to start businesses and finance investments. Finally, although the rich can obviously borrow in both the reputational and collateral markets, they do not need to do so to start businesses. They do not need insurance either, because they have large diversified portfolios and can invest in foreign countries and far away markets. Overall then, the demand for insurance loans in the reputational market declines with wealth, so long as an economic shock is not big enough to wipe out the middle class and make them as desperate for reputational loans as the poor. The demand for collateral loans has a different shape. Absent among the poor, who have no collateral, it peaks among the middle class and then drops again among the rich.

So far we have not really asked what kind of wealth can serve as collateral. We do know that human capital (one's skill as a cook or accountant, for example) cannot secure loans. Other assets such as real estate can, but their effectiveness as collateral will depend on several institutions. First of all, there must be a legal system that can enforce loan contracts and titles to property at low cost and give lenders effective rights to collateral when borrowers default. It is particularly difficult to do this with moveable property (such as livestock, vehicles, commodities, and most manufactured goods) because a borrower can often sneak the collateral away. But problems can keep even real estate from securing loans. The cost of foreclosing on a home mortgage is much higher in Italy, for instance, than it is in Great Britain.[9] The situation is even worse in many developing countries. In Vietnam and Mexico, legal restrictions limit the use of land as collateral, and in Cameroon establishing title to land takes years.[10] In Brazil, slum residents lack any title to the homes they occupy, a barrier that keeps fledgling entrepreneurs from borrowing.

It is also necessary to have some sort of low cost lien or mortgage registry that records whether an asset has already been pledged as collateral and, if so, to whom. Such a registry will make it easier for lenders to see whether an asset has been mortgaged to the hilt when they are deciding to make a loan. And a third key institution is a market in which collateral can be sold off. Assets that can easily be peddled will obviously be more appealing as collateral than wealth that trades in thin markets. Collateral will thus depend on institutions, institutions that are themselves the result of decisions made by current and past members of the society.

Digging deeper reveals another characteristic of wealth that affects its utility as collateral—the ease with which it can be divided. One might assume that divisibility is a purely technological (after all, a truck that secures a loan cannot be split in half), but it in fact reflects a host of legal constraints and market innovations. Consider, for example, real estate in France. Land in France is divided into legally defined parcels, and until the middle of the nineteenth century, a parcel could not easily be split: each parcel, such as the plot of land beneath a building—had to have a single owner. In the countryside, this limitation posed no problem, for there were many small, inexpensive parcels that farmers could easily purchase and mortgage. In cities, however, land was valuable and parcels costly. Building single family housing on such expensive land was out of the question, but the occupants of a larger building could not share ownership of the parcel, as in a modern American condominium. Owning real estate was consequently out of the question for all but the richest city dwellers. Other urbanites rented, and if they saved, they had to acquire financial assets other than land or buildings. As a result, middle-class city dwellers did not benefit from all the money the French government spent in the nineteenth century to create mortgage registries that facilitated the use of real estate as collateral. Although the spending did help the middle class in the countryside, in cities it only worked to the advantage of the rich, because they alone owned real estate. That remained the case until the twentieth century, when legal and financial innovations finally allowed multiple owners to occupy a single building.[11]

In unequal societies, where the middle class is tiny and the ranks of the poor loom large, more credit will be available for insurance than for investment. Demand for credit will be shaped by the huge number of poor people, for the rich do not borrow and the middle class is too small. With no collateral, the poor will have to turn to reputational credit to borrow. Few of the loans they take out will go for investments (to start a business for instance), for they have too little human capital and will fear that such borrowing will limit the amount of debt they can take on if an economic shock hits. Their fears are not irrational. After all, with no savings, they are acutely vulnerable in economic downturns. Because what they can borrow in the reputational market is limited, they prefer to reserve the little credit they have for insurance in hard times. Furthermore, borrowing for investment may even convince a lender (whether he is a village usurer or a local banker skeptical of get rich quick schemes) that they are no longer concerned about being able to go into debt in tough times and thus no longer worried about preserving their reputations. After all, if the poor borrow for investment and succeed, they will not need insurance any more, and if they borrow for investment and fail, they will be so indebted that they will be unable to repay their reputational loans. Borrowing for investment may therefore tarnish their reputation, something many of the poor dare not risk, for fear of being left high and dry and without insurance in a crisis.

The poor will thus want insurance loans and they will get them from the rich, usually in a way that builds upon existing bonds between the two groups. The existing links, which may connect landlords and tenants or the mighty and their clients, will supply the detailed information required by reputational credit—information that helps a rich lender distinguish whether a poor borrower is truly needy, whether he has contributed to his own dilemma, and whether he is likely to pay back his loan or not.[12]

Although the rich do not borrow at all in our model, the outcome will remain by and large the same for an unequal society even if the rich do take on some debt. The picture will only change if institutions arise to facilitate collateral lending. They might actually come into existence if, say, wealthy heirs like the Duke of Chartres want to borrow in anticipation of their inheritance. The development of such institutions is in any case likely to be slow, because there will be few middle class borrowers to create a market for collateral lending. Still, over the long run, appropriate institutions may eventually emerge in unequal societies. They did, for instance, in late seventeenth and eighteenth-century England, despite highly concentrated landownership, giving rise to mortgage credit that allowed wealthy landowners (in other words, the rich) to borrow against their estates. Before the seventeenth century, the law made it hard for wealthy landowners in England to employ their property as collateral. At best they could use the land to secure a six-month loan, but if they fell even one day behind in making payments, they would lose their property forever and still have to pay the lender the principal due on the loan. But both the law and financial habits began to change in the seventeenth century, in part because wealthy landowners who had backed the losing side in England's Civil War sought to mortgage land in order to pay fines or repurchase property that had been confiscated. By the end of the century, the rich were regularly turning to mortgages to manage their finances.[13]

What will happen in more equal societies—in other words, ones with thinner ranks of rich and poor and a larger middle class? Demand for credit in general and for collateral lending in particular will rise with the size of the middle class. If all goes well and there are no institutional obstacles that restrict lending, then the total amount of debt will be larger in more equal societies, with the collateral lending favored by the middle class predominating over reputational credit. The poor will still continue to want insurance, but, as their numbers diminish, overall demand for reputational loans will fall, and the supply of credit will accommodate the greater demand for collateral loans from the middle class. Because the rich will no longer control enough wealth to fund all the collateral debt, financial intermediaries will arise to mobilize the savings of middle class lenders and pass them on to borrowers in the same class. Again, our simplified description assumes that institutional obstacles do not keep intermediaries in check.

The resulting contrast in financial development comes into clear focus in the history of North and South America. In the United States, where wealth was distributed in a fairly egalitarian way even in colonial times, mortgage lending using land as collateral was widespread by the early 1700s. It was far more common than in Latin America, where extreme inequality left few potential borrowers with property to secure loans. Competitive banking also developed earlier in the United States, as did securities exchanges. Differing institutions certainly played a role—in particular, the possibility of competition between states under the American constitution, which spurred the creation of banks—but acute inequality, it has been argued, was the ultimate cause, the prime mover behind even the institutional change. It is telling, for example, that it took until 1884 for mortgage credit legislation to be drafted in Mexico. Furthermore, in much of

Latin America the banking system did not arise to serve middle class borrowers and investors; rather, for ages it remained a "reserve of the wealthy elite."[14]

A similar contrast emerges if we compare Latin America and parts of Western Europe where wealth was dispersed. These relatively egalitarian portions of Europe quickly developed financial intermediaries to facilitate mortgage lending, just as our model suggests. The intermediaries varied from place to place—they might be notaries, credit cooperatives, or agricultural banks—but what is striking is their ubiquity, a stark difference from Latin America.[15]

The intermediaries in Western Europe mobilized much more capital than in Latin America for mortgage loans to middle class borrowers. A pair of examples can illustrate the disparity—the cities of Merida in Mexico and Limoges in France, both of which had about 40,000 people in 1850. Despite the similar size of the two cities, only some 70 mortgage loans were arranged each year in Merida.[16] In Limoges, the number was 20 times higher: nearly 1,400 loans a year. One might simply attribute the difference to higher per capita incomes in Limoges, but the average loan size there was actually much smaller than in Merida: under 1,000 francs, versus over 5,000 francs in the Mexican city.

The difference is just as pronounced between larger cities in Europe and Latin America, such as Lyon and Rio de Janeiro, which had roughly comparable populations in 1870 (318,800 for Lyon and 228,743 for Rio).[17] In Rio only 400 loans were arranged in 1870—a mere 1.75 loans per thousand inhabitants. In Lyon at about the same time (1865), the number was far larger: 2032 loans a year, or 6.62 loans per thousand residents, a figure nearly four times what it was in Rio. Again, the average loan size was smaller in Lyon: 9094 francs, versus 44,650 francs in Rio. Essentially, Rio and Merida had only a small number of huge loans, which is just what the puny middle class would lead one to expect for Latin America. In such societies, the rich are the only ones left to borrow, and while our model does not allow them to do so, in reality they will occasionally take out loans—for instance, to finance extravagant consumption before inheriting a fortune. Their rare but sizeable indebtedness is likely to dominate the credit markets in Merida and Rio, and in any other society without a large middle class. The most insidious effect of extreme inequality in places like Brazil and Mexico is that it slows the development of institutions that support a thriving capital market. With so few people having savings to invest or projects that require external financing, the credit market shrivels up. The tiny minority who do participate in it—essentially the rich—can rely on personal information to arrange loans. They have no need for financial intermediaries, and even if they do, they can always secure the services of specialists in other countries. Intermediaries in the local credit market will develop slowly, particularly if the rich may seek to choke them off in order to limit competition in providing lucrative insurance loans to the poor. Merida seems to have gone through just such a process. Sisal production fueled a boom in the 1880s and 1890s, but far from leading the economic growth, local banks only arose a decade later.

Extreme inequality and a small middle class are thus two major obstacles to flourishing financial markets. But behind this simple truth lurks a hidden cost. Equality is likely to nurture financial development but it may also leave societies vulnerable to financial crises. Crises can strike because indebtedness is higher, especially among individuals with limited wealth and little diversification—in other words, our middle class. When an economic shock hits, it will batter most middle class entrepreneurs. Many will be unable to pay their debts and they will go bankrupt, just like the farmers in Iowa. Their creditors may then be dragged down: in particular, financial intermediaries. If a large number of intermediaries go belly up, the result is a financial crisis.

[...]

Inequality and Economic Shocks

Yet equal societies are not necessarily financial nirvanas, blessed with an unending stream of finance, innovation, and entrepreneurship, for they are vulnerable to economic shocks, which can do more damage to capital markets in equal societies than in inegalitarian ones. The shocks can twist both financial institutions and the distribution of wealth in a way that compresses the middle class and, along with it, the demand for credit and for financial intermediation. The good that equality does inevitably brings with it some bad risks.

To understand how that can happen, take our simple model and consider what a shock does to the distribution of income (what people earn every year) and to the distribution of wealth (the total amount of property they have amassed). Normally, income inequality is assumed to increase in good times and to decrease in bad. The reason is that most income derives from wages and from returns to financial assets, such as interest payments. During bad times, the earnings from financial assets will fall more than wages. Since the rich depend heavily on such earnings, their income will suffer heavily. The middle class, by contrast, get much more of their income from wages, even though they do earn a bit from the assets they own. As a result, their income will fall less than that of the rich, narrowing the breach between the incomes of the two groups. In good times, however, the reverse will be true, as the rich will find their incomes buoyed up by the high returns on financial assets. Income gaps will thus widen in good times and shrink in bad.

Income, however, is not the critical issue for credit markets, at least according to our model. What matters is wealth—especially collateral wealth. What does it do?

Wealth inequality may also rise in good times and fall in bad times in societies if individuals cannot invest outside their local economy. The reason is that the rich are more willing to bear risk than the poor. They will therefore own more assets such as speculative ventures, whose value will fluctuate widely; the middle class, by contrast, will fill their portfolios with more secure investments such as bonds or rental housing. When a shock hits, the rich will lose more, narrowing the gap in wealth between them and the middle class. The phenomenon will only be temporary, though, and will disappear once the shock passes.

More relevant, however, is the case where the rich need not keep all their investments in a particular locality. This is the case our model envisages—the rich being able to afford the fixed costs of investing in distant markets—and it is a realistic one because capital does flow from one part of the world to another. These flows are largely financed by capital exports from the rich. The middle class, by contrast, tend to invest closer to home, and they suffer greatly from this home country bias. The tendency of the rich to invest abroad is even more marked in parts of the world that are regularly battered by crises, where the rich do hold a significant part of their wealth outside of the local economy.

In most Latin American countries, for instance, private investment abroad is of similar magnitude to foreign debt.[18] In other words, for every dollar that enters one of the countries as a loan to the state or to private individuals, another dollar of private wealth seems to move out to be invested abroad. The distribution of these foreign investments is highly skewed, with the poor clearly owning none of them. As for the middle class, its wealth was for a long time strictly local, although some middle class savers in Argentina did manage to diversify their portfolios a bit by opening bank accounts in Uruguay. The reason, again, was that the fixed costs of most foreign investments simply loomed too large.[19]

The rich, by contrast, have long owned portfolios that are spatially diversified, portfolios with resources spread across regions and countries. Consider, for example, the family of aristocrats in eighteenth-century France, the Bourée de Corberon. In the middle of the century, the head of the family was a judicial official living in Paris, but he maintained the family's estates in Burgundy's wine country. In Paris, he lent money to private individuals and to the state; he made similar loans to private parties in the Burgundian capital of Dijon and in Nuits-Saint-Georges, a town near his estates. While he apparently had little personal connection to his debtors in Paris or in Dijon, many of his loans in Nuits-Saint-George went to his tenants. After a bad harvest in 1770, he advanced them money and allowed them to reschedule their rent payments—precisely the kind of insurance only a wealthy and well diversified investor could offer.[20]

Imagine now what happened to the distribution of wealth in Nuits-Saint-Georges after the bad harvest. The poor would find that the bad grape harvest had depressed their income because there was less demand for their work, for while wages per day did not fall, the number of days worked did. The rich would receive lower incomes from local investments, but the impact on their income would be small because of the offsetting effect of earnings from urban investments and from places unaffected by the bad harvest. The middle class would endure a decline in income, and middle class entrepreneurs would face the problem of making payments on loans and leases. Some might have to draw down their savings; a few might even have to sell a little land. Yet although middle class wealth might decline, and by more than the diversified fortunes of the rich, long run change in the distribution of wealth would be small, for in good times the whole process would be reversed. Members of the middle class would then rebuild savings and repurchase lost wealth. Higher income poor people would save enough to join the middle class, swelling its ranks. As long as shocks were not large enough to bankrupt members of the middle class, inequality would change little.

A big shock, however, could threaten this stability, by provoking a financial crisis. If the shock were big enough, the gentle ebb of middle class wealth could become a rip tide, upending middle class entrepreneurs who could no longer make payments on their leases or on their loans. Insolvency would force them to liquidate their businesses. But who could buy their land, tools, or animals? The poor surely could not, because the bad grape harvest had depressed their income as well, and other local middle class entrepreneurs would be unlikely candidates either, because they too would be hurting. Middle class investors would be in a bind as well, because their loans would have gone bad. The most likely purchasers would thus be the rich. They would have diversified portfolios and could bring in resources from Paris or Dijon to purchase assets at fire sale prices. Inequality would then increase, as the rich acquired property. If the shock is bad enough, the middle class may even disappear, but even if it does not, its members will have less collateral and thus take out fewer loans.

This pattern is not peculiar to markets in the distant past, as the recent spate of corporate bankruptcies in the United States demonstrates. [...]

The dire effect that crises can have on the distribution of wealth is worth considering in greater detail, for it is the foundation for the rest of this chapter and the next too. Crises, we shall argue, pose a serious threat to financial markets because of the long run damage they can do to the middle class. If a crisis wipes out much of the middle class, the demand for financial intermediation will decline, and capital markets may take ages to recover.

The reason, at bottom, is that in a crisis the middle class will typically lose a greater fraction of their wealth than the rich, who are usually more diversified. The rich, it is true, may endure the greatest absolute losses in the local economy because they own so much. But if they hold assets outside the local economy—and they typically do—then the local losses will be offset by gains elsewhere, and the local crisis will not matter much. Furthermore, their access to capital markets will not suffer if local financial intermediaries go belly up, for they can pay the fixed costs of seeking out and using distant intermediaries. The crisis may also lead them to shift resources into the local economy, just as in Nuits-Saint-George. They are likely to be making insurance loans to the poor, and since the crisis will cut demand from the middle class, they will be the obvious buyers when local markets are flooded with the collateral sold by distressed middle class borrowers. The ultimate result may be that the rich will gain control of local wealth at bargain basement prices. The difference between what they pay during a crisis and the higher price at which the assets can later be resold is the cost paid by the poor and the middle class for the capital influx furnished by the rich. If the rich face little competition in local markets (either as buyers or as providers of insurance and loans), this difference can be large

While crises may generate opportunities for the rich, they can menace the middle class. Middle class investors will not be as diversified, because of the fixed costs of investing in distant markets. Their portfolios as a whole will be more likely to plummet, and they can even lose safe investments like bank accounts if financial intermediaries fail.

The peril will pose an even greater threat for middle class entrepreneurs, who have borrowed to start their projects and who placed a large fraction of their own wealth into their businesses as collateral to reassure investors. If their businesses fail, they will lose the collateral and fall into the ranks of the poor. True, they will retain their human capital and they may have learned from their failed experience. But they will not be able to start a business again—or at least not immediately—because they will not longer have the required collateral.

Crises thus have the potential to cut the supply of entrepreneurs. The magnitude of the decline will depend on institutions. One might think that it would be larger in societies in which debt predominated over equity as a source of external financing. But the difference between debt and equity financing is likely to be small, for two reasons. First, small and medium size companies typically have only limited access to equity funding. Hence they will be hard hit by crises everywhere. More important, in a crisis many entrepreneurs may fail even though their assets still outweigh their liabilities. The reason is that the crisis may make lenders balk at rolling over loans or at helping a firm through a temporary downturn.

Yet crises will not always ruin the middle class, for their impact can be dampened by institutional innovation.

[...]

Crises thus do two sorts of harm. They reduce the size of the middle class, and then, once intermediaries fail, they cut the supply of credit that passes through the hands of financial intermediaries. If inequality is severe enough, after a crisis, the middle class will no longer be large enough to sustain financial intermediation. New intermediaries will not arise to replace those that disappeared during the crisis; the fixed costs will simply be forbidding given the tiny middle class. Without new intermediaries, it will be difficult for members of the middle class whom the crisis has reduced to poverty to borrow or save and thereby regain middle class status. The middle class will remain small, recovering too slowly from one crisis to avoid being further stunted by the next one.

The capital markets we have in mind here are the collateral markets of our model. Again, however, the same arguments will apply to equity markets and other sophisticated financial transactions. They too require information, and demand for such transactions will come from the middle class. How big the middle class has to be for such markets to thrive is a question of both absolute numbers and relative size. If 99 percent of the population is mired in poverty, demand will remain too small for intermediation to develop. On the other hand, a huge total population may make intermediation possible for a larger but still relatively small middle class by spreading out all the fixed costs.

Economic Shocks and Reputational Credit

What about the other form of lending in our model, reputational credit? Crises, it turns out, boost the demand for this form of financing because it is one way the rich can take advantage of attractive opportunities in stricken post-crisis economy. To begin with, they can buy up collateral sold by members of the middle class in distress. The rich will also make reputational loans to the poor, who use them as insurance, and they will do the same for members of the middle class who find themselves short of cash. Each lender making such loans will be betting that the borrowers will repay their debts in order not to risk their reputations and their future access to credit. To make such a bet, the lender must possess considerable information about his borrowers. He must be convinced that the borrowers will work hard once the economy recovers and that they will at least eventually have the income needed to pay back the loan with interest. He must also make sure that they have no other source of reputational credit that might allow them to decamp and borrow in the future from someone else in another town. Reputational lending will thus require investment in information gathering too, just like collateral lending. Once again, the investment will have to be in place before lending can begin.

The information needed for reputational loans will come from existing ties between borrowers and lenders, ties that make it possible for a lender to assess whether a borrower is likely to default. Often the link has nothing to do with credit, at least initially. That is why, in various parts of the world, we see landlords lending to their own tenants (whom they obviously know well), or wholesalers extending credit to small scale manufacturers, or powerful political families making loans to clients. Such a relationship takes time to construct, but once in place, it allows borrowers to repay in a variety of ways: by paying higher rents, by accepting lower prices for products, or by performing political services.

Because reputational credit binds borrower and lender, it is often difficult to change, particularly in poorer economies. Moreover, a potential borrower cannot wait for a crisis to hit to build up the necessary connections, for by then it will be too late, and no one will advance him money because he is unknown. If the poor anticipate a large shock, they will therefore hesitate to abandon reputational credit and join the middle class, for doing so may mean moving, taking another job, or starting a business—all actions that may cut ties to lenders and imperil access to reputational loans. Even members of the middle class may prefer guarding links to reputational lenders if they fear that shocks will overwhelm local collateral lending. If so, then the availability of reputational credit can block development of the collateral market and more sophisticated financial innovations.

Reputational credit is not confined to underdeveloped economies. Over the last half century or so, credit cards have in fact offered a variety of reputational credit in the United States and in many other developed economies. Credit card debt is not secured by collateral and it relies on reputations in the sense that access to credit is determined, at least in part, by a borrower's history of repayment. Credit histories are obviously necessary, and in the United States they are gathered not by the credit card companies but by credit reporting agencies.

At least in the United States, it is possible to have multiple credit cards and hence multiple lenders, in sharp contrast to most traditional reputational credit. It is also possible to switch credit card companies. But even in this case, there are limits to what card holder can do: in particular, it will not be easy for him to acquire a new credit card after losing his job, unless he is rich. Elsewhere credit card debt bears a much closer resemblance to conventional reputational credit. One card is usually the limit, and it is difficult to get another card because the card issuers hold the information and refuse to release it to competitors.

Reputational lending is typically dwarfed by collateral lending and by innovations such as equity finance. Yet reputational lending often proves more resistant to crises. In a big crisis, the collateral market (and other advanced financial markets too) can shrivel up or collapse, leaving nothing but reputational lending behind. That will happen if the crisis slashes the size of the middle class. Inequality will then jump, demand for financial intermediation and financial institutions will fall, and potential intermediaries who might consider opening shop after the crisis will be frightened off by the reduced demand and by the higher fixed costs of serving a smaller middle class. In severe cases, the middle class will never recover, and the old fashioned reputational lending that builds upon time honored social ties may be all that remains.

[...]

[1] Over the last century, the middle class has also grown to encompass wages earners who save for retirement and retirees who slowly draw down their accumulated wealth.

[2] Advanced capital markets will reduce the risk by creating financial instruments such as mutual funds or the sort of insurance markets discussed by Robert Shiller (2003). But in our simple model or imaginary world, instruments of this sort do not yet exist. That is one reason why (so we argue below) the middle class will favor financial innovation.

[3] Evidence about how much the rich actually own in Latin America is practically non existent since they are hardly eager to reveal the magnitude of their fortunes. The distribution of income there is more unequal, however, than in any other continent, and the same holds for the ownership of land, a major asset. Furthermore, the distribution of land ownership is even more skewed toward the rich in Latin America than is income: Gasparini forthcoming. England and Wales provides an example of past extreme inequality; in 1911-13, the richest 1 percent of the population there owned 69 percent of the wealth Lindert 2000, 176-85.

[4] Davies and Shorrocks 2000, 637-40, 664; Kennickell 2000, Table 5; Lindert 2000, 181-92.

[5] 1858-71.

[6] Lamoureaux 1994

[7] Bayard, Félix et al. 2000; Hoffman, Postel-Vinay et al. 2000

[8] Bercé, Boubli et al. 1988; Chagniot 1988, 266-68; Hoffman, Postel-Vinay et al. 2000, 156; Hoffman, Postel-Vinay et al. 2004. The annuites Chartres sold, called tontines, allowed the purchasers who lived the longest to share the remaining benefits, thereby providing a handsome prize for surviving a long time.

[9] Rajan and Zingales 2003, 31. The cost of foreclosure is measured as a fraction of the house's value in both countries.

[10]TheWorldBank 2002, 35-36, 92-94.

[11] Condominium law did not develop in France until the interwar period, and it took until the 1950s for it to arise in the United States.

[12] For examples from the past and from developing countries, see Hoffman 1996, 69-71; Ray 1998, 561-65.

[13] Allen 1992, 102-104. For the development of analogous loan contracts in France, see Schnapper 1957.

[14] Engerman and Sokoloff 2002, 80-82

[15] Cf. Haber 1991; Banerjee, Besley et al. 1994; Hoffman, Postel-Vinay et al. 2000.

[16] Levy 2004.

[17]Ryan 200?; for Lyon and Limoges, the data come from research we are conducting on the evolution of financial markets in France. The surviving evidence may leave out some informal lending in both France and Latin America, but for legal reasons the omissions are likely to be small in both regions. If we consider the stock of outstanding debts, the advantage the European borrowers had would be even greater, for they could on average take out loans that lasted some 5 years, versus only 1 year in Latin America.

[18] For evidence about the amount of money that Latin Americans invest in the United States, see Sokoloff and Zolt 2004.

[19] At least initially, most Argentines carried cash cross the border to open an account in Uruguay. Our fixed costs would then be the expenses of transportation and time lost from work, and middle class savers might have to make multiple trips to Uruguay if they wanted to keep some readily available cash back in Argentina for emergency expenses. Although it eventually became possible to open such an account in Buenos Aires itself, not all banks had this capability, and boats to Uruguay were still filled with Argentines bearing suitcases full of money. Personal communication, Federico Echenique.

[20]Rosenthal 1994.