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**Robert J. Shiller: The Subprime Solution**

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The *subprime crisis* is the name for what is a historic turning point in our economy and our culture. It is, at its core, the result of a speculative bubble in the housing market that began to burst in the United States in 2006 and has now caused ruptures across many other countries in the form of financial failures and a global credit crunch. The forces unleashed by the subprime crisis will probably run rampant for years, threatening more and more collateral damage. The disruption in our credit markets is already of historic proportions and will have important economic impacts. More importantly, this crisis has set in motion fundamental societal changes—changes that affect our consumer habits, our values, our relatedness to each other. From now on we will all be conducting our lives and doing business with each other a little bit differently.

Allowing these destructive changes to proceed unimpeded could cause damage not only to the economy but to the social fabric—the trust and optimism people feel for each other and for their shared institutions and ways of life—for decades to come. The social fabric itself is so hard to measure that it is easily overlooked in favor of smaller, more discrete, elements and details. But the social fabric is indeed at risk and should be central to our attention as we respond to the subprime crisis.

History proves the importance of economic policies for preserving the social fabric. Europe after World War I was seriously damaged by one peculiar economic arrangement: the Treaty of Versailles. The treaty, which ended the war, imposed on Germany punitive reparations far beyond its ability to pay. John Maynard Keynes resigned in protest from the British delegation at Versailles and, in 1919, wrote *The Economic Consequences of the Peace*, which predicted that the treaty would result in disaster. Keynes was largely ignored, the treaty remained in force, and indeed Germany never was able to pay the penalties imposed. The intense resentment caused by the treaty was one of the factors that led, a generation later, to World War II.

A comparable disaster—albeit one not of quite the same magnitude—is brewing today, as similar concerns are hammering at our psyches. Once again, many people,

unable to repay their debts, are being pursued aggressively by creditors. Once again, they often feel that the situation is not of their own making, but the product of forces beyond their control. Once again, they see once-trusted economic institutions collapsing around them. Once again, they feel that they were lied to—fed overly optimistic stories that encouraged them to take excessive risks.

It is impossible to predict the nature and extent of the damage that the current economic and social dysphoria and disorder will create. But a good part of it will likely be measured in slower economic growth for years to come. We may well experience several years of a bad economy, as occurred, for example, after the profligate mortgage lending booms in both Sweden and Mexico in the early 1990s. There could even be another “lost decade,” like that suffered by Mexico in the 1980s after its spending spree during the oil price boom, or by Japan in the 1990s after the bursting of the 1980s bubble in its stock and housing markets.

In this book I argue that the housing bubble that created the subprime crisis ultimately grew as big as it did because we as a society do not understand, or know how to deal with, speculative bubbles. Even intelligent, well-informed people—who certainly knew that there had been bubbles throughout history and could even

recite examples—typically did not comprehend that an epidemic of irrational public enthusiasm for housing investments was the core of the problem. Business and government leaders did not know how to deal with this situation, nor did they establish the kinds of new financial institutions that could have managed it.

The view that the ultimate cause of the global financial crisis is the psychology of the real estate bubble (with contributions from the stock market bubble before that) has certainly been expressed before. But it would appear that most people have not taken this view to heart, and at the very least that they do not appreciate all of its ramifications. Accounts of the crisis often seem instead to place the ultimate blame entirely on such factors as growing dishonesty among mortgage lenders; increasing greed among securitizers, hedge funds, and rating agencies; or the mistakes of former Federal Reserve chairman Alan Greenspan.

It is time to recognize what has been happening and to take fundamental steps to restructure the institutional foundations of the housing and financial economy. This means taking both short-run steps to alleviate the crisis and making longer-term changes that will inhibit the development of bubbles, stabilize the housing and larger financial markets, and provide greater financial security

to households and businesses, all the while allowing new ideas to drive financial innovation.

### **A Crisis in a Bubble**

By now the whole world has heard the story of the problems in the subprime mortgage market, which began to show up in the United States in 2007 and then spread to other countries. Home prices and homeownership had been booming since the late 1990s, and investing in a house had seemed a sure route to financial security and even wealth.

U.S. homeownership rates rose over the period 1997–2005 for all regions, all age groups, all racial groups, and all income groups. According to the U.S. Census, the homeownership rate increased from 65.7% to 68.9% (which represents an 11.5% increase in the number of owner-occupied homes) over that period. The increases in homeownership were largest in the West, for those under the age of 35, for those with below-median incomes, and for Hispanics and blacks.

Encouraging homeownership is a worthy and admirable national goal. It conveys a sense of participation and belonging, and high homeownership rates are beneficial to a healthy society. Later in this chapter I trace the evolution of the systems put in place in the United States

in the twentieth century to promote homeownership. But the subprime housing dilemma in the United States points up problems with over-promoting homeownership. Homeownership, for all its advantages, is not the ideal housing arrangement for all people in all circumstances. And we are now coming to appreciate the reality of this, for the homeownership rate has been falling in the United States since 2005.

What was the chain of events in the subprime crisis? Overly aggressive mortgage lenders, compliant appraisers, and complacent borrowers proliferated to feed the housing boom. Mortgage originators, who planned to sell off the mortgages to securitizers, stopped worrying about repayment risk. They typically made only perfunctory efforts to assess borrowers' ability to repay their loans—often failing to verify borrowers' income with the Internal Revenue Service, even if they possessed signed authorization forms permitting them to do so. Sometimes these lenders enticed the naïve, with poor credit histories, to borrow in the ballooning subprime mortgage market. These mortgages were packaged, sold, and resold in sophisticated but arcane ways to investors around the world, setting the stage for a crisis of truly global proportions. The housing bubble, combined with the incentive system implicit in the se-

curitization process, amplified moral hazard, further emboldening some of the worst actors among mortgage lenders.

High home prices made it profitable to build homes, and the share of residential investment in U.S. gross domestic product (GDP) rose to 6.3% in the fourth quarter of 2005, the highest level since the pre-Korean War housing boom of 1950–51. The huge supply of new homes began to glut the market, and, despite the optimistic outlooks of national leaders, U.S. home prices began to fall in mid-2006. As prices declined at an accelerating rate, the boom in home construction collapsed.

At the same time, mortgage rates began to reset to higher levels after initial “teaser” periods ended. Borrowers, particularly subprime borrowers, began defaulting, often owing more than their homes were worth or unable to support their higher monthly payments with current incomes. Now many of the financial institutions that participated in what once seemed a brave new world of expanding homeownership and exotic financial innovation are in varying degrees of distress. The world’s credit markets have shown symptoms of locking up.

We may be in for a severe economic contraction that could create hardship for millions of people, spreading far beyond the subprime borrowers at the center of the

crisis. Major losses occurred in U.S. banks and brokerage firms. The heads of Citibank, Merrill Lynch, and Morgan Stanley lost their jobs. The situation remains critical.

The crisis has bled over to other sectors besides housing. Credit card and automobile loan defaults have been ominously increasing. The credit ratings of municipal bond insurers are being downgraded, creating a risk that the problem will spread to state and local government financing. The market for commercial paper has suffered a severe shock, and the market for corporate loan obligations appears troubled as well.

Nor did the subprime crisis end at America's borders. Booming real estate markets have shown signs of peaking, or at least of flattening out, in many countries. The effects of the financial crisis have also filtered into other countries, as witnessed by the failures of IKB Deutsche Industriebank AG, SachsenLB, WestLB, and BayernLB in Germany, the failure of funds sponsored by BNP Paribas in France, and the run on the Northern Rock Building Society in the United Kingdom.

Then again, these problems from outside the United States have fed back into the country, manifested in a declining dollar, a faltering stock market, and more financial failures, notably that of the venerable U.S. investment bank Bear Stearns. This grim feedback loop—with

problems moving from the United States to the rest of the world and back again to the United States—has certainly not yet run its course.

The same feedback seems also at this date to be contributing to a global energy crisis and a global food crisis. Speculative enthusiasm has helped push oil prices to record levels, stimulating a demand for ethanol for fuel from grains, thus reducing the supply of grains for food. Prices of grains are shooting up so high that poor people have difficulty staving off hunger.

The same kind of speculative thinking that has propelled the stock market and housing market in the recent past seems to be at work in these markets as well. The nations of the world have had difficulty protecting themselves from these crises. A number of less developed countries have tried to protect themselves from the global food crisis by putting export controls on food grains. But they have found that such controls do not work, since prices of grains within their borders stay high after such controls, as speculative hoarding within the country responds to the high world food prices and withdraws supply from local markets. Speculative instability in the market for food may eventually result in price breaks there, but one shudders to think of the human consequences until it does.

## **Mend It, Don't End It**

The current financial crisis is often viewed as a reason to sound retreat—to return to yesterday's simpler methods of financial dealing. This would be a mistake. On the contrary, the current situation is *really* an opportunity to redouble our efforts to rethink and improve our risk-management institutions, the framework that undergirds our increasingly sophisticated financial sector. Despite the present crisis, modern finance has produced historic achievements in recent decades and serves as a powerful engine of economic growth, from underwriting new businesses in the private sector to supporting vital research in the universities to building schools and hospitals in the public sector.

Every crisis contains the seeds of change. Now is the time to restructure the institutional firmament of financial activity in positive ways that will stabilize the economy, rekindle the wealth of nations, reinforce the best of financial innovation, and leave society much better off than if there had not been such a crisis.

This book is an effort to explain the current subprime crisis and lay the foundation for such an institutional rebirth. It suggests both commonsense short-run fixes and deeper long-term improvements that will serve us into the indefinite future. The book cannot consider all the proposals and counterproposals that others have offered

to deal with the crisis—there are simply too many of them. But it will set forth the greater goals around which future solutions might cluster.

The book is intended for readers in countries all over the world. The subprime crisis is now a truly international event, and the solutions offered here can generally be adapted to other countries as well.

As already noted, institutional reform means providing a stronger framework within which our real estate and financial markets can operate. No matter how powerful and technologically sophisticated the train, it is only as good as the track on which it runs. Regulatory and insurance institutions are the track that carries our financial and real estate markets. But these existing risk-management institutions are old and unstable. We are running bullet trains on ancient track. Our leaders in government and in business must overhaul and replace the rails and ties. The subprime solution is all about institutional reform: the vision to see beyond short-term fixes and the courage to undertake reform at the highest levels.

### **Lessons from the Last Big Housing Crisis**

While the implications of the subprime crisis are global, the crisis itself must be understood in its place and time of origin, twentieth-century America. Before the current

problem, the last major housing crisis in the United States took place in 1925–33. Home prices fell a total of 30% over this interval, and the unemployment rate rose to 25% at the peak of the Great Depression. The crisis revealed glaring defects in the financial institutions of the period. At that time most people borrowed with short-term mortgages of five years or less, which they expected to roll over shortly before they came due. As the crisis took hold, borrowers increasingly found that they were unable to refinance their mortgages, and so they stood to lose their homes.

No public institutions were in place at the time to prevent borrowers from being evicted from their homes owing to their inability to secure new mortgages. But because concerted efforts were made by leaders to change the institutional framework, mass evictions were avoided and recovery was eventually achieved.

The policy responses to that historical crisis are an inspiration for the kind of solutions that should be promoted to address the current crisis. As the housing problems of the Depression era worsened, major innovations appeared in the private and public sectors. While history has emphasized the importance of Franklin Delano Roosevelt's New Deal, the significant changes were not simply the result of one man's policies. Rather, they reflected an effort, involving leaders from government and

business alike, to try to understand the crisis and change the institutional infrastructure of the U.S. economy.

The National Association of Real Estate Boards, a precursor to today's National Association of Realtors, proposed in the early 1930s that Congress create a new home-loan banking system, parallel to the Federal Reserve System that had been legislated in 1913. Just as the Federal Reserve System had twelve regional banks, so too did the new Federal Home Loan Bank System. Just as the Federal Reserve System had the power to discount assets of its member banks, so too could the Federal Home Loan Bank System provide the same help to mortgage originators. This was large-scale thinking in response to a large-scale crisis. The Federal Home Loan Bank System has since been modified, but it is still with us today, providing assistance during the current crisis by supplying funding for mortgages.

Private-sector reforms were equally innovative. In 1932 the real estate appraisal industry pulled itself together to become a truly professional organization with the founding of the American Institute of Real Estate Appraisers, whose successor today is the Appraisal Institute. It was not formally called the Appraisal Institute until it merged with the Society of Real Estate Appraisers in 1991. Yet by the early 1930s its accredited members were already putting the initials M.A.I., for "Member,

Appraisal Institute,” after their names as a credential. Under the pressure of the crisis, the newly professionalized appraisal industry began taking advantage of the latest developments in information technology, processing data on a large scale using punched cards and computing systems produced by Remington Rand and the International Business Machines Corporation. The improvements that originated in the private sector during the housing crisis of the 1930s have continued to the present day, helping prevent—or at least limit—further crises by providing a more secure valuation of homes for mortgage lenders.

A landmark change occurred on the legislative front as well, in response to the crush of foreclosures against homeowners. The U.S. Congress approved a new bankruptcy law in 1933, near the end of the administration of Herbert Hoover, which made it possible for the first time for most ordinary wage earners to avail themselves of bankruptcy protection. Thus the crisis led to reforms that not only stabilized the housing sector but further democratized the financial institutions of the day, creating public goods that made more effective financial technology available to everyone.

The reforms did not stop there. In 1933, with Roosevelt as the new president, Congress created the Home Owners’ Loan Corporation (HOLC), which lent to local

home-financing institutions, taking risky home mortgages as collateral, and thereby provided a government subsidy to home mortgages. But the HOLC did more than simply provide a subsidy: the organization changed the very standards of the mortgage industry. The HOLC insisted that the new mortgages it sponsored be fifteen-year loans that were both fixed-rate and self-amortizing, that is, that were paid off by steady monthly payments with no large payments due at maturity.

In 1934 Congress created the Federal Housing Administration (FHA), which was intended to promote homeownership among those who could not then afford homes. The FHA went even further than the HOLC in improving the institution of mortgages, raising maturities to twenty years and also requiring, as did the HOLC, that mortgages be fixed-rate and self-amortizing. This began a trend to the familiar fixed-rate mortgage of today; starting in the 1950s, mortgages began to be thirty-year instruments, again with FHA encouragement.

Also in 1934 Congress created the Federal Deposit Insurance Corporation, which insured our banking system against the kind of terrible collapse that had occurred in 1933 in connection with the housing crisis. Deposit insurance on a national scale was a radical new idea then; it has served us very well, and there has not been another bank run in the United States since.

A further innovation introduced in 1934 was the creation by Congress of the Securities and Exchange Commission (SEC), a regulatory agency that was dedicated from the start to making financial markets work. The SEC has dealt constructively with the financial community, doing its job in a way that is fair and useful to all parties.

In 1938 Congress created the Federal National Mortgage Association, later nicknamed (and now officially renamed) Fannie Mae, which further supported the mortgage industry and eventually fostered the widespread securitization of mortgages.

The soundness of the ideas implemented in response to the financial crisis of the 1930s is evident in the durability of the institutions created: all but the HOLC are still in existence. Moreover, these institutions have become models for similar institutions the world over. While it took many years, and often decades, for some of these institutional models to be disseminated across the globe, every country with developed economic institutions now has the equivalent of the SEC, some such organizations having been established as recently as the 1990s. Virtually every major country of the world also has deposit insurance for its banks and institutions to encourage homeownership for those with lower incomes.

### **Band-Aids for a Burst Bubble: Today's Response**

Despite the severity of the current subprime crisis, the response by government today has been disappointingly limited relative to that in the 1930s, and totally inadequate given the scope of the problem.

The FHASecure bailouts announced by President George W. Bush in the summer of 2007 were supposed to help borrowers whose adjustable-rate mortgages were resetting at prohibitively high rates. But as of mid 2008 the total FHASecure refinancing amounted to less than 2% of the single-family guaranty book of business of that 1930s legacy, Fannie Mae.

The Master Liquidity Enhancement Conduit (MLEC) “Super S.I.V.” rescue plan, proposed in the fall of 2007 by U.S. Treasury Secretary Henry M. Paulson Jr., would have been, at maximum, less than a tenth the size of the Federal Home Loan Bank System that fortunately is still with us from Great Depression reforms. As it turned out, the MLEC was canceled altogether.

The standards for adjustable-rate mortgage resets promoted by the American Securitization Forum in 2007 will result in mortgage payment adjustments less than 1% of the deposits insured by that 1934 creation, the Federal Deposit Insurance Corporation.

The Project Lifeline extensions of time before foreclosure that the Bush administration announced it had negotiated in February 2008 were only a thirty-day extension of the time to failure. All this amounted to but a statement of intent on the part of major lenders in response to the president's calls for action.

Other measures taken include interest rate cuts by the Federal Reserve; the Term Auction Facility (TAF), announced December 21, 2007; the Term Securities Lending Facility (TSLF), announced March 11, 2008; and its Primary Dealer Credit Facility (PDCF), announced March 16, 2008, as well as the passage of the Economic Stimulus Act of 2008, signed into law by President Bush on February 13, 2008. Although perhaps helpful, the tax rebates in the stimulus package, and the total size of the TAF, TSLF, and PDCF loans altogether have so far been on the order of only a half a percent of U.S. household assets; while they have been increasing, they are still not up to the magnitude of the problem. Even if their scope were greatly expanded, we do not know that any of these specific measures would do much to solve the fundamental crisis of confidence that lies at the heart of the subprime crisis.\*

\*Some have argued that the TAF should have no effect on the overall level of confidence in our financial institutions as measured by interest rate spreads, and in fact there has been no consistent effect. See John B.

None of these proposals represents a true institutional innovation that would create a better environment to support our real estate and financial markets. They are all merely quick fixes that fail to address the full scope of the problem.

The U.S. Congress has been slow to react to the crisis. U.S. Senator Charles Schumer (D-NY), at a 2007 Joint Economic Committee hearing at which I was a witness, said, "I fear that we still don't appreciate the seriousness of the problem we are facing. Our policy responses are not matching the magnitude of the risk that still lies ahead."<sup>1</sup> That was some months before this writing, and the Fed and Congress have since paid more focused attention to the crisis, but it is still unclear that they are going to be effective in committing the substantial resources the situation demands. As the crisis worsens and begins to consume significant amounts of government resources, they may simply not be able to keep up. The steps taken so far have been ad hoc, and unlike the 1930s nothing fundamental is being done.

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<sup>1</sup>Taylor and John C. Williams, "A Black Swan in the Money Market," Federal Reserve Bank of San Francisco, April 2008, <http://www.frbsf.org/publications/economics/papers/2008/wp08-04bk.pdf>.

<sup>2</sup>Charles E. Schumer, "Opening Statement," Joint Economic Committee Hearing, "Evolution of an Economic Crisis? The Subprime Lending Disaster and the Threat to the Broader Economy," September 19, 2007, p. 2, <http://jec.senate.gov>.

## **Framing Institutional Reform for the Future**

Reporters repeatedly ask me what I think is the probability of a protracted recession spurred by the subprime crisis. Only rarely do they ask me what I think should be done to solve the fundamental problems highlighted by the subprime crisis, or inquire about how we could set up new or reformed institutions that might help insulate our society against the fundamental problems that underlie the crisis. But these are *exactly* the questions we should be asking ourselves. A plan to dramatically reduce our vulnerability to financial crises like the current subprime crisis would rest on two principles.

*In the immediate short run, government and business leaders must deal with the problem created by the bubble and its aftermath. The ship is sinking, and we have to save it before we do anything else. In fact, we have to bail out some people who have fared particularly badly, and we also have to arrange bailouts in certain extreme cases to prevent failure of our economic system. These bailouts must be done promptly and correctly, so that they do not come across as unjust or unfair. This situation also calls for a short-term government intervention designed to shore up those mortgages that are teetering on the edge of default, perhaps modeled after the Home Owners' Loan Corporation of the 1930s.*

*In the longer run, as noted above, we need to develop stronger risk-management institutions to inhibit the growth of bubbles—the root cause of events such as the current subprime crisis—and to better enable the members of our society to insulate themselves against them when they do develop.*

This proposed subprime solution means embracing the following goals:

*First, improving the financial information infrastructure so that the greatest number of people can avail themselves of sound financial practices, products, and services.* This means delivering enhanced financial information, better financial advice, and greater consumer protection to larger segments of society, and also implementing an improved system of economic units of measurement. These steps will set the necessary groundwork, so that all consumers and households can make financial decisions based on the best possible intelligence rather than rules of thumb or, worse still, mere whimsy. Better financial information and decision making would, by themselves, check the incidence of bubbles.

*Second, extending the scope of financial markets to cover a wider array of economic risks.* Such an initiative would include, in the first instance, vastly expanded markets for handling real estate risk such as the new futures markets in Chicago, and also markets for other vital

economic risks as well. These broader markets, coupled with a more sound information infrastructure, would provide the financial foundation for a variety of new initiatives that would help to inhibit the growth of bubbles.

*Third, creating retail financial instruments—including continuous-workout mortgages, and home equity insurance—to provide greater security to consumers.* Today the typical household has as its principal investment its home. A home represents a highly leveraged exposure to a single, stationary plot of real estate—about the riskiest asset one can imagine. The standard mortgage provides no protection against difficulties in repaying the lender due to changes in the marketplace. But mortgages can and should be designed to compensate for these changes by including provisions to ensure homeowners against their major risks. Other retail institutions can protect those who have paid off their mortgages, and they can protect non-homeowners from economic contractions as well.

If we work toward these goals, we would not only curb the creation of the bubbles that fuel crises such as today's subprime disaster but also afford greater protection against risks, encourage better financial behavior and enhanced household wealth, strengthen the social fabric, and create the conditions for greater economic stability and growth.

Implementing these and other important institutional changes in all their detail is a tall order. But this is a project for leaders from all segments of society, not merely a president's or a prime minister's inner circle. It will require the combined efforts of policy makers, business executives, the media, and academics. Fortunately we still have the time, resources, and intellectual capital to do this—if only we recognize the urgent necessity for change.

### **From Subprime Blues to Financial Democracy**

Although the subject comes up only rarely in the public discourse on the current financial crisis, the advent of subprime mortgages during the 1990s reflected a start, albeit primitive, toward extending the benefits of financial innovation to more and more people—in other words, toward democratizing finance. Prominent commentators, from former Fed chief Alan Greenspan through the late real estate economist Edward Gramlich, considered the subprime mortgage movement a positive development (despite some abusive lending practices) because it effectively expanded the franchise for asset ownership to millions of low-income people.

But subprime mortgages, for all their lofty social aspirations, were a disaster in their implementation: they

lacked the kind of risk-management institutions necessary to support the increasingly complex financial machinery needed to underwrite them—the subject of this book.

If safe, effective, and enlightened approaches to designing risk-management institutions can be deployed as the basis for future market activity, the subprime crisis cannot merely be solved—it can be transformed in its aftermath into a better environment for extending the financial franchise, for further democratizing finance.

The first assumption underlying such an effort is the need to better understand the risks inherent in real estate and to acquire the know-how to more efficiently spread these risks. The subprime mortgages, for all their democratic appeal, were launched with a woeful failure to understand real estate risks.

A second assumption is that the democratic extension of the innovations of modern financial technology must be done with a clearer understanding of human psychology, so that the spreading of risk can foster proper economic incentives and limit moral hazard. The subprime crisis was essentially psychological in origin, as are all bubbles. The crisis was not caused by the impact of a meteor or the explosion of a volcano. Rather it was caused by failure to anticipate quite obvious risks—by “irrational exuberance” at the prospects for profits, if one bought into the concept of an ever-expanding bubble.

Ultimately the solution to the economic problems revealed by the subprime crisis requires our doing a much better job of extending the innovations of modern financial technology, together with effective safeguards, throughout society, and of being unafraid to think and act on the scale of the New Deal-era reformers. Democratizing finance is crucial in this process: by spreading risk, it places economic life on a firmer foundation. Financial democracy is thus not only an end in itself, but a means to another, equally worthy, end: the propagation of greater economic stability and prosperity by financial means.

The democratization of finance has in a limited sense already been embodied in the so-called microfinance revolution. The 2006 Nobel Peace Prize, awarded to Muhammad Yunus and the Grameen Bank, has given new impetus to the innovations they set in motion. The microfinance revolution consists of novel institutions that make loans to the tiniest of businesses, often in the least-developed parts of the world.

Yunus has received a sympathetic hearing from world leaders in China, Russia, and elsewhere. More broadly, leaders in emerging countries around the world are showing interest in bringing financial services to more and more people. Mexican president Felipe Calderón has called for policies to promote “financial culture” in his country. The Inter-American Development Bank has launched an action

campaign to expand the range of financial services available to the general population throughout Latin America.

Yet another initiative associated with financial democracy is that of the Peruvian policy innovator Hernando de Soto, author of *The Mystery of Capital*, whose work in asserting the importance of property rights in developing countries has underscored the vital link between legal property ownership among the poor and access to financial capital from domestic and foreign sources alike.

Some of the components of the subprime solution outlined in this book are in the same vein as these initiatives, yet there are differences. The measures called for here are, in the first instance, intended for the most advanced countries. They are not only for the poor, but also for people who are struggling to make do with modest incomes, and indeed for everyone. This book is about dealing with the subprime crisis, and future crises like it, by *developing a new financial infrastructure for the entire population*, and doing so using the most advanced technology at our disposal.

### **A Road Map of This Book**

In the remaining chapters of this book I describe the current subprime crisis with an eye toward understand-

ing its dimensions and its psychological origins. Then I detail both short-term and long-term solutions. Central to this brief manifesto will be the need for action. Reforming the institutional framework is an urgent task, to which we must turn immediately if we are to halt the damage caused by the subprime crisis and learn from it, so that we can move forward to a new and better economic system.