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1

Introduction: Financial Restructuring to Speed Recovery

The financial crisis of 2007–08, which led to what is now known as the Great Recession, caused more widespread economic trauma than any other event in the postwar era. This experience has raised wide-ranging questions about how to reform the financial system to enhance its resilience and prevent the reoccurrence of such episodes. And, because the recovery has been disappointingly slow and uneven, attention has also turned to possible reforms to markets and the financial infrastructure that might speed recovery.

This volume focuses on some of those potential reforms. The Nomura Institute of Capital Markets Research, the Brookings Institution, and the Wharton Financial Institutions Center organized the conference, held in late October 2012, on which this volume was based. This volume contains the revised presentations made at the conference. After this introductory chapter, the second chapter examines potential reforms to the U.S. market for housing finance, the collapse of which played a central role in the crisis and has impeded economic recovery. The third chapter focuses on reform to the U.S. bankruptcy process, which is essential for the efficient reallocation of capital and labor. The fourth chapter considers the market for U.S. initial public offerings, which facilitates the growth of new firms, which are often believed to be the main source of growth in employment and productivity, and has been very slow to revive. The volume concludes with an examination of Japan's experience in attempting to reform the financial sector to resume growth. Japan's real estate market collapsed in the early

1990s and has struggled to recover for the past twenty years. Financial reform has been a central focus of policy and continues to be a challenge. Japan's experience may well hold lessons for the current plight of the U.S. economy. As this conference series has demonstrated over the years, contrasts between the experiences of Japan and the United States can often be illuminating regarding both what to do and what not to do.

In this introductory chapter we provide a summary of the book. A broad theme running throughout is that each of these aspects of the financial services industry can play a useful role in facilitating recovery and the resumption of growth, but the necessary reforms are sometimes subtle and often difficult to implement. Just as the financial sector was the source of many of the problems that caused the Great Recession, it may also have a crucial role to play in economic recovery.

Mortgages

In chapter 2, Franklin Allen of the Wharton School, University of Pennsylvania, James Barth of the Auburn University College of Business and the Milken Institute, and Glenn Yago of the Milken Institute discuss the restructuring of the U.S. housing finance system in a very broad context including both how the system has evolved from historical precedents in Europe and how the United States compares with other leading industrial countries. They begin by noting that the housing sector is an important part of the U.S. economy, with residential investment averaging about 5 percent of gross domestic product (GDP) and housing services averaging about 12–13 percent of GDP. It has always been subject to boom and bust cycles in new construction, but these cycles have not caused widespread problems since the Great Depression of the 1930s. This time, however, the boom and bust in the U.S. housing market contributed to a global financial crisis and the Great Recession. The bust was *not* widely anticipated in the United States, other countries also failed to see it coming, and so this failure to anticipate the bust cannot explain the unusually painful impact on the U.S. economy. What went wrong? Where was the problem, and how can we fix the system?

Early on, the United States developed a system of housing finance that was similar to that in the United Kingdom. U.S. homeownership was greatly expanded with land grants so that by 1890 two-thirds of farm housing was owner occupied. The early introduction of savings-and-loan institutions (S&Ls) distinguished the development of housing finance in the United States, with the first S&L organized in 1831. The S&Ls were granted tax advantages (and later interest rate advantages relative to other financial institutions) so that the sector developed differently from the banking system. During the Great Depression, the S&Ls did not suffer classic bank runs because they had not issued demand deposits. They suffered withdrawals, nonetheless, as customers tried to maintain their level of consumption by withdrawing their savings. This caused widespread failures. The U.S. government tried to revive and sustain the S&L industry during the Great Depression by establishing the Federal Home Loan Bank system in 1932 and setting up the Federal Savings and Loan Insurance Corporation in 1934.

After World War II, the S&L sector prospered, growing from 3 percent of private financial assets in 1945 to 16 percent in 1975. Interest rates increased sharply in the 1970s, however, which put enormous strain on the S&L sector. By charter, S&Ls held mainly long-term fixed-rate mortgages that were funded largely by short-term obligations. Short-term interest rate increases in the late 1970s and early 1980s caused widespread insolvencies. Despite massive government support and an explicit policy of forbearance, many S&Ls failed. This led to a fundamental change in regulations that enabled S&Ls to become much more similar to commercial banks, and in time the insurance funds for S&Ls and banks were combined and administered by the Federal Deposit Insurance Corporation.

Since the 1930s, the federal government has played an increasingly important role in the allocation of mortgage credit in the United States. This has included loan insurance and guarantees, with the establishment of Fannie Mae, Freddie Mac, Ginnie Mae, and the Federal Housing Administration as well as some provisions of the Community Reinvestment Act. Indeed, the United States is one of a handful of countries in which government plays the major role in the provision of residential mortgage finance, with roughly 50 percent of outstanding home mortgages financed by government-sponsored enterprises. Measured in terms of the ratio of mortgage debt to GDP, government support appears to have succeeded in expanding the availability of mortgage finance. Apart from the special case of Switzerland, the ratio of mortgage debt to GDP is much higher in the United States than in other high-income countries. Yet despite the heavy involvement of the U.S. government and bipartisan emphasis on increasing homeownership rates, the United States has lagged the median for other countries with similar income per capita.

During the 1980s, the United States shifted from reliance on S&Ls for the provision of mortgage finance to reliance on the securitization of mortgages in capital markets. This feature distinguishes the U.S. housing finance system from that of other high-income countries. In most other countries, housing finance is funded largely through deposits held in financial institutions or—especially in Denmark, Germany, and Spain—by covered bonds, which differ from securitized mortgages in one important respect. The holder of covered bonds can rely on the guarantee of the issuing bank in the event that defaults in the underlying portfolio of mortgages jeopardize servicing of the bond. The holder of a securitized claim, however, must rely on the subordination structure of the securitization, which was often opaque, or on the guarantee of a thinly capitalized private mortgage insurer rather than that of a depository institution with access to the safety net.

During the housing bust, the U.S. system was severely tested and found to be much more fragile than most market participants had anticipated. Even though the decline in U.S. housing prices was not substantially greater than that experienced by several other countries or Hong Kong from 1992 to 2008, the impact on the U.S. financial system (and on several major foreign banks, which held large amounts of securitized U.S. mortgage debt) was disproportionately damaging. Although other factors undoubtedly contributed to the Great Recession, many analysts believe that the collapse of the U.S. market for securitized mortgages was at least a proximate cause.

Allen, Barth, and Yago note that, over two centuries, U.S. housing finance markets have worked reasonably well. We have had three great disruptions, but these were more likely caused by unanticipated macroeconomic factors than by weaknesses in the U.S. system of housing finance. Nonetheless, this raises an important question about how housing finance should be redesigned in the United States: what kinds of macroeconomic disruptions should the system be expected to withstand in the future? If the macro environment is expected to be more volatile in the future, the mortgage finance system must be restructured to adapt.

Within North America, housing finance in Canada and the United States has many similarities, but also some important differences. In Canada, more housing finance is provided on the balance sheets of financial institutions than through capital markets. The norm in Canada is the five-year fixed-rate mortgage (versus the typical thirty-year fixed-rate mortgage in the United States), with recourse to the borrower in the case of default (versus no right of recourse in much of the United States) and some prepayment penalties (versus no prepayment penalties in most U.S. mortgages). Canadian residents do not receive a mortgage interest rate deduction in computing taxable income. And, although the Canadian government does provide some mortgage insurance and guarantees, direct government involvement in the housing sector is considerably less than in the United States. Nonetheless, Canadian homeownership rates are similar to those in the United States, and the boom-bust cycles in Canadian housing have been much less pronounced.

Even though we lack robust models of fluctuations in real estate pricing, Allen, Barth, and Yago believe that it should be possible to enhance the resilience and efficiency of the U.S. housing finance system through several innovations. For example, mortgage contracts could be improved to provide risk sharing in the event of unanticipated macroeconomic conditions. They argue that the dominance of large financial institutions could be curbed to reduce the threat to financial stability. Government involvement in the housing sector should be rolled back because it cannot be sustained and has caused serious distortions in the allocation of resources. Eliminating the bias against renters in the U.S. tax code and other federal programs would lead to greater diversification in the U.S. housing stock and provide a better range of options for the highly mobile U.S. society. In the near term, they argue, it is urgent to restore confidence in the structure of securitization and to develop a role for covered bonds in the U.S. market.

Conference participants raised a wide range of questions stimulated by the presentation. How can securitization be restored without some way of ensuring that the risk is not redistributed to institutions that cannot afford to bear a loss? Can prudential regulations aimed at the provision of mortgage finance, such as policy-determined limits on loan-to-value ratios, improve the stability of the financial system? What causes housing bubbles? To what extent did the large current account deficits in the United States contribute to the problem? Is the role of the U.S. government in the housing market really different in substance from the implicit (and, often, explicit) support that foreign governments provide for their key financial institutions? To what extent did the internationally agreed Basel II risk weights on the mortgage lending of banks contribute to the problem by reducing prospective capital requirements?

Bankruptcy

In chapter 3, Thomas Jackson of the University of Rochester and David Skeel of the University of Pennsylvania extend the discussion to the underlying institutional infrastructure that stimulates growth and recovery. They make a strong case that bankruptcy policy can play a crucial role in economic growth, including recovery from recessions. Indeed, they argue that the efficient operation of markets depends on the existence of an effective bankruptcy process.

In their view, the primary role of bankruptcy law is to reduce the frictions that would otherwise impede the reallocation of assets to their highest-and-best use in the case of firms facing financial failure. They argue that a properly functioning bankruptcy law neatly separates the issue of "who gets what" from the issue of "what is the highest-and-best (most efficient) use of the assets." Two features are particularly important.

First, bankruptcy reduces the coordination problems that would occur if each individual creditor took independent actions against a borrower who was generally defaulting because liabilities exceeded the borrower's assets. Although piecemeal liquidation of a firm's assets may be appropriate in some cases, the rush to seize assets (caused by creditors seeking payment before the assets run out) may, nonetheless, reduce the total value of the firm's assets to be distributed among all creditors. If the firm's difficulties are purely financial rather than reflecting an underlying economic failure, then piecemeal liquidation is not appropriate and the grab for assets may cause the destruction of going-concern value, thereby inflicting a loss on the creditors as well as society more broadly. In effect, attempts by individual creditors to protect the priority of their claims may prejudice decisions about the overall allocation of resources.

Second, bankruptcy facilitates the shift in control (and ownership) from the old owners of equity to the creditors. This is important because as the firm approaches insolvency—and especially once it has become insolvent—the old equity owners (as recipients of upside value but protected by limited liability against downside losses) are likely to make excessively risky decisions. Indeed, they may forgo projects that have a positive present value, but low risk, in favor of much riskier projects with equivalent—or lower—expected returns. The opportunity to gamble for resurrection means that old equity owners have strong incentives to obstruct a change in control as long as possible and to increase the riskiness of the firm's business. Bankruptcy rules address this problem by enabling creditors to initiate (or force) a proceeding in which control is shifted from the old equity owners to the creditors.

Jackson and Skeel argue that American bankruptcy law is probably the most successful in the world in preventing the consequences of insolvency from impeding the allocation of assets to their most productive uses. In addition to the certainty brought about by our nation's long experience with bankruptcy law—and the advantages of a judicially based process adhering to rules known in advance—American bankruptcy law has five key features:

—Once a bankruptcy proceeding has been initiated, an automatic stay is imposed, requiring that creditors cease all efforts to claim the debtor's assets. Creditors are obliged to shift from asset-grabbing mode to negotiation mode. In several other countries, the imposition of a stay is the result of a vote among creditors or some other mechanism that is not automatic.

—Preference rules permit the debtor to retrieve repayments made to creditors within ninety days before the filing for bankruptcy. This is intended to curb the temptation of creditors to "cut and run" rather than to renegotiate their claims on the troubled debtor. Although creditors may still believe that they will do better by withdrawing credit, they must take account of the fact that they may be forced to return the payment if the debtor files for bankruptcy within the next ninety days.

—The debtor is permitted to assume executory contracts—contracts for which performance remains on both sides and that potentially have a net value to the debtor. These contracts are treated like potential assets of the firm, and counterparties are prohibited from terminating them unless the debtor decides not to continue with them, in which case the contract terminates and the counterparty is left with a claim.

—Priority of creditor claims must be honored in any distribution of the firm's assets. The ability of potential creditors to rely on the priority of their claims in bankruptcy enables them to price claims on the borrower more efficiently ex ante and enhances the flow and reduces the cost of credit.

—U.S. bankruptcy law differs from that of most other countries in that managers continue to run the firm in bankruptcy. The objective is not to punish borrowers in default (beyond their economic loss), but rather to keep the business operating until the appropriate final disposition can be determined. Consequently, bankruptcy does not carry the stigma that it does in many other countries. It is framed as a financial choice, not a moral failing.

Not all firms have access to the bankruptcy courts. Depository institutions and insurance firms are resolved through administrative processes, while securities firms must be liquidated. Financial holding companies, however, may file for reorganization under the bankruptcy code, as can most other nonfinancial firms.

Although Jackson and Skeel praise many features of the U.S. approach to bankruptcy, they believe that it can and should be improved to enhance its effectiveness in speeding the reallocation of resources to the most productive use. They highlight two problems in the existing arrangements.

First, bankruptcy is likely to occur too late—after the incumbent management has had an increased incentive and a prolonged opportunity to waste resources. Stronger corporate governance is not likely to solve this problem. In principle, so long as the corporation is solvent, the board has a fiduciary duty to the existing shareholders—but not to the creditors. At the point of insolvency, however, its duties must expand to include the creditors. Unfortunately, the "point" of insolvency is unclear ex ante. Although courts and experts increasingly have relied on the looser notion of the "zone" or "vicinity" of insolvency, courts have significantly restricted creditors' ability to enforce the duty outside of bankruptcy. Although there are good reasons for the restrictions, they contribute to delays in initiating bankruptcy proceedings.

Jackson and Skeel argue that bankruptcy proceedings should begin before the point of insolvency, ideally just as the incentives for the shareholders to take greater risks begin to increase. They argue that a legal rule needs to be established to determine when the reshuffling of ownership claims against the debtor's assets should occur in order to reduce the scope for delays. The rationale for a rule to determine when the shift in ownership claims should take place is essentially the same as that for bankruptcy. The bankruptcy process reduces the scope for individual creditors to make a grab for the troubled debtor's assets. A rule for determining when a change in ownership should take place reduces the challenges that a heterogeneous group of unsecured creditors faces when initiating action to shift control from the existing shareholders. While the firm is organized to facilitate collective action on behalf of the shareholders, creditors have no such mechanism. Indeed, individual creditors may believe that they are likely to get a higher repayment by acting individually against the borrower than by cooperating with other creditors to wrest control of the firm from the current shareholders. Thus shareholders (and managers acting on their behalf) will prefer to delay filing for bankruptcy as long as possible in order to preserve their option to capture a large future upside return, and individual creditors may prefer to take individual actions than to initiate a bankruptcy process. The result is that the firm's assets may be invested in increasingly risky ventures.

If both existing shareholders and creditors lack strong incentives to initiate bankruptcy proceedings, why do they occur at all? Jackson and Skeel conjecture that the initiative is usually taken by new creditors. New creditors are likely to be willing to lend to a firm in financial distress only if shareholders (and management) file for bankruptcy. A bankruptcy filing automatically gives priority to the claims of new creditors over all previous unsecured creditors. While shareholders and managers will resist this pressure as long as possible, the need for liquidity may give them no choice. Because managers in the United States can usually continue to operate a firm that is restructuring, they may be somewhat less reluctant to file for bankruptcy than managers in other countries. Nonetheless, bankruptcy is still likely to be initiated too late, largely because of the difficulties in valuing a firm's assets. While illiquidity is unambiguous, insolvency may occur earlier and be much more difficult for outsiders to detect.

Jackson and Skeel make several suggestions for encouraging more timely filings for bankruptcy. First, large firms should be required to file a living will, similar to (but simpler than) those required under the Dodd-Frank Act for systemically important financial institutions. These documents would specify how a bankruptcy proceeding would unfold. This would reduce the uncertainty about what would happen if a firm were to file for bankruptcy and speed the process if such a filing were to occur.

Second, they believe that a balance sheet insolvency standard should be reintroduced and added to the current cash flow test as a basis for an involuntary filing. The increased scope for filing an involuntary bankruptcy petition would reduce the problem of delay. While they acknowledge that balance sheet insolvency may be difficult to ascertain, they believe the potential benefits outweigh the possibility of abusive filings.

Third, they advocate permitting the Securities and Exchange Commission (SEC) or some other primary regulator to file an involuntary petition for bankruptcy on the same basis as a firm's creditors. They believe that the SEC should not be subject to the same inhibitions that delay filings by managers (on behalf of existing shareholders) and creditors, and they conjecture that giving the government a potential role at the commencement of a bankruptcy may reduce the tendency to improvise a bailout outside the court-supervised process.

In addition, they suggest some incentives that could be introduced to reduce delays in bankruptcy filings. First, an incentive could be given to shareholders to initiate a timelier filing for bankruptcy. For example, shareholders might be given a small percentage of the difference between the going-concern and the liquidation value of a firm's assets. Timely filings would protect some value for the old shareholders, while filings that are unduly delayed would wipe them out. Second, an incentive could be given to the creditors who file an involuntary bankruptcy petition. This would enable them to benefit (to a modest extent) relative to those creditors who simply press for individual repayments from the debtor. Third, to curb a tendency by large, influential creditors to delay a bankruptcy filing to just over the ninety-day period after they have received payment that is subject to preferences, they suggest imposing a modest penalty on any creditor who receives a preference with the intent to avoid a bankruptcy proceeding. Fourth, they suggest removing exemptions from key bankruptcy provisions, such as the automatic stay for some counterparties or creditors. Protection from the consequences of bankruptcy weakens the incentives that some institutions would otherwise have to monitor the firm's creditworthiness most effectively. They argue that the wholesale exception of qualified financial contracts from bankruptcy's stay and preference provisions may reduce the incentives of counterparties to monitor a firm and generate market signals that can be used by other creditors.

They also note some procedural reforms that could reduce the scope for delays in the bankruptcy process. These include shortening the exclusivity period in which the debtor has the sole right to formulate and file a plan of reorganization and shortening the period for soliciting acceptances and voting on the plan.

Jackson and Skeel conclude with a discussion of the tension between their view of the role of bankruptcy, which emphasizes that the main objective should be to facilitate the highest-and-best use of assets, and the view that bankruptcy should also be employed to save jobs. They note that so long as the conclusion with regard to the highest-and-best use is to keep the firm's assets together, both goals can be achieved. But, when the firm's assets are worth more broken up and sold separately, the two goals appear to be in conflict.

They argue that the political pressures to favor reorganization rather than liquidation can be enormous, but can lead to perverse outcomes. While it may be possible to "save" jobs at the firm in distress, this may be only temporary if the firm's problems are the result of economic as well as financial failure. Moreover, the jobs that are "saved" may come at the cost of jobs that are lost at more efficient firms, although this job loss is an opportunity cost experienced by workers who are difficult to identify and thus much less likely to mobilize political pressure. They note that this policy may well result in shielding inefficient firms from productivity gains that could be achieved by shifting resources to more efficient firms, with damaging implications for economic growth. While recognizing the validity of government support for displaced workers in some instances, they argue that this issue should be evaluated on its merits rather than be subjected to opaque (and undemocratic) trade-offs in the bankruptcy process.

Jackson and Skeel cite the two Chrysler bailouts as examples of the dangers of trying to use the bankruptcy process to save jobs when the debtor is suffering from both economic and financial distress. They argue that, by 2009, capacity in the automotive industry appeared to be at least 25 percent greater than steady-state demand, and so the question was not whether jobs in the industry would be lost, but rather whose jobs would be lost. By "saving" jobs at Chrysler, the government increased the pressure on more efficient producers to reduce capacity. Chrysler, they conjecture, would have been more valuable sold piecemeal—for example, the sale of the Jeep brand, much of Chrysler's real estate, and some of its most efficient plants—than maintained as a going concern. Although they are champions of the role of bankruptcy in enhancing economic growth, they warn that expecting it to achieve additional objectives can diminish its effectiveness in this central role.

Discussion focused primarily on two issues: the idea of requiring living wills and the interpretation of the Chrysler bailout. Some participants questioned whether living wills could serve a useful function for large, nonfinancial corporations not subject to prudential supervision. In other words, they questioned whether the benefits exceeded the costs that would be placed on corporations. Moreover, they raised concerns about whether the SEC should play a role in enforcing safety and soundness requirements on firms and whether it has the expertise to force an involuntary bankruptcy filing.

In addition, some conference participants questioned whether the reallocation function had much of a role to play in the Chrysler case, since the liquidation value of its assets would be quite low. Skeel replied that the most serious distortion of the process was structuring an auction for Chrysler's assets in such a way that only the government could bid. While he acknowledged that there may be a case for suspending bankruptcy rules during a crisis, this period should be clearly distinguished from normal times. Intervening on behalf of an industry, he continued, is much less worrisome than favoring a particular firm. He emphasized that the government should not be in the business of picking survivors.

Initial Public Offerings

In chapter 4, Jay Ritter of the University of Florida analyzes the challenge of reenergizing the market for initial public offerings (IPOs) in a new context. He questions whether the observed decline in IPOs deserves the attention it has received in Congress and the financial press—or, indeed, whether it is a significant policy problem at all.

Conventional analysis starts from the presumption that firms that go public are major creators of jobs and that the marked decline in the number of operating companies going public since 2000 may have contributed to the relatively sluggish rate of growth in jobs over the last decade. This line of reasoning usually attributes the decline to three factors: the impact of the Sarbanes-Oxley Act of 2002 (SOX) on smaller firms, a decline in analyst coverage of small firms since the imposition of the Fair Disclosure Rule in 2000, and the Global Settlement that imposed constraints on sell-side analysts.

The number of jobs that would have been created with a higher volume of IPOs is a counterfactual that can never be proven, but Ritter notes that the estimate of 22.4 million jobs that has been widely quoted in the press, in congressional hearings, and by industry trade associations is certainly too large. He shows that the estimate made by industry consultants relies on three unrealistically optimistic assumptions: first, that the record volume of IPOs that occurred in 1996 would have been sustained throughout the subsequent period; second, that the firms that did not go public would have added jobs as rapidly as twenty-five of the most successful IPOs; and third, that the shortfall of IPOs (relative to the record level achieved in 1996) began in 1997 rather than after the collapse of the high-tech bubble in 2001, as analysts usually assume. These implausible assumptions lead to the conclusion that the number of jobs lost due to the cumulative shortfall in IPOs was nearly double the actual number of unemployed workers in August 2012.

Ritter presents an alternative estimate, based on less extreme assumptions that reflect period averages rather than high-water marks. These assumptions imply that as many as 2.03 million jobs may have been "lost" through the end of 2012.

He cautions, however, that this mechanical estimate may also be too high because it implicitly assumes that the workers who would have been hired by the additional IPOs would otherwise have been unemployed and that investors who would have invested in the "missing" IPOs would have made no alternative investments.

Ritter also examines the reasons advanced for the decline in IPOs—mainly involving the costs of being a public company. First, Section 404 of SOX requires publicly traded companies to undergo external audits of their internal systems to ensure accurate financial reporting. Because such audits have a relatively large fixed-cost component, this regulation falls especially heavily on smaller companies. Ritter does not disagree, but he notes that this cannot explain a significant part of the decline in IPOs because IPO volume has continued to be low after most of the provisions applying to small companies were repealed in 2007. Moreover, European IPOs have followed a similar downward trend even though SOX never applied to them.

Second, the SEC's attempt to level the playing field regarding disclosures by public corporations (Regulation FD in 2000) and its attempt to reduce the conflicts of interest facing security analysts employed by underwriters of publicly traded shares (the Global Settlement in 2003) may have contributed to a decline in coverage of small stocks by security analysts. Ritter agrees that a decline in coverage could reduce the number of potential investors in small-cap stocks and lead to a decline in their prices relative to those of large-cap stocks (which continued to be covered by security analysts). He questions the quantitative impact, however, and breaks the question into two parts: How much does coverage by analysts boost a stock's price? What is the sensitivity of IPO volume to increases in public market valuation? Using estimates from previous work, he concludes that if small-stock share prices were 5 percent higher due to greater coverage by analysts, the volume of IPOs might have increased by as many as ten IPOs a year. In fact, the average market-to-book ratio for small-cap stocks was about 73 basis points lower from 2001 to 2009 relative to the period from 1990 to 2000. This decline in market valuations would also account for a drop of forty-two IPOs a year. Ritter is reluctant to put much weight on this explanation, however, because in the period from 1980 to 1990, when analyst coverage of small-cap stocks was not restricted and the average volume of IPOs was higher, the market-to-book ratio for small-cap stocks was lower than in the period from 2001 to 2012.

Third, some analysts attribute the decline in IPOs to the high direct and indirect costs of making a public offering. Direct costs include fees to investment bankers (which are typically about 7 percent in the United States relative to 4 percent in Europe), costs of printing, legal services, and auditing, as well as the opportunity cost of firm managers' time. Indirect costs result from the underpricing of IPOs by the underwriters to facilitate distribution. On average, this amounted to about 11 percent of the first-day closing price during 2001–12. Thus scaling for the size of a typical IPO, going public may cost nearly 5 percent of the post-issue market price of the firm. In addition, publicly traded firms have higher ongoing legal costs due to higher insurance premiums for directors (relative to private firms) and the costs associated with discovery and legal defense of class-action lawsuits against public firms. Ritter, however, questions whether these factors can explain the decline in IPOs because they did not change significantly compared with the previous decade, when the average volume of IPOs was much higher.

Fourth, Ritter has little patience with the argument that the relative value of small-cap stocks has dropped because of a decrease in the minimum increment in which securities can trade (tick size). Following the move to decimalization, tick size did fall to $0.01 from the increments of $0.125 that had prevailed earlier. Although the decrease in tick size is evident, Ritter shows that the implied drop in small-cap valuations did not occur. Small firms tend to have a higher price-to-earnings ratio than large firms, and these ratios have not deteriorated since 1996, even though the tick size has decreased markedly.

Congress passed the Jumpstart Our Business Startups (JOBS) Act in April 2012 in an attempt to generate more IPOs and more jobs. The JOBS Act attempts to encourage the funding of small firms largely by easing the burden of several investor protection measures for the benefit of firms making IPOs. These include (1) encouraging "crowdfunding" to facilitate the access of new firms to small investments by large numbers of investors; (2) permitting the advertising of securities offerings to the general public; (3) creating a new category of "emerging-growth" firms that are exempt from SOX and other regulations for their first five years as public companies; (4) increasing the permissible number of shareholders "of record" (and exempting the firm's employees from this count) before public disclosure requirements are triggered; (5) easing disclosure requirements for community banks; (6) eliminating the "quiet period" regulations that had restricted analysts working for underwriters from making buy and (rarely) sell recommendations at the time of an IPO; (7) raising the Regulation A limit from $5 million to $50 million; and (8) conducting a study on the impact of the reduction of tick size on issues of IPOs.

Ritter warns that the unintended consequences of the JOBS Act may be perverse. By making it easier to raise money privately, increasing liquidity for some private firms, restricting shareholder access to information, constraining the ability of shareholders to challenge management after an IPO, and reducing the incentives for research on new firms by independent analysts, the net impact of the act may be to reduce the flow of capital to small start-up firms and to diminish the number of IPOs. In any event, he expects the impact of the JOBS Act to be quite limited because it does not address the main detriment to higher investment in IPOs: a marked decline in the ability of small high-growth firms to generate sustainable profits. For similar reasons, he does not expect the JOBS Act to have much impact on job creation or economic growth.

What then accounts for the decline in IPOs? Ritter introduces an alternative explanation based on the advantages of growing large quickly. He believes that the economy has undergone a structural change in recent years so that, especially in some important high-technology industries, big firms have an increasing advantage relative to small firms. Thus a strategy of organic growth (which may lead to an IPO) is often inferior to a strategy of engaging in mergers and acquisitions, either as a target or as an acquirer. This is a much more innocuous interpretation of the decline in IPOs by small firms. In Ritter's view, the decline in small-cap IPOs has been the result of profit-maximizing decisions driven by the changing structure of the economy than by restrictions that place a disproportionate burden on small firms that go public. He supports his argument by noting that small firms now have a much greater tendency to engage in mergers and acquisitions than in earlier decades and that small-cap firms do not appear to have attempted to avoid the costs of a public issue in the United States by making use of alternative European markets that have lower costs, which would be expected if IPOs were a more profitable strategy. Moreover, the average flow of venture capital into new technology has been higher since the collapse of the high-tech bubble in 2000 than in the late 1990s, indicating that venture capitalists have not been deterred by the decline of activity in the market for IPOs.

Does it follow that the decline in the volume of IPOs is irrelevant? Ritter notes that we cannot determine whether the volume of IPOs is too low because we do not know what the optimal volume of IPOs should be. We do know, however, that it should be expected to vary over time. Public policy toward IPOs, he believes, should be framed as part of a broader attempt to enhance the efficiency of all capital markets. Tax and investor protection measures should not be designed to channel subsidies to small-cap firms.

Ritter favors three broad kinds of policies that should boost the efficiency in the allocation of capital more generally and lead to higher rates of growth. First, he favors policies that lower the costs of going public, which, on average, reduce the value of a firm by 5 percent. He believes that the costs of distribution by investment banks through book building are too high, in part because the SEC does not require all of them to be disclosed. He sees this asymmetry in the disclosure requirements for direct and indirect costs (respectively, explicit fees and underpricing) as shielding an important conflict of interest between small firms and their underwriters. Underpricing of IPOs may facilitate the initial placement of shares, but it also enables underwriters to benefit from the allocation of IPOs to hedge funds and other lucrative clients, who, in return, are willing to overpay on their own commissions. Ritter believes that the extent of underpricing would decrease if the SEC were to require disclosure of these indirect costs in the same way it requires disclosure of the direct costs of underwriting. In addition, it might lead to greater experimentation with IPO auctions, an alternative to book building, which might also reduce the underpricing of IPOs.

Second, Ritter believes that the cost of operating as a publicly traded firm could be reduced if liability laws were reformed to limit class-action lawsuits and redirect sanctions from firms to the executives responsible for the alleged misdeeds. This would reduce the cost of liability insurance for directors, legal expenses, and the costs incurred in complying with discovery motions. The shift might also prove a more effective deterrent to malfeasance than the current system in which corporations are the targets of class-action suits.

Third, Ritter argues that the pace of innovation could be increased if copyright and patent laws were reformed to enable the creator of an innovation to capture some of the benefits of the innovation by creating a *temporary* monopoly. He would like to eliminate the current U.S. practice of extending the monopoly long after the death of the creator, a period when the harm done to the distribution of knowledge is likely to be greater than the enhancement of incentives to create innovations. At the same time, he warns that lack of enforcement of intellectual property rights can undermine the appropriate incentives to invest in innovation.

In the discussion following Ritter's presentation, several participants expressed surprise that the decline in IPOs could have had such a minimal impact on investment in high-growth start-up firms. Ritter noted that his argument applies mainly to IPOs in certain industries such as biotechnology firms, communications firms, and other high-tech start-ups, which are likely to have a positive impact on growth and employment. In these industries, becoming large very quickly appears to have strong advantages. At the same time, he emphasizes that start-ups in other kinds of industries are much less likely to have such a large positive impact on overall employment and economic growth. For example, the growth of a restaurant chain may be profitable to its owners but have little impact on overall employment because its growth comes largely at the expense of competing restaurants. Questions were also raised about the extent to which auctions of IPOs could substitute efficiently for the traditional book-building approach to distributing the shares of investment banks.

Lessons from Japan

In chapter 5, Yuta Seki of the Nomura Institute of Capital Markets Research reflects on lessons learned from Japan's two-decade-long attempt to reform its financial system to facilitate economic recovery. He begins by discussing current economic conditions in the United States, characterized by the recovery of share prices and earnings at large lenders but lingering issues in the real economy. In his view, this situation is reminiscent of the Japanese economy in the 1990s.

Seki proceeds to discuss the events surrounding the collapse of the Japanese real estate bubble in the early 1990s. Sharp appreciation in land prices during the bubble years encouraged excessive and speculative lending practices, with, for instance, typical loan-to-value ratios climbing from 70 percent to upward of 120 percent before the bubble burst. Further, Japanese banks often assumed loans based on junior liens, which eventually served to hamper them in seizing or selling collateral once the market started to turn. Without the capacity to sell collateral, it became impossible to determine the amount of uncollectable loans, disturbing the confidence in markets.

After the collapse of the real estate bubble, Japanese financial institutions had a difficult time disposing of nonperforming loans, which contributed to the extended length of the economic malaise. Seki attributes Japan's slow progress in disposing of nonperforming loans to four factors. First, the sheer depth of the crisis complicated the recovery: the Nikkei Average plunged approximately 78 percent from its peak, and commercial land prices dropped a precipitous 85 percent. Second, there was no established framework for resolving large financial institutions. The Deposit Insurance Corporation of Japan had only envisioned needing to resolve small lenders and was not prepared to handle bank failures on the magnitude of the crisis. Therefore, the resolution process implied that depositors were likely to take a haircut, and regulators feared the substantial risk of bank runs. Third, there was no legal or financial framework for restructuring debt. The Japanese had no reorganization procedures akin to those of Chapter 11 of the U.S. Bankruptcy Code, and thus there was no way of passing ownership of nonperforming loans onto distressed debt funds or other specialist institutions. Consequently, real estate loans locked up on balance sheets, which prevented redevelopment and reuse of real estate and had pernicious effects on the real economy. Fourth, as markets seized, banks had difficulty raising capital, which further depressed their share price and credit, creating a vicious cycle. Simultaneously, pressure from investors, counterparties, and regulators led banks to record the minimum allowable loan loss reserves in order to preserve their capital ratios. Altogether, these factors contributed to delaying the disposition of nonperforming loans.

As asset prices began rising in the late 1990s, the Japanese economy seemed to be improving, but after the collapse of the tech bubble in mid-2000, the nascent recovery stagnated. Widespread belief that the nonperforming loan problem was the root cause of the poor state of financial markets pressured the government to address the issue. This prompted the administration of Prime Minister Junichiro Koizumi and his two successive ministers responsible for the financial services industry, Hakuo Yanagisawa and Heizo Takenaka, to take measures aimed at facilitating financial institutions' disposal of nonperforming loans.

Yanagisawa, who had been appointed minister of state for financial services by Yoshiro Mori in January 2001, built a platform with Prime Minister Junichiro Koizumi focused on broad structural reform of the financial sector and supply-side-oriented policy. To this end, Yanagisawa proposed direct write-offs and final disposition of nonperforming loans in place of the indirect write-off methods that the banks preferred, namely increasing loan loss reserves as the quality of loan assets deteriorated. Direct write-offs entailed court-ordered liquidation of borrowers, loan sales, and debt forgiveness based on borrowers' restructuring plans. Additionally, in an effort to make the nonperforming loan problem more transparent, Yanagisawa led the Financial Services Agency in conducting special inspections of banks' internal assessments of major borrowers. The inspections focused on the management of credit to large borrowers that posed systemic risks and sought to create a consistent system of loan categorization so as to ensure that different banks would not categorize loans to the same borrower differently. Banks responded to these policies by aggressively disposing of nonperforming loans and coping with the associated losses. But the stagnating economy, coupled with the ongoing special inspections, caused the amount of nonperforming loans held by the major banks to increase a significant 47 percent year-over-year. The ensuing criticism of Yanagisawa led to his dismissal in September 2002, and the minister of state for economic and fiscal policy, Heizo Takenaka, took on the additional role of minister of state for financial services.

In October 2002, Takenaka presented his Financial Revival Program, which became nicknamed the Takenaka Plan. The plan set a target of cutting the nonperforming loan ratio from 8.4 percent in fiscal 2002 to half of that by fiscal 2004. The program involved various policies aimed at providing support for troubled lenders and incentivizing the major banks to write off nonperforming loans. The Takenaka Plan set dual goals of revitalizing financial institutions in order to regain the trust of markets and corporations and to promote sustainable financial positions and better business models. In the absence of private equity and securitization markets, the plan also set about instituting the legal infrastructure, markets, and personnel needed to revitalize distressed companies.

Altogether, the Takenaka Plan called for three new frameworks: one for the financial system, one for corporate reorganization, and one for financial regulation.

Seki then outlines the three prongs of the Japanese government's solution to the nonperforming loan problem: promoting the final disposition of nonperforming loans, creating a system to encourage borrowers to recapitalize, and facilitating real estate market liquidity.

The Japanese government created various incentives to encourage financial institutions to dispose of nonperforming loans. First, they required banks that received public injections of capital to submit business improvement plans that were subjected to quarterly reviews. Furthermore, passage of the Rapid Recapitalization Act authorized the Financial Services Agency (FSA) to issue business improvement orders to banks that failed to meet the targets for return on equity and net profit; typically, when results fell short of targets by 30 percent or more, the FSA would respond with a business improvement order, a practice that became known as the 30 percent rule. Since the issuance of a business improvement order implicitly expressed disapproval of bank management, it often led to the installation of a new bank management team. Therefore, the 30 percent rule put significant pressure on the banks, creating incentives for them to dispose of nonperforming loans quickly in order to protect management autonomy.

The Japanese government also sought to unify the disclosure standards for nonperforming loans and to establish a special inspection scheme. Japanese policymakers had difficulty assessing the scale of bad assets when the bubble first began to collapse, partially due to the lack of unified and transparent loan classification standards. Although the Financial Reconstruction Act of 1998 settled on a definition of nonperforming loan categories and disclosure requirements, discrepancies persisted between the banks' internal assessments, public disclosures, and assessments by foreign investment banks. The special inspection scheme and its corollary parts finally changed the situation. First, the scheme served as a real-time check on banks' borrower classifications and helped to restore the confidence of market participants. Second, the scheme prevented banks from using different categories for borrowers with large loans from multiple lenders. Third, the special inspections yielded synergies with earlier rules for removing nonperforming loans from bank balance sheets. Fourth, the special inspections scheme complemented the backstop of public funds that the Takenaka Plan facilitated.

The second prong of Japan's financial restoration sought to encourage borrowers to recapitalize. The Civil Rehabilitation Act was instrumental in establishing a system of support for corporate reorganization procedures. The act provided for speedier and more flexible reorganizations and created incentives for business managers to pursue strategic restructurings. Additionally, the Resolution

Collection Corporation (RCC) and the Industrial Revitalization Corporation of Japan (IRCJ) both played important roles in facilitating the disposal of distressed debt. The RCC, modeled after the Resolution Trust Corporation, established during the S&L crisis in the United States, coordinated corporate reorganization and assisted companies in working through complicated debt claims. The RCC, however, lacked the resources to deal with large corporate borrowers, which led to the establishment of the IRCJ, which was authorized to purchase debt claims for up to two years and was mandated to close after five. Funded by the DICJ and Norinchukin Bank, the IRCJ received guarantees on its loans from the Japanese government for up to ¥10 trillion and provided assistance in forty-one cases. The IRCJ effectively acted as a buyout fund with government guarantees and received high marks for its success and the earnings that it was able to generate. The experience and human capital built up at the IRCJ contributed to the development of Japan's buyout market after the organization was disbanded.

The third and final prong that Seki discusses, the revival of liquidity in the real estate market, was largely accomplished through the introduction of real estate securitization and real estate investment trusts (REITs). The securitization of real estate loans and other types of debt began in 1998 with temporary legislation authorizing special-purpose companies to securitize assets, while the legal framework for doing so was established by the Asset Securitization Act of 2000. That same year, the Revised Investment Trusts Act authorized the formation of REITs; by September 2001, two REITs were listed on the Tokyo Stock Exchange. As the market was forming, securitized assets were composed primarily of operating properties with relatively favorable locations as opposed to traditional nonperforming assets such as land set aside for failed development projects. Hence, although real estate securitization itself did not contribute directly to cutting the amount of nonperforming loans, the securitization market fueled a gradual increase in real estate transactions and restored liquidity in the market, indirectly creating an environment more conducive to the disposal of properties by large borrowers and lenders.

Seki concludes by expounding on relevant lessons for policymakers from Japan's experience. First, he argues that when a collapsed asset bubble affects the real economy, a solution is unlikely to be reached by focusing exclusively on lenders. Japan's financial revival depended on policies that revitalized corporate borrowers in addition to policies geared toward incentivizing financial institutions to remove nonperforming loans. Second, he argues that the Japan case demonstrates the effectiveness of policies tied to market mechanisms. The Financial Revival Program in Japan, for instance, encouraged banks to dispose of nonperforming loans and recapitalize voluntarily, thereby beginning the process of revitalization with those banks favored by the market. Additionally, Japan's success in laying the groundwork for markets in securitization and reorganization was essential for reviving corporate borrowers and restoring liquidity.

Discussion focused on possible parallels between the Japanese experience during the 1990s and the more recent U.S. experience. On the surface, the similarities are striking. The Japanese financial crisis began with the collapse of a massive real estate bubble after which the Japanese government tried to offset the shock with a huge fiscal stimulus that failed to kick-start the economy. It also experimented with unconventional monetary policy that had negligible impact on restoring growth. Business proved unwilling to make new investments despite very liquid balance sheets, and the government lacked a framework for restructuring large, complex financial institutions that held much of the bad debt and were obliged to deleverage rather than resume lending. The Japanese economy has languished over two decades and is only now showing signs of more robust recovery. Some participants argued that these similarities were more apparent than real. In particular, they noted that the U.S. government had moved much more quickly to restructure bad debts and that the bankruptcy system had facilitated the reallocation of resources. Other participants felt that the Japanese experience could not be dismissed so easily, noting the Fed's fear of falling into a Japanese-style deflation, the meager evidence that quantitative easing is working, and the disappointingly sluggish U.S. recovery. One participant noted that many of the structural reforms introduced in Japan to hasten recovery—securitization, bankruptcy proceedings that can result in reorganization, and mechanisms for resolving financial institutions—did not prevent the United States from falling into a deep recession and an agonizingly slow recovery.

Conclusions

The Brookings, Nomura, Wharton conference papers spanned a range of vital issues for restructuring the financial sector and aiding the recovery of the real economy following the crisis. Problems in the mortgage market in the United States were at the heart of the near collapse of American financial institutions and the spread of the crisis around the world. Redesigning that market and the role of government-sponsored enterprises remains a huge and uncompleted task that will be easier as a result of the paper by Allen, Barth, and Yago, which uses both an historical and a comparative approach and draws out clear policy recommendations.

One of toughest lessons learned in the crisis is that no effective mechanisms were in place to resolve financial institutions that got into trouble. Policymakers were scrambling to decide whether to bail out failing institutions or let them fail.

Taxpayer funds were put at risk, and there was inconsistent treatment of different players. Jackson and Skeel make a powerful case for bankruptcy as the most effective and fair mechanism for resolving troubled institutions, emphasizing the importance of having a predictable path for such cases. Such a path takes away concerns about moral hazard, protects taxpayers, and makes sure that market participants know what risks they are facing.

The revival of the real economy depends heavily on innovation and the growth of young companies and the ability of the economy to fund that segment. Ritter's paper helps us to understand what has been behind the sharp drop in the number of IPOs and which policies may be effective and which may be ineffective. Ritter argues that, for many young companies, merging into larger existing companies has become more attractive than growing organically through an IPO.

Seki's paper has offered important lessons about why the Japanese financial crisis lasted so long and what was needed eventually to turn the corner. The failure to recognize and deal with bad debts dragged down the economy, a heavy weight that was finally lifted by courageous policy efforts. Both the United States and, perhaps especially, Europe would do well to study this history as they continue to struggle in their own economic recovery efforts.