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THE NEXT
FINANCIAL CRISIS
AND HOW TO
SAVE CAPITALISM

Hossein Askari and
Abbas Mirakhor





The Next Financial Crisis and How to Save Capitalism

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and

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THE NEXT FINANCIAL CRISIS AND HOW TO SAVE CAPITALISM

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Foreword

A properly functioning financial system plays a central role in the process of achieving a better allocation of resources in a market economy. However, when the financial sector becomes impaired, the consequences are severe. Now that we are leaving behind the Great Financial Crisis, the worst financial crisis of the past 80 years, we have to deal with its side effects and consequences—high unemployment, heavy debt burden, modest prospects for medium-term sustainable growth—and to work on controlling the excesses that facilitated the crisis. Although the causes of the crisis are still heavily debated, there is agreement that the set of factors that facilitated its occurrence include the Asian economies' savings glut (an ex-ante excess of savings), China's currency policy and its excessive reserve accumulation, a period of low variability in growth and inflation or the so-called Great Moderation, the sudden collapse of the heavy-leveraged American housing market, agency problems brought about by executive compensation policies, easy monetary policy after the dotcom crisis of 2001–2002, excessively lax financial regulation, poor supervision, government interference in financial markets, the corrosive influence of greed, and a number of other related factors.

Many of the mentioned factors are only symptoms, and many of the proposed culprits only victims. It is true, for instance, that the Great Moderation facilitated the development of the crisis by lulling regulators and risk managers into a false sense of security. But this is not very different from stating that busts unexpectedly follow booms, or that

night follows day. An observation can be both true and not at all informative about the underlying processes that govern a system. Distinguishing the proper causes of the crisis is crucial if we are to draft more effective rules for economic policy.

This highly readable book by Askari and Mirakhor is a welcome addition to the study of the causes and consequences of financial crises. In their view the fragility of the financial system was the result of the “process of financialization and increased debt” that results from the preeminence of interest-rate-based debt and the role of fractional reserve banking, which together facilitate high leverage and constitute the root cause of the financial boom before the crisis and the financial crisis that followed. To reduce the probability of financial crisis, they propose to move to a financial system that relies more heavily on risk-sharing contracts and equity finance coupled with a banking system that is closer to 100 percent reserve banking, as opposed to risk shifting and interest-based debt and the highly leveraged (fractional) reserve banking system that we have today.

The authors have advocated risk-sharing contracts for a number of years. This, their latest contribution, is a very interesting and stimulating book that extends the recent risk-sharing proposal of Mian and Sufi from the financing of housing to most financial contracts in the economy.

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Preface

Today the United States is saddled with economic problems that are worse than anything it has experienced in decades. Yes, national economic output is much higher than it was after the Great Depression and even much more so when compared to a century ago. Yes, the basic necessities of life—food, shelter, healthcare, and education—are more widely available. Yet there are underlying economic problems, which, if not comprehensively recognized and addressed, will undoubtedly get worse with potentially catastrophic economic, social, and political consequences. Today, for the first time in memory, the future just does not seem bright for the vast majority of Americans and their families, and polls claim that for the majority of Americans the “American Dream” has become tarnished, less credible, and increasingly unattainable.

The problems are interrelated and are, as a result, more intransigent than problems that are not linked. The problems are: (i) “financialization,” or the growing domination of the financial sector over the real sector and their increasing divergence; (ii) stagnant real incomes for the majority of Americans since about 1980; (iii) growing income and wealth disparity; (iv) a slowdown in economic growth for the foreseeable future; (v) the adoption of a patchwork of financial reforms where fundamental reforms are needed; and as a result (vi) recurring serious financial crises that leave economic and social devastation in their wake. We take a US perspective on the issues at hand. Much of what we have to say, but by no means all, is applicable in differing degrees to Western Europe, but much less so to developing countries that have

an underdeveloped financial system. Still, in a few compelling instances, we refer to the international dimension of the problems and policies.

The policy response to these problems has been to assess and examine one issue or problem at a time, develop limited solutions, use a “bandage” approach to get over what is invariably labeled as a “bump” in the road and to repeat the same process all over again in the future whenever and wherever the next bump appears. But the bumps may be getting bigger and thus becoming more difficult to bandage. Reaction to economic and social problems, as opposed to comprehensive solutions and foundational reforms, has become the easy road to take. Why? Simply said, in the arena of finance and economics experts have become too narrowly focused to see the full landscape, and more importantly the rise of special interest groups has become so pervasive that the US federal government and the elected politicians have become too timid to admit the full extent of the socioeconomic problems the country faces, much less propose comprehensive and essential reforms that could threaten powerful interests, especially those who support their reelection.

Our goal in this short book is to present the interrelated facets of our shared economic quagmire and the fundamental reforms that are called for. We try to do this with little or no economic jargon and few notes, with only the names of those whose ideas we have presented and a bibliography of their writings for further reference. We believe that our shared problems have not been presented as an interrelated whole, much less with the needed and essential reforms explained in an easy-to-understand language. We hope that this short book is informative and eye opening so that we can individually decide where we stand and what to demand of our elected officials when it comes to financial and related economic reforms. In the concluding chapter we briefly sum up the problems we face and their interrelationships, why conditions will likely get worse before they could get better, outline the needed foundational reforms, and the pragmatic reasons why foundational reforms may not be easily forthcoming but only change in baby steps.

We have said much of this in different places for nearly a decade or so, especially what we see as the essential reforms to our financial system. But since others have started more recently to say some of the same things and their views have received considerable traction, we thought it is now an opportune moment in time to pull our thoughts together in one place and state our contention in a concise, yet comprehensive, volume for the concerned nonspecialists as well as for the open-minded specialists.

Acknowledgments

We are indebted to Professor Vittorio Corbo, one of the most gifted macroeconomists of his generation and an important contributor to Chile's economic success, for honoring us with a Foreword. Vittorio Corbo has done it all—a stellar academic record, former president of the Central Bank of Chile, World Central Banker of the Year in 2006, and board member of Banco Santander SA in Madrid during 2011–2014. We thank Professor Dariush Zahedi, Professor Donald Losman, and Rodrigo Guimaraes for their generous endorsements. We are grateful to Kelvin Teo, Dohee Kwon, and Anna Askari for helpful comments on drafts of this manuscript, but we are responsible for any and all shortfalls and errors.

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The Financial Sector—In Support of Growth or Financialization?

► *Abstract: A stable and efficient financial sector has an essential role in support of the real sector to facilitate mechanisms for an efficient allocation of financial and real resources by funding the investments with the highest social rate of return: mobilizing savings, identifying the best business opportunities, financing these investments, monitoring their performance and their managers, enabling the trading, hedging, and diversification of associated risks, and facilitating the exchange of goods and services. Financial institutions, by pooling risk, should be better positioned to analyze investments and their associated risk-return profile and to monitor the performance of investment projects. Our financial system has achieved some of these goals but has also been accompanied by recurring crises.*

Keywords: finance; financialization; intermediation; investment; risk; savings

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Introduction

The primary role of a financial system is to create incentives and mechanisms for the best allocation of financial resources with minimum waste or maximum output (efficiency) in an economy through time. In other words, an ideal financial system would facilitate the financing of the “best” investments, or the investments with the highest social return or payback, by identifying the best business opportunities, mobilizing savings, funding these investments, monitoring the performance of the selected investments and their managers, enabling the buying and selling ownership in these investments (trading), locking in a known return (hedging), providing ways to diversify associated risks, and facilitating the exchange of goods and services between producers and consumers throughout the economy. Within a financial system, financial markets (where buyers and sellers trade currencies and the three principal financial instruments, namely, stocks, bonds, and derivatives or contracts whose value is derived from the performance of the asset on which it is based) and banks facilitate the vital functions of raising capital and channeling it to entrepreneurs and companies (capital formation), monitoring, information gathering, and facilitating the sharing of risk. To the extent that financial markets perform these crucial tasks efficiently, individuals are spared these responsibilities and the attendant costs of channeling their savings into rewarding investments.

In further elaboration, an ideal financial system should perform a number of functions. First, the system should facilitate the efficient channeling of savings from savers to investors (financial intermediation) to reduce information gathering and allocation costs for individuals by spreading these costs among many individuals and providing them with the broad range of financial instruments and investments that they seek. It would be prohibitively expensive and wasteful for every individual to analyze the attractiveness of investments and invest in such a way as to get the type of investment that he or she wants (debt or shares, short term or long term, and size of minimum investment). Intermediaries can do all this on behalf of many individual investors by spreading the cost of information gathering and reducing the fallouts of information asymmetry between parties to an investment (adverse selection and moral hazard) by better assessment of borrowers’ risk and subsequent monitoring of borrowers’ performance. Moreover, as Crockett (1996) noted commercial banks by pooling risk can afford depositors’ attractive

returns as well as the ability to redeem their deposits quickly (enhanced liquidity). Second, with increasing globalization and demands for financial integration, it is essential that the financial system offer efficient and liquid markets for trading assets with short maturities (Money Markets) and markets for channeling capital to governments, businesses and individuals (Capital Markets). And third, the financial system should provide a well-developed market for risk trading, where economic agents can buy and sell protection against unforeseen developments such as fire (event risk) as well as all forms of financial risks (such as sharp declines in share prices and interest rates).

These functions ultimately lead to the efficient allocation of resources, rapid accumulation of physical and human capital and faster technological progress, all of which, in turn, stimulate economic growth. A sound financial system should be stable, reduce uncertainty, and provide the basis for rational decision making to stimulate savings and investment. While stability is desirable, it must not impede price flexibility (such as changing interest rates) that signals change to market participants but avoid excessive volatility that emanates from excessive speculation and uncertainty (Crockett). It should be evident that an efficient, sound, and stable financial system would be essential for promoting savings, funding the best investments and in turn fueling economic growth and prosperity. Thus the financial sector should support the real economy to function more efficiently, while providing a broad array of investment instruments with different liquidity-risk-return profiles and a market for trading risk.

In recent years, it has become widely recognized that debt, loans or borrowing through interest-based contracts and a banking system that creates money from deposits and bank lending invariably promotes a phenomenon that has become coined “financialization,” resulting in a growing divergence between the real and the financial sectors of the economy, or in other words tethering the linkage between the real and financial sectors. To the extent that the financial sector simply produces more financial instruments and promotes their trading, it does not perform its vital function of encouraging savings and funding the best investments. If this were the case, then real economic growth would be impaired. How can this decoupling of the real and financial sector come about? Interest-based debt contracts have a tendency to shift risk onto those who cannot manage it and the end result is excessive debt buildup and widespread defaults; the borrowers can be individuals or businesses

that borrow too much relative to their capacity to pay the contractual interest payments and pay back the principal.

The conventional banking system, or what is commonly referred to as fractional reserve banking with banks creating demand deposits (checking accounts that is a form of money) and then lending a large portion of their customers' deposits, results in the expansion of the money supply through demand deposit creation (a form of money as checks are money) and creating more and more debt or what is generally referred to as leveraging. Simply said, when a depositor deposits \$100 in a bank, he or she has access to the money in the form of check-writing capacity; his or her money (dollar bills) is there but in the form of checks (or cash if the depositor needs cash). The bank created money by giving checks to the depositor and then lending out a large fraction (say 80 percent) of the depositor's cash; the borrower from the bank then deposits his or her borrowed money in another bank, the bank issues a checking account and then lends 80 percent of these new deposits; and the process goes on and on. Note that the original depositor's cash was transformed into demand deposits (a promise by a bank to honor checks up to the amount that is in the account) and the banking system created money by lending the money that was entrusted to it for safekeeping.

But banks would like to lend out more and more in order to make more profits. Their dreams were answered by the development of complex financial instruments, such as derivatives or financial instruments that derive their value from an underlying asset and securitized debt or loans that are bought from a lender (such as a bank) and then used to issue shares to investors with these loans as their backing. These innovations further encouraged credit expansion (enabling banks to lend even more) to outpace the growth of the real sector of the economy. As financial assets are securitized and resecuritized (debts, such as mortgages, are bought from banks, packaged, and sold as new securities that pass on the mortgage interest to the buyers of the created securities), the banks get cash for their mortgages or car loans and then they lend their cash out again. Disproportionate risks are transferred through derivative instruments, the connection between the financial and real sectors becomes decoupled (the financial sector growing much faster than the real sector), and an inverted credit pyramid is created where the liabilities of the economy become a large multiple of real assets (the base of the pyramid) that support them.

Mismatched assets and liabilities are another characteristic of such a banking system. Namely, a bank's loans are largely medium and long term but its funding is short term, from checking and savings deposits and certificates of deposit (CDs). Deposits are very short term because depositors can retrieve their deposits at a moment's notice and CDs are normally short or medium term and can be cashed with a penalty. There is a mismatch because the maturity of their loans is long term whereas the maturity of their funding is short term. If depositors demand cash for their deposits, a bank can be caught short as it cannot immediately liquidate its investments and call in its loans to honor its commitment to depositors. Although the bank may be still solvent, such a squeeze can pose a danger, requiring the government, or a government agency, to step in and make cash available to banks on a short-term basis. But price shocks can be more of a problem. For instance, if a bank has made long-term loans and invested in long-term government and corporate bonds, then with a sharp decline in the value of its loans and investments (from a sharp decline in price or bankruptcy) it may be insolvent as the liability side of the balance sheet is very slow to adjust while the asset side has declined rapidly. Such mismatches create a potential for instability that can spread rapidly through the interlocking connection of financial institutions, with many institutions being both borrowers and lenders exposed to the risk of rapid price changes and defaults. The result can be an increase in the frequency, transmission and severity of financial and economic crises, with the resulting economic crises being more severe than ordinary recessions because the financial industry has a widespread impact on all sectors, including households.

Between 1980 and 1995, 35 countries experienced some degree of financial crises. These were, essentially, periods during which their financial systems stopped functioning and, consequently, the real sectors were adversely affected leading to economic downturns or recessions. Recent research on financial intermediation and financial systems has enhanced our understanding of why the financial system matters and the crucial role it plays in economic development and growth. For example, studies have shown that countries with higher levels of financial development grow by an additional 0.7 percent or so per year. Although strong evidence points to the existence of a relationship between a well-developed financial system that promotes efficient financial intermediation (through a reduction in information, transaction, and monitoring costs) and economic development and growth, this linkage and the direction of causation is not as simple and straightforward as it may at first appear.

Financialization

Financialization means different things to different people. The 2007–2008 financial crisis has been explained by some as a culmination of a long process of “financialization” of the advanced industrial economies that was left unchecked, despite numerous warnings during the previous three decades. Financialization has been defined in various ways that emphasize three basic elements or characteristics: (i) a significant expansion of the financial sector relative to the real sector, such as increasing the financial sector’s share of GDP, increasing the share of financial sector profits relative to total corporate sector profits, higher rate of return on equity in the financial sector relative to return in the rest of the economy, and the like; (ii) a fast expansion of financial institutions and products outside traditional banking and traditional instruments, without which financialization could not have thrived; and (iii) an expansion that was not beneficial to the broader economy and may have even turned out to be harmful for longer-term economic growth. To some observers, besides bringing on the worst financial crisis since the Great Depression, the economic consequences of financialization may also be summarized as: a drop in the share of wages and nonfinancial profits in national income, a consequent drop in real capital investment in the nonfinancial sectors of the economy, tepid economic growth of the real economy, heightened speculation, increasing numbers of bankruptcies and economic distortions, significant economic and financial uncertainty, and increased social inequities including a worsening of income and wealth distributions.

In the United States (and in other major Western economies) the financial sector has been partitioned over the past 30–40 years. The financial system embraces on the one hand traditional instruments such as shares and bonds, and on the other hand nontraditional instruments such as financial derivatives. The system includes deposit taking by a traditional banking, such as or commercial banking and nondeposit shadow banking, which includes money market funds, institutional investors, hedge funds, mutual funds, private equity funds, mortgage companies, and insurance companies. The competition for financial resources (such as deposits) and for income opportunities between traditional and unregulated financial intermediaries have become intense, leading both segments of the financial system to devise innovations that increase their access to resources and their income-earning assets, and at times

promoting unwarranted speculation and risk taking on their own and on their clients' account.

Financialization has fueled an explosion of financial activities in the form of nonregulated financial institutions and a phenomenal growth of financial engineering and complex financial products, incorporating the power of creating money through debt (leveraging) with little regard for its attendant risk. Besides its traditional and beneficial role of intermediation between savers and investors, financial institutions ventured into trading and speculating in risky financial instruments on their own account (proprietary trading) and speculation and in the process became dangerously overleveraged. Financialization has also led to the development of shadow banking, securitized or parallel banking, with the purpose of increasing the availability of resources for the traditional banking sector. This shadow banking includes: (i) bank conduits, namely, special investment vehicles (SIVs), special purpose vehicles (SPVs), and limited purpose finance corporations (LPFCs) and (ii) securitizations that cover asset-backed securities (ABSs), asset-backed commercial papers (ABCPs), residential mortgage-backed securities (RMBS), commercial mortgage-backed securities (CMBS), auto-loans-backed securities, collateralized loans obligations (CLOs), collateralized bond obligations (CBOs), and collateralized debt obligations (CDOs). Derivatives such as credit default swaps (CDSs) were invented in order to spread credit risk and push traditional banks into higher risk lending and related activities. Securitization has created derivatives based on existing debt with the purpose of increasing lending activities. However, securitization has also turned into the practice of selling toxic loans to investors using fraudulent practices. Opacity has replaced transparency and investors can no longer know the "fair" price of the securities they are buying or selling.

In short and more broadly, financialization is a process whereby financial markets, financial institutions and financial elites gain greater influence over economic policy and economic outcomes. Financialization transforms the functioning of economic systems at both the macro and micro levels. Again, its principal fallouts are to (i) elevate the significance of the financial sector relative to the real sector; (ii) transfer income from the real sector to the financial sector; and (iii) as a result increase income and wealth inequality and contribute to wage stagnation. In addition, there are reasons to believe that financialization may put the economy at risk of debt deflation and prolonged recession. To Epstein

(2005) financialization refers to the increasing importance of financial markets, financial motives, financial institutions and financial elites in the operation of the economy and its governing institutions, both at the national and international level. Krippner (2005) defined financialization as a pattern of wealth accumulation in which profit making occurs increasingly through financial channels rather than through trade and commodity production. Palley (2007) contended that the notion of financialization covers a wide range of phenomena: the deregulation of the financial sector and the proliferation of new financial instruments, the liberalization of international capital flows and increasing instability in foreign exchange markets, a shift to market-based financial systems, the emergence of institutional investors as major players on financial markets and the cycle of boom and bust on asset markets, shareholder value orientation and changes in corporate governance of nonfinancial business, increased access to credit by previously “underbanked” groups or changes in the level of real interest rates.

We add that when a financial sector is dominated by interest-rate-based debt contracts, the financialization process creates more and more debt as it expands throughout the economy, converting equity in real assets into debt. This was the case in the early stages of the housing boom in the United States where excess liquidity and low interest rates created an incentive for homeowners to cash out equities built up in their homes through refinancing, commonly referred to as home equity line of credit and loans. The cashed-out equity was largely used to support a consumption boom and masked the stagnating income growth among middle-class households. By emphasizing debt multiplication and relaxing credit standards, financialization has led to rapidly growing corporate debt-to-equity ratios and household debt-to-income ratios; acceleration of dominance of the financial sector relative to the real sector; income transfer from the real sector to the financial sector; deterioration of income distribution and increased income inequality; and changes in the orientation of the economy from saving-investment-production-export orientation to one of borrowing-debt-consumption-import orientation.

The growth of financialization

A number of interrelated factors have promoted financialization in the United States, including financial deregulation, lax supervision

and enforcement, implicit government subsidies, and accommodating monetary policies.

Financial deregulation in the form of the Gramm-Leach-Bliley Act (also referred to as the Financial Services Modernization Act) in 1999 opened the floodgates of the “anything goes” mentality in the financial sector. Principally, the Glass-Steagall Act was repealed, enabling commercial banks, investment banks, and insurance companies to form any combination of these activities, hitherto separated by a wall. For example, this allowed commercial banks to take investment banking risk and investment banks to accept deposits. As the financial sector became deregulated, supervision and enforcement, which should have become more vigilant, became instead more relaxed. A number of financial entities took unwarranted risks and leveraged their capital to unprecedented multiples. The assumption of risk was in part promoted by the emergence of higher funding costs as non-interest-bearing bank deposits were increasingly supplanted by interest-bearing deposit options (such as money market funds) for depositors and the resulting competition for funding. At the same time, as low interest rates reduced banking profits, banks took on more risk to enhance revenues, in part by taking greater risk with their own capital and relaxing their prudential lending standards.

While a modest level of calculated risk might have been tolerated, financial institutions resorted to excessive risk taking and unethical financial practices to increase their profits. Although these practices may have temporarily increased the profits of financial institutions, threatening the stability of the entire financial system, governments allowed all manner of financial mergers to create mega institutions and then provided them an implicit subsidy to balloon their profits even more. The subsidy afforded to the large financial institutions is embedded in the notion that there are firms that can be classified as “too big to fail.” This implicit subsidy, guaranteeing the solvency of some financial institutions no matter the level of risk they assumed, created moral hazard (encouraged financial institutions to take on excessive risk because the fallout would be absorbed by the government), had the effect of reducing the funding costs of these institutions (as lenders thought them safe because of government backing) and creating an important barrier to market entry for new institutions, and thus in the process reducing competition in the financial sector. As a result of these and other risk-taking practices, for example, the return to equity achieved by British banks increased from an average of 7 percent between 1921 and 1971 to an average of

20 percent since that time (*The Economist*, June 30, 2010). In addition, many categories of financial institutions, such as hedge funds (a financial vehicle funded by private capital, outside the regulatory structure and engaged in diverse financial activities to take advantage of discrepancies across markets) escaped all regulations, while benefiting from the same subsidy. In the case of hedge funds, in addition to escaping regulation and receiving the protection of “too big to fail,” they have received preferential tax treatment in the United States, with the managers of hedge funds and private equity firms allowed to treat a significant part of their compensation as capital gains (taxed at 15 percent) as opposed to ordinary income (taxed at 35 percent). The special treatment of the financial industry in the United States and attendant benefits were promoted and protected by the intense lobbying of the financial services industry.

A defining feature of financialization has been an increase in the volume of debt through proliferation of unregulated intermediaries and rapid expansion in the trading of derivatives. There has been no apparent, or perceived, limit to the increasing ratio of debt to GDP, as if higher and higher levels of debt could be easily serviced. In other words, a savings rate, say at 10 percent of GDP, could service any level of debt that could be many times the size of GDP. Data for the United States shows that nonfinancial sector debt rose from 140 percent of GDP in 1978 to 243 percent of GDP in 2009. Household debt rose from 48 percent of GDP in 1978 to 95 percent of GDP in 2009, after peaking at 98 percent of GDP in 2007. The debt of the financial sector ballooned from 18 percent of GDP in 1978 to 110 percent of GDP in 2009. The financial sector debt represents nondeposit liabilities of financial institutions. It represents essentially bonds, securitized assets, and commercial paper issued by financial institutions. And the total debt of the nonfinancial and financial sector rose from 158 percent of GDP in 1978 to 353 percent of GDP in 2009. Simply imagine an individual with a fixed and limited wealth and income taking on more and more debt. As the debt grows, so do the payments to serve the interest on that debt. But if income does not grow at least commensurately, then the debt cannot be serviced. It is that simple.

Such an expansion of interest-based debt changed macroeconomic equilibrium in a very profound way and caused widespread distortions in the broader economy. For example, the increasing assumption of debt enabled households to spend far above their incomes. Consumption, both public and private, rose at very high rates. Data for the United

States showed that household savings rates fell to close to zero in 2007, while net national savings, defined as savings of households, business, and government, excluding depreciation charges, became negative in 2009, at about 2.5 percent of GDP. The difference between consumption and national output of real goods and services required external borrowing. Thus the United States's current account deficit (net borrowing from abroad) widened to 6–7 percent of GDP during 2005–2007, remained at 4 percent in 2009, and was expected to be ominous for the United States for many years into the future (Bergsten, 2009).

At the macroeconomic level, the era of financialization has been associated with generally tepid economic growth. Gross investment spending as a share of GDP has exhibited a declining trend. When “speculation dominates enterprise” as Keynes put it, investment is often poorly allocated and society is poorly served. Consequently, real economic growth has slowed down in most industrial countries, with a long stagnation in countries that used to be strong growth performers such as Japan. Subsequent to the financial crisis, real economic growth became negative in most industrial countries. The financial and the real sector have significantly parted ways some time ago. Today there is little association between the growths of the two sectors, while the financial sector has become preminent.

Another inherent feature of financialization is speculation and ensuing bubbles, both supported by a loose monetary policy. Without speculation and high price volatility, financial intermediaries cannot easily extract profits from the real sector. The unlimited expansion of debt and credit led to pressure on prices, particularly on asset prices such as stocks, housing, and commodities. The demand for goods and assets has been financed by abundant credit at low interest rates, not from income, with the result that pressure built up in asset prices. Thus financialization has also been associated with destructive bubbles in the 1980s, 1990s, and 2000s. Key factors leading to these bubbles were: (i) as postulated by Keynes and Minsky, the inherent nature of financial markets leads to speculation, herding (individuals adopting a group's behavior), and instability; (ii) the increasing importance of the privatization of the savings system leads individual investors to search for higher returns and take on riskier investments and increases their susceptibility to rumors and misinformation; (iii) the increasing role of institutional investors and mutual funds that increase the concentration of information and incentives for herding; (iv) the “Greenspan put,” by

which the Federal Reserve appeared to place a floor under equity prices by injecting more money; (v) the rising power of the Wall Street financial industry with the ability to influence regulatory and central bank policy; and (vi) macroeconomic theory that also supported the optimistic view of financial markets (Brainard and Tobin, 1977).

In the early stages of the growth of a debt-dominated financial system there is a tenuous relationship between financing and real sector investment as entrepreneurs compare the expected rate of return to the investment project and the rate of interest, namely, the difference between their expected return on investment and their cost of capital or interest expense. As financialization proceeds and debt securitization grows in sophistication, the relationship becomes progressively less important. The overwhelming dominance of finance over the real sector can be discerned by noting that the ratio of global financial assets to the annual global output of goods and services grew from 109 percent in 1980 to 316 percent in 2005. Similarly, while the total world GDP was about \$48 trillion in 2006, the value of global financial assets in the same year was \$140 trillion (nearly three times as much). As of 2007, the global financial liquidity market was estimated to be 12.5 times global GDP, with financial derivatives constituting about 80 percent of this liquidity.

The warning signs of an eventual implosion were around long before the recent crisis of 2007–2008. Indeed, five years before the event, the financial innovations of the 1990s had led to mobilization of financial resources as well as the equally impressive growth of debt contracts and instruments. A comparison of aggregate debt (sovereign, corporate, and household) to the production and capital base of the global economy reveals an inverted pyramid of huge debt piled up on a narrow production base of real goods and services that is supposed to generate income flows that are to serve this debt. In short, this growth in debt has nearly severed the relationship between finance and production of goods and services. The succeeding five years made this picture far more ominous as debt grew further with a growth rate that dwarfed the growth of global real economic output.

In short, financialization has transformed productive economic activities to pursuits that resemble participation in a gambling casino, as Keynes remarked, which use real resources but produce no real output and no productive investment (Hirshleifer, 1971). Such an economy produces “rolling bubbles” in financialized assets. As one bubble bursts, finance moves to another. Such has been the case over the past three

decades, as bubbles were created and then imploded in emerging market debt, dotcom, real estate, and commodities markets. Investments in real productive activities were not the primary objective of debt and credit expansion in any of these financial bubble-building episodes. It was the expectations of higher prices of financial assets that attracted participants by the droves as they speculated to build bubbles that were destined to burst. That this would happen was analytically demonstrated as early as the 1980s. For example, Flood and Gerber (1980) demonstrated that rational individuals participate in asset price bubbles if they expect rising asset prices. Growth in liquidity, low interest rates, higher leverage, and rapidly expanding credit, combined with regulatory-supervisory forbearance and passivity, accelerate the emergence and growth of bubbles.

The process of financialization may have also in part been facilitated by the demise of gold standard with fixed exchange rates between currencies and the adoption of flexible exchange rates. Reserve currency countries (whose currency is accepted by other countries as a reserve asset) could print more money and run external deficits without losing real resources. In turn, the surplus of foreign countries is reinvested in the reserve currency countries (predominantly the United States) in the form of bonds and shares and constitutes a basis for further credit expansion. As reserve currency countries ran large deficits, principally the United States in the financial crisis that erupted in 2007, banks had to devise innovations to create credit and push more debt to consumers and corporations.

The financialization process has gained momentum in a number of advanced countries in addition to the United States. In large part because of the rapidly rising international capital mobility after the demise of the Bretton Woods system of exchange rates (a gold exchange standard with fixed exchange rates) and the absence of capital controls, financial institutions, sovereign wealth funds, and ordinary investors became interconnected through a web of debt, securities and cash flows. Debt was pushed not only on households and corporations in the United States but also on households, corporations, and governments in a number of other advanced economies. Equity and housing bubbles developed in many countries. Many banks around the globe bought derivatives such as mortgage-backed securities, and with the outbreak of the crisis a number of large European banks incurred significant financial losses in the form of toxic assets, deposits, and loans at failed banks in the United States. The fast depreciation of toxic securities inflicted losses on

sovereign funds and banks outside of the United States. The contagion of the crisis was fast and deep. A number of banks in Europe, Japan, and emerging market countries had to be bailed out by their respective central banks and governments. The failure of investment banks, most prominently Lehman Brothers, and the ensuing credit crunch curtailed trade financing, adversely affecting the real economy.

Conclusion

A stable and efficient financial sector has an essential role in all economic systems, namely, in support of the real sector of an economy to facilitate incentives and mechanisms for an efficient allocation of financial and real resources by funding the investments with the highest social rate of return: identifying the best business opportunities, mobilizing savings, financing these investments, monitoring their performance and their managers, enabling the trading, hedging, and diversification of associated risks, and facilitating the exchange of goods and services. An important facet of efficient financial intermediation is the ability to reduce the problems associated with what economists have labeled as “asymmetric information” that leads to adverse selection (among economic and financial choices) and moral hazard (motivated to act irresponsibly, for example, if an individual owns a fully insured home, there is less incentive to take measures to prevent theft or fire, or when a bank is assured of government bailout it has more incentive to take on excessive risk). Thus financial institutions, by pooling risk, should be better positioned to analyze investments and their associated risk-return profile and to monitor the performance of investment projects. Our financial system has achieved some of these goals but has also been accompanied by recurring crises and has brought about the “financialization” of our economic system.

Financialization has been an important part of the dramatic growth in finance over the past 40 or so years and is defined as an overexpansion of the financial sector relative to the real sector, which in turn has turned out to be a drag on the real sector. It has unraveled the inherent instability of finance. It has illustrated the power of the financial system to create money, push debt, and create bubbles and volatility in the quest to earn greater returns and profits. It has created distortions in the economy that have led to changes in income distribution in favor of the financial

sector and long-term economic stagnation as exemplified in Japan and in the drawn-out recession in the United States and in Europe. By creating speculative bubbles in assets and commodity markets, the financial sector has become more apt to excise real income at the expense of the real sector. The profits of the financial sector have remained private and its losses have been socialized through government and central bank bailouts. The financialization phenomenon has been supported by a variety of implicit and explicit government subsidies, financial deregulation, lax supervision and enforcement, and bailouts that have encouraged risk taking and moral hazard. Financialization has had an international dimension through its propagation to leading industrial countries as well as emerging countries.

A number of trends associated with financialization have caused concern, including rapidly growing, unsustainable and unproductive debt, a fall in nonfinancial sector shares in national income, growing income and wealth disparities, and stagnant growth of per capita income. More regulation has been proposed as a way to tackle the undesirable effects of financialization: regulating the unregulated financial institutions, regulating derivatives, imposing special taxes on the profits of financial institutions, and prohibiting proprietary trading. But as we hope to show, simple changes in regulations may not be enough where more foundational reforms are needed. At the same time, central banks may have unknowingly promoted financialization through rapid money creation and a prolonged period of low interest rates.

2

Recurring Financial Crises—The Causes

► **Abstract:** *A financial crisis is manifested as a crash in any number of asset prices or as a banking crisis and a freezing of credit. These crises have serious economic fallout—sharp and prolonged decline in economic output and a spike in unemployment—as an impaired financial system spares no sector of the economy and deleveraging takes time. There is no shortage of explanations for financial crises: moral failure, fraud, Ponzi schemes, lax regulations, supervision and enforcement, prolonged period of low interest rates, government bailouts of “too big to fail” institutions enabling excessive risk taking, economic shocks, animal spirits, rapid rise in debt, and the list goes on. To our mind, the real culprits of financial crises are (i) preeminence of interest-rate-based debt contracts and (ii) fractional reserve banking.*

Keywords: asset bubbles; contagion; debt; financial crises; interest; leverage

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Introduction

Throughout history, recurring financial crises have been a feature of the economic landscape. Although financial crises are not all exactly the same, they share some common characteristics. Their fallouts are generally more devastating than those of standard economic recessions because finance is important for every sector of the economy and thus no sector of the economy is spared. Financial crises are accompanied by severe and prolonged economic downturns, high unemployment, slow economic recovery, and, invariably, big losers and winners. Moreover, it takes time to unwind (deleverage) the accumulated debt that brought on the crisis. In the throws of economic pain there is much posturing and talk of reform and better regulations and supervision, and yet very little is ever learned or fundamentally changed in the aftermath of the crisis.

The 2007–2008 financial crisis has been aptly coined the “Great Recession.” Since its onset and the resulting economic downturn—the significant drop in US economic output, high and stubborn unemployment, economic stagnation, slow economic recovery, and the prediction that slow growth would be the new normal for years to come in the United States and in much of Western Europe (as their financial systems are closely linked to the US system)—there has been increasing debate over the causes of financial crises. The debate has focused on the role of debt or interest-rate-based lending in fueling financial crises. The idea that debt or credit may be the most important reason for financial crises has been around since the writings of Keynes in the 1930s and in the post–World War II era it was revived by Charles Kindleberger’s pioneering 1978 book, followed by Minsky, and more recently by the research of Reinhart and Rogoff and Mian and Sufi. The central message that seems to be emerging is that all financial crises have been driven by rapid growth in debt (some focusing on public debt, others on private debt, and a few on total debt) to unsustainable levels and no matter what label (such as currency or banking crises) is assigned to them they are at their core debt crises. Rapid growth in debt cannot be supported and financed by a real economy that grows at a much slower pace. While we have said this and more for nearly ten years with little acknowledgment, we are delighted that at least now others are coming around to the same way of thinking and this may be an opportune moment to present our thinking in a form and format that may appeal more readily to nonspecialists as well as to specialists.

The debate has also shifted somewhat from analyzing the “what happened” and the “why” of the credit crisis to questioning the entire edifice of the economic and financial ideas developed since World War II. This has led to new insights as to the foundational role of interest-rate-based debt financing and the structure of a banking system, whereby banks create money (as banks issue demand deposits, a form of money) by keeping a small fraction of their deposits as reserves and lending the balance and in the process assuming great risk. Extensive research has provided empirical support for the views of Kindleberger, Keynes, and Minsky, that debt financing creates instability in the form of cyclical behavior of boom and bust. While there is still much convincing to be done in the face of powerful special interests, there may be the beginning of a convergence to the belief that our financial system is fragile because of the preeminence of interest-rate-based debt and the role of fractional reserve banking, which together facilitate high leverage and constitute the root cause of financial crises in our contemporary market capitalist system. In other words, rapid growth in interest-based debt is the precursor to bubbles (in stock prices, real estate, and other assets) and to widespread or systemic bankruptcies. The reason why debt (and thus debt contracts) is seen to be at the heart of widespread bankruptcies is that debtors assume excessive risk (risk that they cannot manage) and when their ventures fail they ignite a chain reaction of defaults that bring down lenders who are in turn also debtors and highly leveraged themselves.

Definition and the varied explanations for the causes of financial crises

A financial crisis could be envisaged as a crash in any number of asset prices, such as real estate, stocks, gold, and numerous of other commodities, following a speculative asset boom or as a banking crisis that ensues on the heel of a liquidity shortage and an impairment of bank assets. A financial crisis causes defaults and bankruptcies that adversely affect the banking system, is followed by the financial ruin of depositors (to the extent that they do not have deposit insurance) and companies, and a sharp decline in economic activity and employment. A web of cash flows and money incomes links banks, firms, and consumers, as the spending of one is the income of another. Contagion (transmission and spreading

of financial volatility and risk) in financial sector is enhanced because of interlocking claims and liabilities, and information asymmetry limits the ability of creditors to judge risk. The risk of contagion and the widespread damage of financial crises are the two principal reasons calling for government vigilance towards regulations, supervision, and enforcement (Crockett, 1996). Default by some economic agents may freeze the payments system and trigger general default and loss of incomes. Banks may face default on their loans and sharp depreciation of their assets or a sudden and massive withdrawal of deposits, and as a result may be unable to settle their liabilities. During financial crises, banks may suspend redemption of deposits and have to be bailed out or simply fail and close their doors.

Three mainstream explanations for major financial crises and their ensuing fallout are: (i) a major economic shock (e.g., natural or political disaster) that causes losses that are transmitted throughout the economy and in turn bring on a crisis; (ii) a general credit freeze (banking crisis) whereby banks are reluctant to lend because of heightened risk or impaired balance sheets; and (iii) “animal spirits”—irrational exuberance and beliefs that drive up asset prices into the bubble zone, with greed overwhelming fear. But this is only the tip of the iceberg. The diagnoses of the causes of financial crises have been more numerous and are truly diverse; often causes are analyzed as effects and effects are analyzed as causes, as well as symptoms being confused with causes.

Financial crises have been blamed on: the shock from bad harvests as in the case of England in 1847, resulting in large gold outflows to finance food imports; traders in stock markets and their manipulations of stock prices, “talking up” stock returns to push stock prices to high speculative levels, as was the case of South Sea Company in England in 1720 and the Mississippi Company in France in 1720; numerous swindles such as the banking panic of 1907 that was precipitated by an attempt to corner stocks, with the failed effort depressing share prices by a further 50 percent in 1907, inflicting losses on banks, and precipitating a run on banks; and speculation, such as the case of the Barings Bank (1762–1995), which fell in 1995 because of the lack of sufficient internal controls. Marx (1894) attributed financial crises to low wages for labor and large surplus value for capitalists and entrepreneurs. Low-wage incomes would not enable labor to buy the output of goods being produced, leading to overproduction. Owners of capital would stimulate the working class to buy more and more of the expensive goods, houses, and durable goods,

pushing them to take on more and more expensive credits, until their debt becomes unbearable. The unpaid debt would lead to bankruptcy of banks and thus to a financial crisis.

Still others, which included a number of renowned economists, such as Thornton (1802), Ricardo (1817), Marx (1894), Wicksell (1898), and Hayek (1931), pointed to an extended period of low interest rates as the catalyst for financial crises. Thornton and Wicksell developed the doctrine of two interest rates, the money market rate and the natural rate of interest. The natural rate is the rate of profit or return in relation to invested capital, and depends on innovation, factor (labor, land, and other inputs) prices, and product prices, and may rise and decline with a change in these factors. The money rate of interest is the cost of borrowed capital. The rate of profit cannot be observed and can only be estimated. On the one hand, if the rate of profit exceeds the interest rate, the demand of credit will expand, leading to a credit and economic boom, and prices will rise, setting off a cumulative inflationary process. On the other hand, when interest rates rise above the rate of profit, because of tighter money or simply a fall in the rate of profit, the demand for credit contracts and prices may decline. Keynes (1936) advanced the notion of marginal efficiency of capital. When the marginal efficiency of capital is higher than the interest rate, investment demand expands, as does the demand for loans to finance the higher level of investments. When the marginal efficiency of capital falls below the rate of interest, the demand for credit contracts.

Many economists have argued that an extended period of low interest rates can stir a credit boom (borrowing binge), leading to rising economic growth, and then to rising prices before the onset of a financial crisis where borrowers cannot meet their debt payment obligations and thus default. For instance, the Great Depression was preceded by an epoch of low interest rates in the United States and England. Interest rates fell from 8 percent in 1920 to 3 percent in 1924 and remained low thereafter. Low interest rates reduce the cost of borrowing and thus the cost of speculation. Thus an extended period of low interest rates encourages speculation and as asset prices rise the herd instinct kicks in as everyone wants to get in on the action. Moreover, as low interest rates reduce the income of institutions and individuals who rely on fixed income revenues, they are encouraged to take on more risk in order to increase their revenues and incomes.

The recent financial crisis has produced its own share of explanations for the causes of such crises. Some have blamed financial regulators for

being asleep on the job as events unfolded. Many experts and politicians have faulted bankers and financial markets such as hedge funds, mutual funds, and equity funds for excessive risk taking and the inability of regulators to understand, much less regulate, complex financial derivatives. Securitization (packaging securities such as mortgages, credit card debt, or automobile loans and issuing a new security that is represented by these and other underlying securities, with the income from these loans passed on to the buyers of the created securities) of illiquid assets such as mortgages and multiplication of derivatives in a deregulated financial industry were faulted for debt trading, excessive leverage, and a highly inflated credit pyramid. Some have attributed the crisis to the increasing number of institutions that were deemed “too big to fail,” which were motivated to take on excessive risk knowing that they would be bailed out in case of temporary liquidity problems and even insolvency because of the danger attributable to the systemic damage that their failure would ignite. Others have faulted the credit rating agencies for their incestuous relationship because they are paid by the entities they rate; and some of these agencies gave high credit rating to financial securities that were junk. Still others (Gorton, 2010) put the blame on the run on banks, not by individual depositors, as in past crises, but by institutional investors in what he calls the parallel banking sector, with credit quality concerns, in turn, motivating banks to withdraw from the interbank loan market.

Still others, most notably Ben Bernanke, the former chairman of the US Federal Reserve, have argued that the crisis was a consequence of large global macroeconomic imbalances and large savings held by the emerging markets. The latter was itself a consequence of the financial crisis of 1997–2000 in the emerging markets. During the crisis, these emerging economies experienced firsthand the absence of an effective and representative global lender of last resort that could provide balance of payment support fairly and adequately during the crises. Consequently, they protected themselves against future occurrence of crises by accumulating large reserves, a significant portion of which was invested in government bonds issued by industrial countries, especially the United States. This, in turn, led to low-, medium-, to long-term interest rates, a huge expansion of debt, and rapid expansion of liquidity in search for higher yields. Increased liquidity led to an aggressive incentive structure for the promotion of financial innovations and engineering of complex, opaque financial instruments. The design of instruments and their packaging were engineered such as to create an illusion that they

possessed risk-return characteristics that were more attractive than the risk exposure attributes of their underlying assets. This process encompassed the entire spectrum of activity, design, origination, packaging, trading, distribution, wholesale, and retail. Increased global demand for financialized assets led to increasing prices for these paper assets that had little or no connection to the real sector of the economy, thus validating expectations of ever-increasing asset prices. Higher asset prices validated expectations of ever-increasing asset prices and the creation of a full-blown asset bubble. Interconnected international asset markets ensured the spread of the US-originated crisis rapidly and globally through the contagion process.

We now turn to three other explanations for the cause of financial crises in more detail.

1 Keynes-Chicago Plan-Minsky

Evidence surveyed in many studies showed that every economic and financial crisis was preceded by an expansion of credit. For example, Irving Fisher (1933) argued that overindebtedness precedes major financial crises as enterprises borrow and expand capacity on the basis of expectations of higher profits. Credit expansion is a multiplicative process as the fractional reserve banking system creates money in the form of demand deposits. If a person deposits \$100 in a bank, the bank would lend the \$100 to earn interest income. But it has to keep a fraction (say 20 percent or \$20) in what is called required reserves and can lend the balance (\$80). Thus the bank has created \$80 of new money. A person who receives credit of \$80 will not keep it idle while paying interest. The borrower will either spend it on consumption or invest it with the hope of earning profits. The recipient of the borrowers of \$80, namely, seller of goods and services or a provider of assets, will deposit the proceeds in a bank. Hence, the loan becomes a deposit in another bank and creates excess reserves and the bank will make new loans and repeat the process, making new loans and reducing their excess reserves. Thus credit expansion takes place through what is referred to as the credit multiplier, or in other words banks can create money in the form of demand deposits by lending, with the reserve requirement limiting how much they can lend and thus limiting their money creation ability. Credit expansion may be accompanied by an economic boom and speculation. Both lead to higher demand for credit and renewed credit multiplication. Banks then use all available innovations to increase the volume of credit to increase

their profits. They use the innovation of securitization to increase their lending without relying solely on traditional depositors' money. Banks gain through loan commissions and fees and on interest rate differentials between issued loans and issued securities.

The alternative perspective maintains that crises are internally generated (endogenous) instability episodes that inevitably arise from the basic debt-credit-interest rate relation. Fractional reserve banking (banks lending their deposits and keeping a fraction as reserves) and its close relatives—in the form of money market funds and hedge funds, plus other financial innovations operated by highly leveraged institutions—ensure that the credit and debt creation process is amplified manifold during the upswing phase of the financial cycle, to lead to asset bubbles. The process works in reverse during the downswing phase, leading to a credit crunch once the bubbles burst.

The view that the fractional reserve system is a source of instability—creating a financial system dominated by interest-rate-based debt in which the credit multiplier and leverage ratio mechanisms are operative—found its most forceful expression during the years of the Great Depression. This recognition led a major group of American economists, including Irving Fisher (one of America's greatest economists of all time), to submit the Chicago Reform Plan to President Roosevelt but it was not implemented. This proposal required banks to hold 100 percent reserves against deposits. The Plan claimed four major advantages: (1) much better control over the major sources of business fluctuations—sudden increases and contractions of bank credit and the supply of bank-created money; (2) complete elimination of bank runs fueled by illiquidity, insolvency, and rumors; (3) dramatic reduction of the (net) public debt; (4) dramatic reduction of private debt, as money creation no longer requires simultaneous debt creation. Recently, Benes and Kumhof (2012) found support for all four claims. Moreover, they found that the Plan would lead to an output gain approaching 10 percent and that the inflation could drop to zero without resulting in a problem for policymakers.

Whereas these American economists viewed the fractional reserve banking system and its power of credit (debt) creation as the source of financial instability, Keynes saw another deeper problem. He argued that market capitalism, left alone, was inherently unstable. The core of this argument maintained that the real phenomena of saving and investment came from two different subsectors of the real economy:

consumers and businesses. They save and invest for different reasons. Their coordinated behavior is subject to uncertainty and even under the best of circumstances their equality cannot be assured. The existence of a financial system dominated by ex-ante fixed interest rate debt contracts (a promised rate of interest to the lender in the face of uncertain future returns that the invested funds would bring) exacerbated this coordination problem. Since the equality of saving and investment cannot be assured, the emergence of unemployment and inflation are likely. Not only could the equality of saving and investment not be guaranteed because of the coordination problems, but also it was likely that not all savings would be channeled into productive employment-creating investment. This, Keynes argued forcefully, in his famous book *General Theory of Employment, Interest and Money* (1936), was because of the role of interest in creating a wedge between savings and investment. He viewed interest as “rents” and those who demanded it as “rentiers.”

Keynes was neither the first nor the only economist to hold such views. Nor was the expression of the concept confined to the twentieth century (Ferguson, 2008). However, it was Keynes who made the relationship between interest-rentier and the lack of coordination a centerpiece of his explanation for why market capitalism was unable to achieve full employment. Moreover, he argued that the rentier-interest rate relation was responsible for another “evil” of capitalism. Keynes not only states that “Interest today rewards no genuine sacrifice” (1936, p. 376), but its compounding leads to wealth accumulation at an accelerated pace, without the commensurate risk or work. This tilts income and wealth distribution toward the rentier (more on this in the next chapter). So convinced was Keynes of the detrimental role of the predetermined fixed interest rates that he suggested that although unemployment and poor income and wealth distribution were two “social evils,” the real “villain of the piece” creating both, as well as inevitable instability that followed, was the rentier class that finds advantage in holding liquid assets rather than risking their holdings in employment-creating investment. They would part with them only if they could loan them in the form of iron-clad debt contracts that guarantee full repayment of principal and interest. The solution he offered was the “euthanasia of the rentier.” This was to be a gradual process that “will need no revolution” but could be achieved by “socialization of investment” (Keynes, 1930, 1936).

One of the most perceptive, productive, and astute followers of Keynes was Hyman Minsky, who used the Keynesian foundation to

produce valuable insights into the workings of financial capitalism. As did Keynes, Minsky considered such a system in which debt dominates as endogenously and endemically unstable. Indeed, he argued that in a debt-dominated financial system of contemporary capitalism, the structure itself amplifies disturbances. His major contribution is known as the “financial instability hypothesis” (Minsky, 1984), with its pivotal element being debt. So important is debt that Minsky himself considered his hypothesis as a “theory of the impact of debt on system behavior.” This hypothesis contains two central propositions. The first states that there are two financing structures: one promotes stability and the other instability. The more a financial structure, as measured by debt to equity ratio, tilts toward debt, the more fragile the system becomes. The second proposition argues that in financial capitalism, stability is not sustainable because, during a prosperity phase, stability sows the seeds of instability. Minsky refers to the second hypothesis as saying “stability is destabilizing.”

During the stages of prosperity, businesses finance their activities using internal funds or through equity finance (issuing new shares). If they borrow, they do so only if their future income streams are sufficient to meet payment commitments on both the principal and interest, over the lifetime of the contracted debt. Minsky calls this “hedge finance,” and when hedge finance dominates—that is, financing is mostly equity or internal funds with minimal debt commitments that are validated compatibly by an underlying income stream—the system is stable. As profit opportunities intensify during prosperity, however, there is higher reward to borrowing (taking on debt) as enterprises take on riskier investments. More and more firms and other participants tilt their financial structure toward debt and increased leverage. Minsky calls this “speculative finance,” and enterprises using this type of finance as “speculative units” who overwhelm their financial structure with debt to the point where their income stream becomes insufficient to pay the principal that becomes due. They can only pay the interest but must rollover the principal. But firms continue to borrow to the point where their financial structure is made of debt commitments that can only be validated by more borrowing to pay both principal and interest. When firms are in this state, Minsky referred to them as Ponzi units and their financing as “Ponzi finance.” Minsky considered contemporary capitalism as a dynamic system with a number of dialectical processes and feedback loops at work that created issues of instability, unfair distribution, and

structural unemployment. In this, he was following Keynes, and, like Keynes, he thought the dialectic forces within the system would lead it into disaster if the system were left to its own devices.

In the aftermath of the recent credit crisis, many found Minsky's diagnoses of past crises—and his explanation of potential turbulences ahead—to be insightful. He had warned of the growing fragility of the system, debt buildup in the household and business sectors, as well as the adverse consequences of securitization, debt globalization, and deregulation. Minsky had observed the growing fragility of the US financial system since 1966, as a boom and bust in one asset market was followed by the formation and implosion of another bubble in a different asset market. After him, his colleagues and former students saw a continuation in the phenomena of bubbles of debt and credit forming and then imploding. In Minsky's tradition, they considered these not as isolated incidents because of external factors, but as “rolling bubbles” signifying the growing fragility of the financial system. George Soros (2008) too had seen each asset bubble connected to other bubbles and all part of a long-term formation of a “super bubble” of debt and credit that finally imploded in 2007–2008.

2 Financialization: James Tobin and Hans Tietmeyer

The period between the second half of the 1960s and 1970s was one of much progress in the theory of finance and laid the foundation for derivatives and securitization. By the mid-1970s, the application of these achievements initiated a drive for financial innovations, unmatched in history, which gave finance a significant presence in the United States and in most other industrial economies and with the potential to take on a life of its own. By the early 1980s, finance was well on its way to dominating the real sector of the economy. In 1984, James Tobin sounded the alarm about the emergence of a “paper economy.” In little over a decade later, the “paper economy” was not only dominating the real sector, but was well on its way to decouple from it. This period coincided with the presidency of Hans Tietmeyer at the German central bank. Much respected, Tietmeyer used his presence in domestic and international forums to warn about “financialization,” but seemingly to no avail.

A “paper economy” has distinct financial characteristics: (i) its finance is speculative rather than productive; (ii) its finance is focused on the short term, buying pieces of paper and trading them back and forth in rapid turnover; (iii) its finance decouples from the real sector; (iv) it

extracts, rather than adds, value from the real sector; and (v) it has only an illusory or, at best, a tenuous (virtual) anchor in real assets. How was the “paper economy” fairing after the crisis? Data shows that at the end of 2011, the nominal value of paper instruments—such as interest rate swaps, collateralized debt obligations, credit default swaps, and others—had no connection, tenuous or otherwise, to the real economy and were \$700 trillion in the United States alone. This is 4.5 times as large as the capitalization of the global debt and stock markets combined (Bogle, 2012). Data also reveals that stock markets too are mostly serving the paper economy. During a recent five-year period, of the total volume of \$33 trillion annual trading in the US stock markets, on average only \$ 250 billion per year provided additional equity capital to new and established companies. In other words, only 0.8 percent of the \$33 trillion was on average devoted to capital formation in the real sector. The remaining 99.2 percent was devoted to pure finance activities: trading pieces of paper with no additional capital provided for productive businesses. This is a paper economy! Meanwhile, debt continued to pile up in major economies with a total debt by 2010 (government, households, and corporate) in the United States, Japan, Canada, and 15 European countries ranging between a low of 238 percent of GDP in Austria to 456 percent in Japan (Cecchetti, Mahonty, and Zampolli, 2010).

Importantly, credit expansion has contributed to a financialization of the economy, that is, an increase in the relative size of the financial sector in the total economy. Too much resource has been allocated to financial markets, in the form of thousands of speculative entities such as private equity funds, structured investment vehicles, and hedge funds. In turn, the growth of these institutions and instrument innovations for speculation and hedging added substantially to the opacity and complexity of the financial system, leading to greater uncertainty. Moreover, traders (with a short-time horizon), instead of investors, dominate the financial markets. With very low interest rates, speculators, in search of yield, engineer structured products to increase monetary returns and play games against one another. All in all, the result of these activities has been the growth of complexity in the financial system with increased volatility, risk, and vulnerability.

Credit expansion on the basis of cheap money causes distortions in the allocation of financial resources, particularly those that adversely affect long-term investment in the real economy. Projects with very low return are undertaken. Credit finances household demand that has shifted to

housing, automobiles, and durable goods. A large capacity is installed to meet this demand. However, when the credit process goes bust, this debt-financed demand vanishes. Companies face large inventories of unsold real estate, durable goods, and excess production capacity, and find themselves in financial trouble.

3 The Financial Crisis as “Moral Failure”

There is a third alternative explanation for the credit crisis as a major sign of a massive “moral failure” plaguing contemporary society. There is a view that considers finance as “a profoundly moral issue, as it involves the creation of relationships of trust, often with very high stakes indeed” (Davies, 2012). This is perhaps the reason why the revelation of the extent of fraud and other financial and economic crimes committed by financial institutions created intense moral outrage reverberating in the “occupy” protest movement. Thus, in an expression of moral outrage, Zuboff (2009) argued that while there is merit in technical explanations of the credit crisis, what is ignored in these analyses is “the terrifying human breakdown at the heart of the crisis.” She maintained that at its “heart,” what drove the crisis was a sense of “remoteness and thoughtlessness compounded by a widespread abrogation of individual moral judgment.” This is promoted by the “business model” that dominates, and is characterized by, the self-centeredness of its practitioners, who operate at an “emotional distance” from their victims and from the “poisonous consequences” of their actions. Zuboff found to be appropriate the philosopher Hanna Arendt’s formulation of “the banality of evil,” in her observation of Adolf Eichmann in his trial in Jerusalem. Arendt observed that Eichmann did not appear “perverted and sadistic,” but “terribly and terrifyingly normal” (Arendt, 2006; Zuboff, 2009). Accordingly, Eichmann was motivated by nothing except “an extraordinary diligence in looking out for his personal advancement.” The same motivation animated the practitioners of the “narcissistic business model” operative in the runup to the crisis. Zuboff argues that “the crisis has demonstrated that the banality of evil concealed within a widely accepted business model can put the entire world and its people at risk.” She concludes: “In the crisis of 2009 the mounting evidence of fraud, conflict of interest, indifference to suffering, repudiation of responsibility and systemic absence of individual moral judgment produced an administrative massacre of such proportion that it constitutes economic crime against humanity.”

The crisis and its aftermath have led to a debate about the need to consider the role of ethics and morality in the economic and financial workings of contemporary capitalism (*Citizen Ethics in a Time of Crisis*). In this regard, it should be noted that Adam Smith, considered to be the father of Western economics, wrote his book *The Theory of Moral Sentiments* a decade and a half before his *Wealth of Nations* and an argument can be made that his propositions regarding the workings of market capitalism must be placed within the institutional framework of *The Theory of Moral Sentiments* that provides the mooring. His earlier book provides the moral anchor for his more famous second book, *The Wealth of Nations*. The decoupling of the two books, in effect, cut off economics and finance from the ethics of the system that was essential for its successful operation as envisioned by Smith.

The culprits—inflexible interest-based debt and fractional reserve banking

The financial system is characterized by financing (financial intermediation between savers or capital surplus entities and investing entities or capital deficit entities) through interest-rate-bearing debt contracts and to a lesser degree equity contracts and fractional reserve banking (along with investment banking and mutual funds). The core of this financial system is the transfer of risk (with a lender entering into a contract and is assured of a return without taking the risk that the borrower's investment will not perform) on the basis of a predetermined interest rate and fractional reserve banking (banks risking their depositors' money). Under certain conditions risk transfer may, without warning or concurrence (stealthily and without the concurrence of the parties exposed to risk), switch over to risk shifting (arising if a company or a bank in financial difficulties and with significant debt takes on more risk, with the potential extra profits accruing to its shareholders and the downside risk of bankruptcy falling on the holders of debt, that is, risk shifted from the former to the latter). Controlling and abating risk transferring to risk shifting requires thoughtful regulation, vigilant supervision, and strict enforcement; and in the absence of these measures (normally opposed by the financial industry), financial crises are sure to always follow.

The interest-rate-based debt contract system that transfers risk, in addition to transferring excessive risk to those who cannot handle it,

and more importantly shifting risk “stealthily” to others who are not even aware of the shifting risk and who have not given their consent and ultimately resulting in a financial crisis, has a number of other deleterious fallouts. It leads to financialization (financial capital over-riding real capital). It decouples the real economy from the financial sector (noting that the main purpose of the financial sector is to provide desired instruments for savers and to efficiently intermediate between them and investors in the real economy). Fixed and predetermined interest on lending and its compounding and risk transfer coupled with massive transfers of inheritance have in large measure created a rentier class and a highly skewed wealth and income distribution in the United States. In turn, the financial crises resulting from risk transfer and risk shifting lead to massive economic loss in the form of reduced output, high unemployment, and slow economic recovery, which adversely and disproportionately affect the less fortunate members of society.

Keynes (*Economic Journal*, 1931) argued that interest-based risk transfer system created the two “evils” of capitalism, namely, preventing full employment in the capitalist market economy and creating large income and wealth inequalities. Keynes went on to argue that the “villain of the piece” was the interest rate mechanism. Minsky clearly considered a debt-dominated financial system as endogenously and endemically unstable. Kindleberger was a pioneer in getting to the core and addressing the reasons for recurring financial crises (rapid runup in debt). More recently, Reinhart and Rogoff have added valuable data and insights, as have Mian and Sufi in recommending risk-sharing contracts.

The Mian and Sufi thesis is that a big rise in household debt is the root cause of severe financial crises and recessions. Recessions may be triggered by a collapse in asset prices (such as housing prices) and access to large and unsustainable external borrowing (current account deficits) that abruptly end in large banking sector losses with credit freezing up. But invariably severe crises are preceded by large runup in household debt. What makes banking-financial sector crises exceptional, or severe, is when it is preceded by a rapid rise in household debt, with the severity of ensuing recession largely determined by the extent of the increase in household (private) debt. A big runup of household debt leads to a decline in household spending (with the bigger the runup in debt, the bigger the decline in household spending) during a recession because of defaults and loss of wealth. Households cannot service the money they have borrowed from banks resulting in losses for banks, leading to job

losses. At the same time, businesses incur losses and run into financial difficulties as household demand declines and they lay off more workers. The financial problems of businesses reverberate further on banks and business activity declines even more followed by a banking crisis with credit freezing up.

The important element to Mian and Sufi is household debt. The facts lead Mian and Sufi to conclude that the lending boom fueled the rapid rise in housing prices and not the other way round. As households then borrowed more, home prices rose. All asset price bubbles are a result of excessive supply of credit. Timing indicates that the fall in household consumption (not a decline in investment) is the catalyst and the root cause of the initial big fall in GDP. Only later is there a fall in fixed investment because of job losses and lower private consumption and demand. Thus GDP falls further. All of these factors feed on one another, reducing demand and in turn output. Because of the large runup in household debt leading to such crises, financial crises hurt the poor more adversely and this in turn exacerbates the recession, job losses, and the crisis. The reason is that in the event of bankruptcies borrowers with debt contracts (especially mortgages) end up losing some, or all, of their initial down payment (equity). Foreclosures are a result of debt and lead to housing prices going down even further. Lenders (ultimately the wealthy who own financial assets, including bank shares) have contracts that impose all initial losses (the down payment equity) on the borrower. Thus, depending on the extent of the asset price collapse, the borrower may be forced to absorb most, if not all, of the losses.

Moreover, the monetary and fiscal authorities invariably bail out lenders. As a result, severe financial crises and recessions exacerbate wealth inequalities by exposing borrowers (the less fortunate) and protecting lenders (the fortunate). Because of the deteriorating distributional wealth effect of debt contracts and job losses, it is the expenditures of poorer households that get specially affected because they have a higher marginal propensity to consume from housing wealth. This impact is further corroborated by the fact that the Tech Bubble did not lead to the same decline in spending, job losses, and recession. There is fraud in both debt and equity markets but it is more prevalent in debt markets and because lenders feel that they have a senior claim in debt contracts and they don't think fraud is as important. The proper policy response should have been to restructure household debt, given levered losses, and not to bail out bank shareholders.

The bursting of asset bubbles, in turn, affects the banking sector. First, credit losses from debt default or depreciation of assets may create a large divergence between assets and liabilities that remain fixed in nominal value. This in turn puts pressure on bank capital. For banks that are highly leveraged, losses that may at first appear not to be excessive relative to total assets can wipe out a bank's capital and thus render it insolvent. Second, in the conventional system bank credit has no fixed relation to real capital in the economy and bears no direct relation to the real rate of return. Credit expansion through the credit multiplier is a fundamental feature of conventional banks. Cash flow could fall short of expectations and force large income losses on banks, especially when the cost of funds is fixed through a predetermined interest rate (the classic asset-liability mismatch we discussed in the previous chapter). Third, banks caught in a credit freeze with a drying up of liquidity may default on their payments. Fourth, banks are fully interconnected with one another through a complex debt structure; in particular, assets of one bank become instantaneously liabilities of another, leading to fast credit multiplication. A credit crash may cause a domino effect that may impair even the soundest of banks.

Credit (debt) has other ominous implications. Credit can be issued to finance consumption, and hence may rapidly deplete savings and investment, whereas equity finance finances investments. The depletion of savings could be significant if credit finances large fiscal deficits. Hence, credit is no longer directly related to the productive base as in the equity-based system, and the income stream from credit is no longer secured by real output as shown for the equity system. Credit expands through the credit multiplier, leading to increased default risk, whereas equity in the equity-based system cannot expand more than real savings. And with securitization, credit can expand theoretically to an infinite degree as debt can be packaged and sold with the proceeds used to finance new loans.

In the financial system, we see that credit expansion may have no bearing to the real capital base and to the real cash flow in the economy that may be required for debt servicing. If lending were extended to finance higher levels of consumption (as opposed to investment), then credit could erode the capital base and economic growth. According to the recently launched Fiscal Monitor of the International Monetary Fund (IMF), the average debt per working age person in advanced economies will increase from \$27,600 in 2007 to \$62,000 in 2016, and

from \$1,500 to \$2,200 in emerging markets. In 2009, the IMF estimated that gross general government debt in high-income advanced G-20 economies is expected to grow from 78 percent of their GDP in 2007 to 120 percent in 2014, an increase of 40 percent over a seven-year period. These countries suffer from high unemployment, fiscal instability, low capacity utilization, and high debt and leverage. The stress and strain on the international trade and financial system and its associated arrangements did not suddenly become apparent after the recent crisis; in the 1990s, Japan, Russia, Argentina, Brazil, and Mexico were sending distress signals. Neither the signals nor the lessons of these crises made any noteworthy impact on the way the world economic system and its policies were being steered.

There is a palpable anxiety and growing concern leading to the search for an alternative to the present interest-based debt-financing regime and fractional reserve banking. To avoid crises, the prevailing systemic risk transfer regime has to be gradually married to a risk-sharing system of contracts and the fractional reserve banking by a movement toward a level closer to 100 percent reserve banking. Renowned economists at different times and places have said much of this in bits and pieces since the Great Depression.

Conclusion

A financial crisis is manifested as a crash in any number of asset prices following a speculative asset boom, or as a banking crisis that ensues on the heel of a liquidity shortage and an impairment of bank assets and invariably leading to a banking crisis and a freezing of credit. These crises have more serious economic fallout—sharp decline in economic output, a spike in unemployment, slow and prolonged recovery—than simple recessions as an impaired financial system spares no sector of the economy and deleveraging (winding down excessive debt buildup) takes time. There is no shortage of explanations for financial crises. They run the gamut from moral failure, embezzlement, fraud, Ponzi schemes, lax regulations, supervision and enforcement, prolonged periods of low interest rates, government bailouts of “too big to fail” institutions enabling excessive risk taking, economic shocks, excessive foreign savings, animal spirits or irrational exuberance, to a rapid rise in debt. Some believe that reforms or policy initiatives to address financial crises and ensure the

smooth workings of institutions and markets would succeed if market discipline were maintained and efficiency was applauded by allowing inefficient firms to go out of business and indebted individuals and institutions lose their money.

To our mind, the real culprits of financial crises are (i) the prevalence of interest-rate-based debt contracts and (ii) fractional reserve banking, which compounds the debt burden by more and more lending or leveraging. While debt, or credit, is the seed of financial crises, it has other implications such as financing excessive consumption and depleting savings with ominous implications for future growth; the unemployment that ensues financial crises is more likely to affect the disadvantaged; and defaults and loss of equity are more concentrated among the less fortunate members of society. Moreover, the US financial system favors the more fortunate members of society and this coupled with massive transfers of inheritance exacerbates income and wealth inequalities.

3

Recurring Financial Crises—The Fallout

Abstract: *The fallouts of financial crises are severe. The problems are intertwined and the process of financialization and the runup in debt is an important cause of stagnant real wages, increasing income, wealth disparity, slower economic growth and the fuel for recurring financial crises. These are in large measure because of the changes wrought by financial sector interests and are related to the structure of the economy, economic policy, and the behavior of corporations. The dissipation of savings, the growth effects of increased indebtedness, increased share of financial sector profits, shifts in income away from workers, and lower retained profits of corporations tend to reduce long-run equilibrium growth. They have to be addressed in a comprehensive manner to be effective.*

Keywords: bank failures; deleverage; foreclosures; recession; unemployment

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Economic downturn, unemployment, and associated costs

As we have said a number of times earlier, the adverse economic impact of a severe financial crisis is much more pronounced than that of a run-of-the-mill economic recession. This has been the case throughout modern history and has been corroborated in numerous studies. The basic reason is that in a financial crisis the financial system—banks, financial markets, and capital markets—becomes impaired, and financing to all sectors of the economy, including households, is adversely affected. In essence, financial crises are much more pervasive than ordinary recessions because no sector is spared their wrath! In addition, because financial crises are fueled by leverage (a big debt buildup) it takes time to reverse the process or deleverage (reducing the burden of debt at the expense of current spending) with continuing adverse economic fallouts while the deleveraging process continues. As a result, the economic downturn is generally more severe and prolonged, and with economic recovery at a slower pace.

In the case of the recent crisis, a number of fallouts have been attributed to the crisis. The unemployment rate in the United States jumped from 5.0 percent in December of 2007 to a peak at 10.1 percent in October of 2009 with 15.4 million who could not find jobs. The unemployment rate had not recovered to its precrisis level even by the end of 2014. But this statistic tells only a part of the story as, in addition, many workers became so discouraged that they simply gave up looking for jobs (persons who are not counted in the official unemployment statistic) and thus labor force participation (even after adjustments for the aging population) had not recovered to its precrisis level. From 2007 to 2010, median family income fell from \$49,600 to \$45,800. The number of families falling below the poverty line climbed steadily. In 2010, over 11 million homeowners owned homes worth less than their mortgages, and a total of more than 4 million homes have already been lost to foreclosure since the crisis began.

There are numerous ways to assess the economic cost of the 2007–2008 financial crisis. One way is to estimate where the economy, or more precisely national output, might have been if it had stayed on its historical trend and had not been thrown off course and adversely affected. Such estimates are by necessity not exact and can be best presented by a range because one has to make an assumption about when in the future the

economy would get back on the path that it was on before the financial crisis. In the case of the recent crisis, the economy at the end of 2014 was still below its historic trend and thus the estimate would have to be in a range that depends on when we get back on the trend line (a more accurate estimate could be obtained when and if the economy gets back on its precrisis path). In September of 2013, the Federal Reserve Bank of Dallas estimated the loss in economic output (or GDP) resulting from the crisis in the range of \$6–\$14 trillion.¹ Again, the range depends on when the economy gets back on track, and if the economy were to be permanently on a lower path, then the economic output loss could even exceed \$14 trillion. Now what do these figures mean? To put them in context, these figures represent an average output loss of \$50,000–\$120,000 per American household; note that this is an average figure and as we reason later on in this chapter the loss is likely to be skewed more against poorer households, a result that would increase wealth and income disparities. These losses are losses in the sense that they are lost for the United States and its residents, into thin air. They are gone. We cannot get them back!

But the crisis had other implications as reported in the Dallas Federal Reserve study. The net worth of US households fell by \$16 trillion (24 percent of total household net worth) from the third quarter of 2007 to the first quarter of 2009—largely losses in financial assets and in real estate values. The Dallas Federal Reserve then adds human capital losses (current wage income and discounted future income). These losses (what they refer to as path-of-consumption approach to assessing the impact of the crisis), in net worth and in human capital, are not permanent losses in the same sense as the lost output figures mentioned in the previous paragraph. The cost of the crisis would jump to \$15–\$30 trillion if these losses were added to the permanent losses. There are also losses that are even harder to quantify and thus even less precise. The two major categories here are “national trauma and lost opportunity” and “extraordinary government support.” These were estimated as \$14 trillion and \$12–\$13 trillion, respectively. The national trauma and opportunity costs include stress, diminished sense of self-worth, family turmoil, all manner of psychological problems and frustration with finding a job, and ultimately just giving up.

To get a better idea of what the figures mean, these loss figures should be compared to the GDP figure of \$15 trillion (national economic output for an entire year) for the United States in 2007 given in this study. The loss figures are impressive in any comparison to annual GDP. Taking the average (of the low end and the high end) of estimated output loss, it represents

about 66 percent of GDP; the average of the path-of-consumption figure represents 145 percent of GDP; the national trauma effect represents up to 90 percent of GDP; and extraordinary government support 80–85 percent of GDP. If the output loss figure is combined with the trauma and lost opportunity and government support figures (all losses that cannot be recaptured), then the loss is 210–265 percent of GDP! If the approach of the path-of-consumption loss (admittedly some of which may be recaptured) is combined with trauma and lost opportunity and government support figures, then the loss is 270–365 percent of GDP!!

Even these total losses, which on a stand-alone basis are simply eye popping, cannot tell the full societal story. Some families, invariably always the less fortunate, have been simply devastated. Trust in the government and in government institutions, a crucial part of the social fabric and an important factor for economic growth, has been eroded. A large segment of the US population believes that the government exists primarily to support the big financial institutions and their rich stockholders. The notion that hard work and sacrifice will be justly rewarded in the United States has been tarnished. The American optimism about the future and dream of a better life has been dented for years, if not for generations, to come (according to multiple surveys including a survey conducted by the *New York Times* and reported on December 11, 2014).

Income and wealth distributions

During the decades of the 1980s, 1990s, and the 2000s, observers increasingly commented on the widening gap between the rich and the poor to levels not seen since the days of the “Robber Barons” in the late nineteenth and early twentieth centuries. Financialization and financial crises may have played an important role, but by no means an exclusive role, in the recent growing income and wealth disparity in the United States. There are many other candidates for the growing income inequality in the United States (and elsewhere in the world): stagnant and eroding real wage, declining labor union power, technical change that discriminates against labor, especially less educated labor, and tax policies that favor owners of capital (the wealthy). But financialization has also had a hand in this. As far as income distribution is concerned, growing financialization means an increase in the income share of rentiers, in particular, a rise in the rentiers’ interest income (on bonds, mutual funds) and dividends

(stocks and mutual funds), at the expense of firms' retained profits or households' wage income. A financial crisis does not diminish the income and wealth of this class of citizens because most have remained in their jobs, and their vast holding of financial assets is largely preserved because of government bailouts. This concentration of wealth in favor of those who own capital is further reenforced by the "magic" of compounding, something that has been identified by many noted economists.

Mian and Sufi in their book have put forth another mechanism to explain the adverse impact of the crisis on the poorer members of society, which in turn exacerbate income and wealth inequalities. Because of the large runup in household debt leading to financial crises (discussed earlier in Chapter 2), financial crises hurt the poor disproportionately and this in turn exacerbates the recession, job losses, and the crisis. The reason is that in the event of bankruptcies, borrowers with debt contracts (especially mortgages) end up losing some or all of their initial down payment (equity). Foreclosures are a result of debt contracts (mortgages) that in turn lead to housing prices going down even further. Lenders (ultimately the wealthy who own financial assets, including bank shares) have contracts that impose all initial losses (the down payment equity) on the borrower. Thus, depending on the extent of the asset price collapse, the borrower may be forced to absorb most, if not all, of the losses, while the lenders' equity (the rich) is senior and may be totally, but at least partially, protected. Moreover and importantly, the monetary and fiscal authorities invariably bail out lenders. As a result, severe financial crises and recessions exacerbate wealth inequalities by exposing borrowers (the less fortunate) and protecting lenders (the fortunate). The prevalence of debt essentially magnifies the fall in asset prices because of foreclosures and concentrating losses on the indebted, invariably the poorer segment of our society.

The increasing concentration of wealth and capital in the hands of a few, as implied in the foregoing discussion, has been significantly illuminated by Thomas Piketty in his widely and rightly acclaimed book (2014), *Capital in the Twenty-First Century*. Piketty essentially argues that owners of capital (the wealthy) have fared much better than the vast majority of society over the recent three–four decades, and will continue to do so, because the rate of aftertax return on capital has been, and will continue to be, higher than the rate of growth of the economy (GDP) that affects the average person. Namely, this favors those who derive their income from wealth (dividends and interest) as compared to those whose income comes from work, that is, the wealth and income of rentiers

(the wealthy) has grown, and will grow, faster than for those whose income is primarily derived from work; and we say primarily because there are also a new class of super financial and general managers whose pay packages are simply eye popping. Moreover, it should be noted that wealth is much more highly concentrated among the rich than is income from labor; thus, the higher the share of income from wealth, the more unequal the distribution of income.

In turn, the past and predicted higher rate of return to investments (capital) than the economy's growth rate is magnified by the financial crisis because such crises adversely affect the economy's overall growth rate (disproportionately impacting the poor); and in the aftermath of the 2007–2008 crisis it is predicted that future economic growth will continue to be below the precrisis trend and some even predict that future growth may have been permanently impaired. This may be in part because debt finances consumption, and excessive debt financing can erode savings that are needed for investment and capital formation. We can add that this effect may be further even reenforced by financial crises because, as argued by Mian and Sufi, such crises hurt the poor much more as they stand to lose a larger percentage of their capital. The concentration of wealth is further reenforced by the limited progressivity of US income tax laws, preferential treatment of capital gains, dividend income and other financial incomes, and inheritance taxes and inheritance tax loopholes that enable the truly wealthy (top 0.01 percent) to avoid most, if not all, inheritance taxes.

As a result of all of these factors—low economic growth relative to the return on capital, the magic of compounding, financial crises that affect the poorer segments of society more adversely, and tax laws (in addition to the oft other cited reasons of stagnant and eroding real wage, declining labor union power, technical change that discriminates against labor, especially less educated labor)—income and wealth distribution has become increasingly unequal over the past 30–40 years. Today, the United States has the most unequal income distribution among industrial countries. Emmanuel Saez provides what is arguably seen by academics as the most respected analysis of the changing income distribution in the United States. Briefly taking from a popularized version of his results:

In 2008, the top decile [defined as 10 percent of income earners] includes all families with market income above \$109,000. The overall pattern of the top decile share over the century is U-shaped. The share of the top decile is around 45 percent from the mid-1920s to 1940. It declines substantially to just above

32.5 percent in four years during World War II and stays fairly stable around 33 percent until the 1970s... After decades of stability in the post-war period, the top decile share has increased dramatically over the last twenty-five years and has now regained its pre-war level. Indeed, the top decile share in 2007 is equal to 49.7 percent, a level higher than any other year since 1917 and even surpasses 1928, the peak of stock market bubble in the “roaring” 1920s. In 2008, the top decile share fell to 48.2 percent, approximately, its 2005 level, and is still higher than any other year before 2005 (except for 1928)... the top percentile has gone through enormous fluctuations along the course of the twentieth century, from about 18 percent before WWI, to a peak almost 24 percent in the late 1920s, to only about 9 percent during the 1960s–1970s, and back to almost 23.5 percent by 2007, and then to 20.9 percent in 2008. Those at the very top of the income distribution therefore play a central role in the evolution of U.S. inequality over the course of the twentieth century.²

Such dramatic movements toward more unequal income distribution may have been masked for quite a while in part by inflating housing prices, access to home equity finance (borrowing on the basis of rising house prices to finance a higher level of consumption than possible from income alone), and increased indebtedness of the household sector. Figures on wealth concentration, a more meaningful and stable indicator of income distribution, are even more alarming. In 2007, the richest 1 percent of Americans owned about 35 percent of its wealth and the richest 20 percent owned more than 85 percent of its wealth, meaning that the bottom 80 percent of Americans owned about 15 percent while the top 1 percent owned 35 percent.³

In a more recent paper, Saez and Zucman examine the concentration of wealth in the United States since 1913:

Wealth concentration has followed a U-shaped evolution over the last 100 years: It was high in the beginning of the twentieth century, fell from 1929 to 1978, and has continuously increased since then. The rise of wealth inequality is almost entirely due to the rise of the top 0.1% wealth share, from 7% in 1979 to 22% in 2012—a level as high as in 1929. The bottom 90% wealth share first increased up to the mid-1980s and then steadily declined. The increase in wealth concentration is due to the surge of top incomes combined with an increase in saving rate inequality. Top wealth-holders are younger today than in the 1960s and earn a higher fraction of total labor income in the economy.

While many object to the growing inequality of income and wealth on moral grounds, there is evidence that growing inequality is also harmful to economic growth. In a 2014 study, the Organization for Economic

Cooperation and Development (OECD), the group representing 34 rich countries, concluded that inequality in its member countries was at its highest in 30 years. The OECD reported that income inequality has a statistically significant negative impact on economic growth; and in the 20-year span from 1990 to 2010, rising inequality resulted in lost output (GDP) equivalent to 7 percent of GDP for the United States and nearly 9 percent for the United Kingdom. While some may argue that higher taxation and income redistribution has a negative effect on economic growth, the OECD study emphatically disputes such assertions. In the United States a significant change in tax regimes to address such disparities in income and wealth is unlikely in the near future. In the twenty-first century the United States has been moving in the opposite direction by taking the bite out of inheritance taxes and continuing policies that afford a lower income tax rate for those running hedge funds than those in the middle class of Americans.

Financialization, the decoupling of real and financial sectors, and the fallout

Financialization has been accompanied by rising management salaries at the expense of the wages of ordinary workers. Assuming different propensities to save from rentier, management, and worker incomes, income redistribution in turn will affect consumption, and investment through different channels. Thus, the distributional effects of financialization could have a significant impact on growth. Data for the United States confirms that from 1959 to 1979 wages grew roughly in line with productivity, but thereafter the two have diverged, with wages flat while productivity has continued growing. In other words, the benefits of productivity growth have not accrued to workers but to those who own capital. In sum, wages of US production and nonsupervisory workers, who constitute over 80 percent of the employed, have become detached from productivity growth during the era of financialization. The effect of this for income distribution is evident.

Crotty (2005) reported that, for the United States, the profits of financial institutions rose dramatically relative to the profits of nonfinancial corporations after 1984. In the case of the US economy, financialization has had a profound and largely negative impact on the operations of nonfinancial corporations (NFCs). This is partly reflected in the increasing incomes extracted by financial markets from these corporations.

Crotty showed that the payments of NFCs to financial markets as a share of their cash flow more than doubled from the period 1960–1980 to 1980–2000. NFCs came under increasing pressure to make payments as well as increase the value of their stock prices. Financial markets’ demands for more income and more rapidly growing stock prices occurred at a time of stagnant economic growth and increased product market competition, making it increasingly difficult to earn profits. Nonfinancial corporations responded to this pressure in three ways, none of them healthy for the average citizen: (i) they cut wages and benefits to workers; (ii) they engaged in fraud and deception to increase apparent profits; and (iii) they moved into financial operations to increase profits. Crotty argued that financialization in conjunction with neoliberalism and globalization has had a significantly negative impact on the prospects for economic prosperity. Epstein and Jayadev (2005) presented a profile of similar distributional issues in a larger group of countries. They showed that rentiers—financial institutions and owners of financial assets—have been able to greatly increase their shares of national income in a number of OECD countries since early 1980s.

In an article in *The Economist* (July 17, 2010), a related question was framed in the following words: “How has finance done so well for itself and why haven’t its returns been competed away?” The answer that is given comes from a number of papers in a report published by the London School of Economics (*The Future of Finance: The LSE Report*, July 2010). Quoting one of the authors, the magazine reports that the success of finance has been “as much mirage as miracle.” The summary answer in *The Economist* is not at all surprising:

The financial industry has done so well for itself, in short, because it has been given a license to make leveraged bet on property. The riskiness of that bet was underestimated because almost everyone from bankers through regulators to politicians missed one simple truth: that property prices cannot keep rising faster than the economy or the ability to service property-related debts. The cost of that lesson is now being borne by the developed world’s taxpayers.

In other words, the financial sector’s contribution to financial intermediation has not been enhanced in recent years. If this had been the case, it would have been reflected in real economic performance indicators, such as more rapid economic growth as opposed to a slow-down. Instead, the financial sector has grabbed a bigger slice of the economic pie through leveraged speculation that has been supported

by governments and ultimately paid for by ordinary taxpayers in the advanced countries.

The financialization thesis is that these developments—increased debt, changes in the functional distribution of income, wage stagnation, and increased income inequality—are in large measure because of changes wrought by financial sector interests. These changes concern the structure of the economy, economic policy, and the behavior of corporations. The growth effects of increased indebtedness, increases in the share of profits, shifts in income away from workers, and lower retained profits of corporations will tend to reduce long-run equilibrium growth rate. However, this conclusion is sensitive to assumptions concerning the response of aggregate demand to changes in the share of profits. In particular, if investment responds strongly to an increased share of profits and consumption is little affected by a lower share of wages, then growth can increase as a result of a higher share of profits. This positive effect has not been evident.

There is no doubt that a sophisticated economy, such as the economy of the United States, requires a sophisticated financial sector to intermediate and efficiently allocate the savings of millions of savers to millions of productive business investments while providing protection against risk. But the issue is whether finance and the process of financialization has gone too far and is more focused on extracting rewards for rentiers as opposed to supporting the real sector. Has diminishing returns to finance become so ominous that its presumed returns are dwarfed by its almost certain negative fallout in the form of another financial crisis? As Robert Solow asks himself:

Yes, it is hard to imagine that the Hedge Fund Operator of the Year does anything that is remotely socially useful enough to justify the enormous (and lightly taxed) compensation that results; but that is not really an argument. Much more significant is the fact that the bulk of incremental financial activity is trading, and trading, while it may provide a little useful public information about market opinion, is largely a way to transfer wealth from those with inferior information and calculation ability to those with more. There is no enhancement of economic efficiency to speak of.⁴

Conclusion

This summary presentation of some of the fallouts of financial crises clearly underscores the economic and social costs of financial crises. They

are overwhelming and could be getting more severe and burdensome with each ensuing crisis. Moreover, as we have outlined in the chapter, the problems are intertwined and the process of financialization and increased debt is an important cause of stagnant real wages, increasing income and wealth disparity, slower economic growth, and the fuel for recurring financial crises. These are in large measure because of changes wrought by financial sector interests and are related to the structure of the economy, economic policy, and the behavior of corporations. The dissipation of savings, the growth effects of increased indebtedness, increases in the share of profits, shifts in income away from workers, and lower retained profits of corporations tend to reduce long-run equilibrium growth. They have to be addressed in a comprehensive manner as opposed to a little here and a little there.

The attempts by finance industry lobbyists notwithstanding, it cannot be legitimately denied that the value of foundational reforms and a stronger and more comprehensive regulatory system that could mitigate such crises is huge. The benefits include sparing our economies and societies the devastating consequences that another financial collapse and economic crisis would bring, in the form of monetary losses and human suffering, both of which may in part become a permanent fixture.

We endorse much of what has been said since the Great Depression by economic giants such as Fisher, Keynes, and Kindleberger. We welcome the Mian and Sufi book of 2014 as an important contribution by alerting the public to the dangers of interest-rate-based debt contracts and endorsing the benefits of moving toward risk-sharing contracts, something that we have said in numerous books and articles over a period of nearly ten years. We have no disagreement with them as far as they go but we don't think that they go far enough. Mian and Sufi do not advocate a comprehensive risk-sharing financial system for the private and public sectors coupled with a banking system that does not create money, which results in its own insolvencies.

We believe that risk sharing should be the norm, not the exception, in financial contracts. Risk-sharing contracts are important not only for mortgage, car, and other consumer purchases, but also for corporate and government financing; default in these categories could also lead to severe economic downturns. Moreover, we believe that fractional reserve banking left to itself can also lead to systemic and serious financial crises. On the basis of their data, Mian and Sufi might argue that by controlling household debt severe economic downturns would be avoided but we

are not so sure as other debt (corporate and government) and leveraging by financial institutions could also lead us down the same familiar road. We address the issue of essential and comprehensive reforms, as opposed to more bandages on top of bandages, in the next chapter.

Notes

- 1 <http://www.dallasfed.org/research/ecllett/2013/el1307.cfm>
- 2 <http://www.docstoc.com/docs/48716353/Striking-it-Richer-The-Evolution-of-Top-Incomes-in-the-United-States->
- 3 <http://sociology.ucsc.edu/whorulesamerica/power/wealth.html>
- 4 <http://www.newrepublic.com/article/112679/how-save-american-finance-itself>

4

Recurring Financial Crises— The Essential Reforms

Abstract: *The recent financial crisis devastated the global economy and the lives of millions of individuals and families around the world. Debt contracts are inflexible, do not accommodate sharing of risk and losses, and eventually lead to defaults and financial crises. Almost 80 years ago, Irving Fisher and other renowned economists cautioned against fractional reserve banking and the creation of money by the banking system. The application of risk sharing in corporate and public finance and a banking structure closer to 100 percent reserve banking are important as a package to reduce the likelihood of future financial crises in both the private and public sector. The powerful financial industry benefits from debt contracts, fractional reserve banking, subsidies, and preferential treatment and opposes serious reforms.*

Keywords: Chicago Plan; equity finance; fractional reserve banking; risk sharing

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Introduction

The historic quest for financial stability is motivated by a desire to avoid, economic downturns, and their attendant economic and social costs. Here, we present a brief history of financial crises to establish the attraction of a financial system that relies more heavily on risk-sharing contracts and equity finance coupled with a banking system that is closer to 100 percent reserve banking, as opposed to risk shifting and interest-based debt and highly leveraged (fractional) reserve banking. We hope to show that debt, that is, the transfer (and shifting) of risk and fixed rate of interest, has been at the foundation of financial crises and will likely continue to be so in the future unless radical change in financial structure is introduced—toward a financial system that relies more heavily on risk sharing and closer to 100 percent reserve banking, a system that is stable, requires no bailouts, and does not impose attendant costs on the real sector of the economy.

While there have been a number of proposals and ideas that are based on the benefits of reducing risk shifting in favor of risk sharing (explained in earlier chapters), such as the Chicago Reform Plan, Kotlikoff's Limited Purpose Banking, and the ideas of Mian and Sufi, none of them in our opinion goes far enough. The system that is closest to our recommended financial system is that which may be deduced from Islamic teachings—something that has been developed since the mid-1970s and coined as Islamic finance. We acknowledge and underscore that any change should be gradual and deliberate but toward an end that meets the goals of stability and financial efficiency. A number of the best economic minds in the United States created the Chicago Reform Plan to abolish fractional reserve banking over time because such banks expand and contract the money supply through the money multiplier, create excessive debt (leverage), and lead us down the path of bank failures and financial crises. More recently, Maurice Allais published (1999) a book, *La Crise Mondiale d'Aujourd'hui*, in support of the Chicago Reform Plan, and Milton Friedman endorsed the plan in various forums including congressional testimony in 1975.

The Chicago Reform Plan would replace the fractional reserve banking system by banks that engaged in two principal activities, namely, safekeeping and intermediation: (i) banking that took in deposits for safekeeping convenience and charged depositors a small fee, eliminating the ability of banks to create money through the money multiplier and to spike the volume of household and corporate debt and (ii) investment

banking that invested funds entrusted for investment (much as a mutual fund) and charged a fee for such services and also invested some of the bank's capital that had been contributed by its stockholders and supplemented over time by profits for this purpose. Importantly, banks would no longer be exposed to the risk of the asset and liability mismatch (borrowing short and lending long). On the one hand, they would keep deposited money safe, allowing depositors to write checks; on the other hand, they would assess investments and invest or channel investor funds to the best investment projects. Yes, they could invest some of their own capital (on behalf of their stockholders) in investment projects but they would not be leveraging (lending safekeeping deposits) and facing insolvency if some of the projects failed; and importantly, failure of projects would not reverberate throughout the economy as they do under our contemporary financial system with interlocking financial institutions (lending to one another). While the Chicago Reform Plan went a long way to moderating the creation of debt through the banking system and leveraging, it did not fundamentally address the benefits of risk-sharing finance. While Mian and Sufi acknowledge the benefits of risk-sharing contracts, especially its mitigation of a big runup in household debt and their flexibility, they do not embrace risk sharing more widely to include government and corporate financing and they do not address the problems associated with fractional reserve banking; they may argue that risk sharing already addresses the problems associated with fractional reserve banking but it does not do so completely.

We have argued that the present financial system is inherently unstable, often shaken by periodic crises and requiring massive bailouts, for essentially two reasons: (i) it is a debt-interest-based system and (ii) creates excessive (mispriced) debt with leveraging through the credit multiplier of the fractional reserve banking system and through other channels associated with financial innovations. The assets of financial institutions (loans and investments) may decline in value while liabilities (deposits and accrued interest) are obligations that are fixed in value. Such a financial institution can face two different types of financial difficulties: be insolvent or be solvent and face short-term liquidity crisis (insufficient cash on hand). These institutions require some form of government support (subsidy) to reduce the negative impact of bank failures and liquidity crises. Increased regulation after each severe financial crisis, though usually helpful, has not prevented recurrence of even more severe crises that have followed. Moreover, regulations have

been in part undermined by financial innovations, with regulators and supervisors always in a catch-up role.

Financial innovations have in turn led to financialization of the economy as discussed earlier in Chapter 2. The number of unregulated financial institutions has mushroomed along with the number of financial products. Speculation and debt trading have intensified creating asset bubbles, excessive volatility, and heightened uncertainty. The inverted credit pyramid has become overleveraged and vulnerable to small shocks, with even a small shock sending the credit pyramid tumbling into bankruptcies, and with a freezing of the entire banking and financial system, the frequency, transmission, and severity of crises have increased. Financial instability has been accompanied by abnormal exchange rate instability with implied disruption to international trade. In view of significant economic losses inflicted by recurring financial crises—higher unemployment and lost output, slower economic growth, and social inequities and pain—the quest for financial stability has become ever more urgent. By briefly examining the history of financial crises, we hope to show that a financial and banking system that is founded on risk sharing and equity financing can deliver stability and enable the integration, or reintegration, of the financial and real sectors of the economy.

Inherent instability of conventional banking

Today, the banking system in the United States and in most, if not all, other countries is primarily based on interest-bearing debt. This is to be contrasted to an equity-based system, which is a profit-loss-sharing arrangement. Historically, debt-based banking has been prone to bouts of instability, threatening its very existence, in the absence of massive government guarantees (in the case of loss of confidence and deposit withdrawals culminating in a run on banks that require deposit insurance) and bailouts (for insolvent banks, especially for those that are deemed “too big to fail”).

By definition, fractional reserve commercial banks do not maintain 100 percent of their deposits in the form of reserves and are as a result vulnerable to being caught short when many of their depositors demand their deposits at the same time. More precisely, a bank that keeps a fraction of its assets in the form of reserves is vulnerable to sudden panic (from rumors about pending insolvency) withdrawals of deposits by depositors.

It can be immunized from such panic withdrawals if deposits are guaranteed by the government or by a quasi-government agency, invariably on a subsidized basis. It was for this reason that after a number of destructive panics, ensuing withdrawals, and runs on banks, deposit insurance became a part and parcel of conventional (fractional reserve) banking.

While deposit insurance can deter runs on solvent banks that may be temporarily facing a liquidity crisis (not having enough cash on hand) from an asset and liability mismatch, banking crises come about also because of insolvency resulting from bad (mispriced) loans, speculation (excessive risk taking), and even fraud on the part of banks. Insolvencies can either be allowed to run their course, leading to bankruptcy, closing bank doors and loss of shareholder value and creditor loans, or the government can bail out insolvent banks. Bailouts could be ominous and shift bank losses to the taxpayers. For instance, the bailout of the savings and loan associations in the United States in the late 1980s cost taxpayers \$130 billion. Bailouts are said to socialize private losses, while gains are not and are in fact privatized! While public bailouts have become the norm, the rescue of the hedge fund Long-Term Capital Management (LTCM) in 1998 was an exception in that it was coordinated by the New York Federal Reserve with 12 commercial banks, with no public funds at risk. The failure of LTCM (which had used \$2 billion in capital to buy \$125 billion in securities with which it had entered into transactions exceeding \$1 trillion) could have had serious implications for financial markets.

The need for bailouts has become imbedded in the interest-based system and has been implemented by governments with a view to protecting banks (especially banks that are deemed “too big to fail” as they might threaten the entire financial system and in turn the broader economy), debtors, and to reinflate asset prices to their pre-crisis levels. Recent reassurances about asset prices (referred to as the “Greenspan Put” because the former chairman of the Federal Reserve repeatedly injected more money or liquidity into the financial system to support asset prices) created moral hazard and led financial institutions to indulge in risky speculation. Consequently, bailouts have become all too frequent.

Regulation and financial crises

Financial tremors have, over time, devastated economic activity and forced governments to renew their search for stronger regulations to

avert future crises. The recent crisis is no different. But more regulations on a system that some have dubbed a “Grand Casino” would not be reassuring. Besides traditional and regulated banking system, there are thousands of shadow banking institutions such as hedge funds, mutual funds, and private equity funds that are unregulated and do not fall under banking or any other regulatory system. The regulated and unregulated financial institutions compete for profit opportunities and are prone to excessive risk taking. Unregulated intermediaries do not face capital requirements and may indulge in excessive leverage and risk taking. Besides the multiplication of nonregulated intermediaries, there is a far-reaching multiplication of increasingly complex and exotic financial products. Speculation has become an increasingly prominent activity, and volatility and uncertainty have reached unprecedented historical levels and have heightened the risk of sizeable losses from asset price and exchange rates instabilities. While Schumpeterian technical innovations are conducive to greater economic growth, financial innovations have at times turned out to be susceptible to greater instability, volatility, and economic uncertainty and disruption.

In the United States, the banking panic of 1907 led to the establishment of the US Federal Reserve System in 1913 with a view to preventing the recurrence of financial crises of the past. Unfortunately, the Federal Reserve was not able to prevent the worst financial crisis in modern history, namely, the Great Depression. In the wake of financial collapse, hallmark reforms were introduced with the renewed objective to restore financial stability. The National Credit Corporation (1931) and the Reconstruction Finance Corporation (1932) were created to provide loans to banks, for mortgages, agriculture, and industry. The 1933 Glass-Steagall Act, subsequently repealed in 1999, separated deposit taking from investment banking and created the Federal Deposit Insurance Corporation. The separation of investment banking and deposit taking was designed to maintain the safety of deposits and prevent deposit-taking banks from taking excessive risk with depositors’ funds entrusted to them for safekeeping. Government deposit insurance became necessary in the United States and in many other countries if banks were to attract depositors.¹ The US Securities and Exchange Commission was created in 1934 to regulate stock and derivative markets. The 1933 Banking Act, transferring policymaking from New York Federal Reserve Bank to the Federal Reserve Board of Governors in Washington, established the Federal Open Market Committee. Those reforms were

considered to have afforded the US financial system a long period of stability until mid-1960s. Instability grew in the 1970s with the failures of Real Estate Investment Trusts and built further momentum in the 1980s with the failure of Savings and Loans Associations and a number of banking corporations. The reemergence of increasing instability since the mid-1960s, in turn, led Hyman Minsky (1986) to qualify the banking system as inherently unstable and to conclude that long-term stability builds the stage for instability, calling it “unstable stability.”

Despite far-reaching structural changes in the banking system, the drive to reform the banking system in the early 1930s fell short of the Chicago Reform Plan. The Chicago Reform Plan was designed to address the essence of financial instability. It recognized two distinct roles for money: (i) money as a medium of exchange and store of value and (ii) for financial intermediation between savers and investors. As explained earlier, banks have the power of creating and destroying money through the credit multiplier. The expansion of credit and money is coupled with rising prices and activity. The contraction of credit and money is coupled with bankruptcies, loss of wealth, deflation, and economic crisis. Such was the typical pattern of bank credit and monetary cycles in the past two centuries. Consequently, the Chicago Reform Plan sought to isolate the money function of money from its intermediation function. The money function is carried by 100 percent reserve banking (thus banks do not create money but only accept money for safekeeping), and intermediation is carried by investment banking (such as mutual fund opportunities in a variety of companies and business ventures) with close matching of assets and liabilities. Thus financial bankruptcy and illiquidity are side-stepped. Over time, the authors of the Chicago Reform Plan have gained followers as the same factors that precipitated the Great Depression continue to remain in play; uncertainty and volatility have gone beyond tolerable limits, making investment decisions difficult to analyze and assess. With innovations such as financial derivatives and securitization, the powers of creating money and leverage have become boundless and have furthered the increasing divergence of the real and financial sector. Financialization in the form of multiplication of unregulated money funds and multiplication of complex financial products has diverted wealth in favor of speculators and others in the financial sector and at the expense of real producers and workers. Large financial gains have led to obscene pay packages and bonuses in the financial industry, something that is also prevalent in the sport and entertainment industry.

As in the past, the immediate reaction to the recent crisis was to strengthen the regulatory apparatus with the objective of achieving financial stability and preventing the recurrence of the devastating financial crisis. In May 2010, the US Senate passed the bank reform bill, titled “Restoring American Financial Stability,” or alternatively, the so-called Dodd-Frank Act, designed to strengthen the regulation of banks and nonbank financial institutions, create a sound economic foundation for job growth, protect consumers, rein in Wall Street, end the policy of “too big to fail,” and ultimately to prevent another financial crisis. The bill also introduced the Volcker Rule, which would force deposit-taking banks to spin off their proprietary trading arms (trading on their own account) and sell ownership interests in hedge funds and private equity firms. After a Senate House conference committee ironed out differences between the two houses of Congress, President Obama, on July 21, 2010, signed into law the Dodd-Frank Wall Street Reform and Consumer Protection Act. The major provisions of the Act are: a new consumer watchdog, a financial early warning system, breakup authority of financial institutions, tighter leash on banks and financial firms to limit their excessive risk-taking activities (such as trading of derivatives), and mortgage reform.

However, in December of 2014 as a part and parcel of passing the federal spending bill, the provision that prohibited banks from trading derivatives (possibly their most risky activity but one with high profit potential) was eliminated from the bill. In our opinion, the Dodd-Frank Act, which some politicians have hailed as the most significant set of financial reforms since World War II, does little to prevent the next financial crisis. In December of 2014, about four and a half years after the president signed the Dodd-Frank Act, some of the details have still not been fully written and it is assumed that the report, the bill, and its details could run close to 20,000 pages! But this was not all. The 114th Congress that opened for business in January of 2015 immediately started to consider further revisions in the Dodd-Frank Act in a special rapid process that eliminates debate for uncontroversial legislations. The new elements in a bill introduced by Representative Michael Fitzpatrick would roll back three other provisions:

First, it would let large banks hold on to certain risky securities until 2019, two years longer than currently allowed. It would also prevent the Securities and Exchange Commission from regulating private equity firms that conduct some securities transactions. And, finally, the bill would make derivatives

trading less transparent, allowing unseen risks to build up in the system. Of course, you wouldn't know any of this from the name of the bill: the Promoting Job Creation and Reducing Small Business Burdens Act. Or from the mild claim that the bill was intended only "to make technical corrections" to the Dodd-Frank legislation of 2010.³

If all of these elements are adopted, then the bill will achieve almost nothing in preventing future financial crises. But this process of chipping away at this legislation is likely to continue until every tooth has been pulled from what was already a highly compromised attempt at financial reforms.

More generally, during a banking crisis, there are calls for increasing bank capital requirements (something that is also in line with the premise of 100 percent reserve banking). Of course as capital to asset ratio is increased (holding more capital on hand to meet contingencies) banks become increasingly immunized from failure and bankruptcy. But the banking industry opposes higher capital requirements because it decreases earnings, although higher capital requirement is designed to increase safety and mitigate bank failure, which should be the overriding goal.

In November of 2014, the Financial Stability Board (FSB), a group of international officials that oversee international financial regulations, took measures that might make it easier for banks to fail without being bailed out by governments, and in the process motivating banks to assume less risk. Under the new rules, the biggest banks will have to hold "buffers," or "total loss-absorbing capacity" (TLAC), equivalent to 16–20 percent of their assets—a figure that significantly exceeds the capital ratio that was the norm during the 2007–2008 crisis. Moreover, banks must hold more equity (contributed by their shareholders) relative to assets. Also, bondholders (lenders to the banks) would be expected to share in any losses arising from bank failure but after shareholders' capital contributions are depleted. Certain types of bonds will count toward TLAC if they are explicitly designated as loss absorbing if things go wrong. For example, "Contingent-Convertible Bonds," also known as Cocos, while resembling bonds during normal operating environment, would automatically convert into equity if capital ratios were to decline below a certain threshold level, is a type of bond that would qualify as TLAC. The TLAC rule, which comes into force in 2019, would apply only to 27 "systemically important" global banks. The TLAC is envisaged to prevent systemic failure and not individual bank failure. These measures, though

helpful, may be still insufficient to prevent financial crises because the safety cushion that is provided for banks may be inadequate and also because only the biggest of banks are covered.

Risk sharing and financial crises

Financial innovations have created opportunities and instruments for risk shifting—where risk could be stealthily shifted to investors, borrowers, depositors, and, ultimately, to taxpayers (Sheng, 2009)—rather than risk sharing. We say stealthily in this context because a bank with significant debt that is facing financial difficulties may be motivated to assume excessive risk, with the potential extra profits accruing to its shareholders and the downside risk of bankruptcy falling on the holders of debt, that is, risk shifted from the former to the latter without the concurrence of its creditors. As the banking system pushed more and more interest-based debt to finance consumption and speculative investments, the financial sector became increasingly decoupled from the real sector with the growth of the former outpacing that of the latter by double-digit multiples (Epstein, 2005; Mirakhor, 2010; Menkhoff and Tolksdorf, 2001). Emergence of a crisis was inevitable since it was the real sector that had to resolve the mountain of debt sitting on top of a relatively small hill of real output. Ultimately, much wealth was destroyed, many people became unemployed, and substantial fiscal costs were imposed on governments and taxpayers the world over.

At the outset, we note that the universal application of risk-sharing contracts and the prohibition of interest-rate-bearing debt in the context of 100 percent reserve commercial banking (banks that provide safekeeping deposit services) and investment banks that invest investor funds on a pass-through basis, as a mutual fund, essentially eliminates the possibility of default and thus reduces the likelihood of severe financial crises. The losses on any contract are shared between the parties to the contract; creditors (investors) are not simultaneously debtors (borrowers); the failure of an investment project for an investor does not in turn adversely impact a lender; and as a result, financial losses of one entity do not ripple through the financial system as they would do in a system that is predominantly interest-rate-debt based with a high degree of leverage (with a chain of loans in the economy). Debt fueled asset bubbles and banking crises are almost eliminated as banks can invest

their clients' money only in projects on a pass-through basis, akin to a mutual fund. Banks cannot take risk with deposits, leverage, and then become insolvent when loans sour, affecting in turn the overall financial system. Fraud and other dishonest behavior can still bring about a financial crisis and sound regulations, supervision, and enforcement will as always be needed. Risk-sharing contracts and banking that is closer to 100 percent reserve banking are both needed to prevent financial crises. On the one hand, if only interest-based bank lending is prohibited, banks could still risk the safekeeping money of their depositors through their investments (on the banks' own account) and be caught insolvent when the business venture failed. On the other hand, if only fractional reserve banking is prohibited, the investment-banking component of the banking system could fund investments through borrowing and leverage that could result in a financial crisis.

Given that all financial assets in such a financial system (risk sharing and 100 percent reserve banking) are contingent claims and there are no debt instruments with fixed predetermined rates of return, the returns to financial assets are primarily determined by the rate of return in the real sector. In the absence of speculation arising from dysfunctional debt markets, equity prices would tend to show less volatility. Essentially, dividends from successful real (as opposed to purely financial) investment projects and real savings would drive demand for equity shares. It cannot be fueled by fictitious credit to speculate and bid up asset prices. The supply would be influenced by initial public offerings. Hence, both the demand for and supply of equity shares are influenced by stable variables in the absence of interest rates and debt, and equity prices would tend to display a stationary pattern. Two elements explain the absence of systemic risk. The deviation between the expected return and the market return would be very small and result from nonsystemic factors, such as the scale of the firm, the efficiency of its labor force, or its entrepreneurship. Second, the performance of one firm would be influenced by its competitiveness, cost-efficiency, promotional efforts, and investment plans. In the absence of common systemic risks, the correlation of a firm's return with the market portfolio would be very low. The pool of real savings rather than credit would determine asset demand. The supply of equity shares would be determined by real investment plans. The rate of return would essentially comprise dividends.

However, conventional (fractional reserve) banks fail to meet inherent stability conditions even in the presence of prudential regulations. First,

credit losses from debt default or depreciation of assets may create a large divergence in relation to liabilities that remain fixed in nominal value. This in turn puts pressure on bank capital. For banks that are highly leveraged, losses that may at first appear not to be excessive relative to total assets can wipe out a bank's capital and thus render it insolvent. This cannot happen in 100 percent reserve banking. There are no loans. All investments (that could sour) are channeled through the bank on a pass-through basis. Essentially, banks cannot become insolvent unless there is embezzlement. Second, in today's banking system, bank credit has no fixed relation to real capital in the economy and bears no direct relation to the real rate of return. Credit expansion through the credit multiplier is a fundamental feature of conventional banks. Cash flow could fall short of expectations and force large income losses on banks, especially when the cost of funds is fixed through a predetermined interest rate (the classic asset-liability mismatch). Third, banks caught in a credit freeze with a drying up of liquidity may default on their payments. Fourth, banks are fully interconnected with one another through a complex debt structure; in particular, assets of one bank become instantaneously liabilities of another, leading to fast credit multiplication. A credit crash causes contagion and a domino effect that may impair even the soundest of banks.

Debt has other ominous implications. Debt can be issued to finance consumption, and hence may rapidly deplete savings and investment, in turn adversely affecting economic growth. The financing of consumption could just as easily be prohibited. The financing of consumption could be another reason for the prolonged downturn that follows on the heel of severe financial crises. The depletion of savings could be significant if debt finances large fiscal deficits. Hence, debt is no longer directly related to the productive base as in an equity-based system, and the income stream from debt is no longer secured by real output as shown for the equity system. Debt expands through the credit multiplier, which is determined by the reserve requirement, whereas equity in the equity-based system cannot expand more than real savings. Debt can expand through leverage to an unsustainable multiple of real national income, increasing default risk. In case of financial derivatives debt can expand theoretically by an infinite degree, or in the case of securitization as loans can be packaged and sold as new securities allowing banks to continue lending from the proceeds of the securities assets (loans that were packaged). In a system of 100 percent reserve banking and a

separate investment banking system, financial intermediation consists of redeploying real savings into real investment.

When we compare a banking system that has two components—100 percent reserve (or something close to it) banking for deposits and investment banking for investors on a pass-through basis—to our present-day banking system, we note that in the system in practice today credit expansion may have no bearing to the real capital base and the real cash flow that may be required for debt servicing. When financing is extended to consumption, credit could erode savings and economic growth. The equilibrium interest rate that clears money markets may instantaneously have no direct relation with the real rate of return in the economy. Such a deviation (between the real rate of return and the market clearing, or equilibrium, rate) has been acknowledged by the classical economists and was seen to be a cause of booms and busts and excessive speculation in commodities and assets. Banks are obliged to pay the face value of their liabilities in case of credit loss and fully absorb losses from their capital reserves or recapitalization. Governments may be compelled to extend large and costly bailouts to rescue impaired banks and prevent a total collapse of the financial system.

Besides the inability to reach full-employment output, the prevailing financial system can suffer from interest rates distortions in relation to a natural interest rate and can suffer from the absence of direct link to a real capital base that generates cash flow for servicing debt. As we have said earlier, Minsky (1986) described the conventional system as endogenously unstable, evolving from temporary stability to periods of crisis. Credit losses play havoc with the real economy and cause massive unemployment. The resulting unemployment may be persistent and stubborn because the required time for deleveraging (both public and private debt) may be significant and the ensuing financial uncertainty may result in a slow recovery of investment expenditures that is necessary for growth and employment.

The issue of instability in conventional finance is not limited to the role of commercial and investment banks. In the financial system, a critical role of the central bank is to act as a lender of last resort. In the absence the central bank assuming such a role, conventional banks would risk simultaneous failure, as banks are interconnected through loans. Banks are exposed to credit and interest rate risk and may become illiquid. In order to fulfill their obligations, borrowing from the central bank is necessary for the smooth functioning of conventional finance. In

100 percent reserve banking, banks cannot have or cause any liquidity mismatch and are not dependent on the central bank finance to maintain their liquidity. Moreover, as all deposits are in safekeeping, investors will not panic and cause a run on the banking system; thus there is no need for deposit insurance. In sum, in such a financial system, the financial sector functions to support the real sector. Financial assets are based on risk and return sharing and are contingent claims. Real as well as monetary forces determine the rate of return.

If risk sharing and in turn risk-sharing contracts have such benefits—especially reducing the likelihood of severe financial crises and ameliorating societal cohesion—why have they not been more readily adopted? The answer is evident. The powerful financial industry in the United States is opposed to risk-sharing finance. They do not see it in their financial interest, especially when they have managed to secure a number of important subsidies (and structural concessions) for debt and its proliferation—preferential tax treatment for debt servicing, subsidized deposit insurance, leveraging through fractional reserve banking, lender of last resort, and “too big to fail” bailouts. As major campaign donors, the financial industry has clout with US politicians and it uses it to its advantage. This fact was most vividly in display in December of 2014, when the big New York banks managed to delete an important provision of the Dodd-Frank Act that prevented them from trading risky financial derivative instruments, and yet again in January of 2015 as the new Congress opened for business by considering further modifications to the Act.

Moreover, and more broadly, we should note that risk sharing reduces human angst and increases societal trust, cooperation, and social capital to bring humankind ever closer together. There is much room for the expansion of risk-sharing contracts in student loans (contingent on employment after graduation, salary), mortgages (contingent on appreciation-depreciation of house prices, employment, salary), business loans (contingent on return on investment), automobile loans (contingent on employment, salary), and much more. Some may want to keep the gains and share the losses but that is not risk sharing.

Conclusion

For years, the late Charles Kindleberger had said that excessive credit (debt) is the fuel of manias, asset price bubbles, and the resulting panics.

Academics, much less policymakers, did not take heed. Kindleberger then wrote it all in his book in 1978. Paul Samuelson, among the handful of American economic giants of all time, hailed it as a book that all should read and heed. They did not. It could be that humans may be reluctant to change tracks unless absolutely forced. The unknown, the path not taken, may appear scary. Or society may be collectively unable to get on the path not traveled because of selfish interests and a broad decline in morality and compassion.

The recent financial crisis devastated the global economy and the lives of millions of individuals and families around the world. Mian and Sufi pulled together the data and made a convincing case that a big runup in household debt fueled the 2000–2008 housing price bubble (not vice versa); foreclosures resulted in the less fortunate losing their equity, while the lenders (and in turn, bank shareholders) lost little; the big drop in demand caused massive layoffs and the great recession. Debt contracts are inflexible, do not accommodate sharing of risk and losses, and eventually lead to defaults and financial crises. Still policymakers are not listening and are unlikely to take notice. There is no serious reform on the horizon. Almost 80 years ago, another Irving Fisher (and other renowned economists with him) cautioned against fractional reserve banking and the creation of money by the banking system. Fisher (1936) endorsed 100 percent reserve banking (*100% Money*). Policymakers did not listen and take action, while banking (financial) crises have occurred and reoccurred many times over with devastating human and economic consequences.

Risk-sharing contracts combined with 100 percent reserve banking almost eliminate the likelihood of severe financial crises as long as markets are supervised and fraud and other acts of malfeasance are prevented. The application of risk sharing in corporate and public finance and 100 percent reserve banking are important as a package to reduce the likelihood of future financial crises in both the private and public sector. While we are convinced that these changes to the financial system would enhance financial stability and in turn reduce the likelihood of severe economic downturns, we recognize that reforms, no matter how desirable, must also be pragmatic. Thus we would recommend steps to (i) increase reserve banking with the goal of achieving one day in the very distant future something much closer to 100 percent reserve banking and (ii) eliminating the tax incentives for debt financing to encourage

risk-sharing contracts and reduce the predominance of interest-based debt. Still, even the concept of 100 percent reserve banking and encouraging risk-sharing contracts are unlikely to be broadly embraced in the near future in the United States. The powerful special interest group, the financial industry, benefits from debt contracts, fractional reserve banking, and their subsidies and preferential treatment. So financial crises will assuredly recur as they have in the past unless a broad segment of society begins to take interest and demand essential financial reforms or if the adverse fallout of the next financial crisis create social fissures that cannot be bandaged.

Notes

- 1 Deposit insurance is not provided in all countries; see http://mitpress.mit.edu/sites/default/files/titles/content/9780262042543_sch_0001.pdf
- 2 http://www.nytimes.com/2015/01/11/business/kicking-dodd-frank-in-...h.html?emc=edit_th_20150111&nl=todaysheadlines&nid=47951886&r=0

5

Conclusions and Our Financial Future

Abstract: *The financialization of the economy has brought a number of interrelated problems: financial crises that have led to severe economic downturns with high unemployment, declining economic opportunities, stagnant real wages, and reduced economic growth and thus growing income and wealth inequality. It is time to make a bold change by putting our financial house in order and on a better path. Higher capital requirements for banks, better regulations, supervision and enforcement, and the like are invariably helpful, but at best they will only delay the inevitable, another devastating financial crisis. The prevalence of debt financing is at the heart of the problem. We need more fundamental reform of our financial system that reduces the supremacy of debt, encourages risk-sharing finance, and increases the fraction of reserves in fractional reserve banking.*

Keywords: economic growth; income and wealth inequality; reforms; regulations; return to capital

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In the United States of 2015, we face a number of interrelated problems that have roots in a financial sector that has been growing much more rapidly than the real sector. This financialization of the economy with its decoupling from the real sector has, in our view, gone too far with finance drifting further and further away from its main function of intermediation between savers and investors and affording mechanisms to manage risk. But the financial sector has gone in the direction of trading paper with one party extracting big gains from another, with little or no positive effect on the real economy. The financialization of the economy has brought about a number of interrelated problems: beginning with financial instability, leading to financial crises, resulting in severe economic downturns with high unemployment, declining economic opportunities, stagnant real wages (the benefits of productivity accruing to owners of capital), and reduced economic growth in part because of enhanced uncertainty, and the erosion of savings to finance consumption, with the after tax real return to capital exceeding economic growth and in turn growing income and wealth inequality. These economic difficulties could in time lead to societal fissures. We believe that a reversal of the financialization process, which requires serious reforms of the financial system, is an essential step in reversing this ominous trend.

Financial crises have been a recurring phenomenon in the United States and in many other countries around the world. While crises have been attributed to factors that include “financialization,” unchecked speculation, lax regulations, supervision and enforcement, economic shocks, prolonged periods of low interest rates, lax monetary policies, inadequate level of bank capital, greed, outright fraud, and more, we believe that at the heart of financial crises, the problems are two: the prevalence of interest-rate-based debt contracts and fractional reserve banking. In our opinion, this conclusion is supported by an examination of past crises and their propagation. A rapid buildup of debt and leverage invariably results in default and bankruptcies, where debtors, especially highly leveraged debtors, cannot meet their financial obligations. The severity of a crisis is made more ominous the greater the debt buildup or leverage. As defaults occur, they reverberate on to lenders (largely commercial banks), who in turn cannot honor their obligations to their depositors and to their other creditors—banks and nonbank financial institutions. Banks stop lending, resulting in widespread credit freeze with a drop in consumer and investment expenditures followed by a severe economic downturn and a sharp spike in unemployment. Debt

and leverage are the essential fuel for financial crises. In the absence of interest-based lending by commercial banks (lending that is financed by depositors who have deposited their funds for safekeeping), defaults and their transmission across the economy would be dramatically reduced because the web of debt would be more limited. Instead, with no debt-financed consumption expenditures, the decline in consumer spending would be more limited, and while there would still be investment losses, their reverberation (contagion) throughout the economy would be more contained.

If we replaced our financial system with a system that reduced the role of debt relative to equity finance (i.e., risk-sharing contracts) and a banking system that is closer to 100 percent reserve banking, the likelihood of financial crises and financial contagion would be almost eliminated. The losses on any contract would be shared between the parties to the contract and would not reverberate throughout the economy as in the case of leveraged debt. Debt-fueled asset bubbles and banking crises would be significantly reduced as investment banks, or investment-banking divisions of banks, could invest their clients' money only in projects on a pass-through basis, akin to a mutual fund, and their own shareholders' capital. Banks could not take risk with deposits; leverage and become insolvent when loans sour, in turn impairing other banks that had lent them and affecting the overall financial system. Fraud and other dishonest behavior could still bring about a financial crisis; sound regulation, supervision, and diligent enforcements would as always be needed.

Risk-sharing contracts and a banking structure closer to 100 percent reserve banking are both needed to prevent financial crises. On the one hand, if only interest-based bank lending is prohibited, banks could still risk the money of their depositors through their investments (on the banks' own account) and be caught insolvent when the business venture failed. On the other hand, if only fractional reserve banking is prohibited, the investment-banking component of the banking system could fund investments through borrowing and leverage that could result in a financial crisis. Simply said, if all business ventures were financed by risk-sharing contracts (equity), then in the event of the bankruptcy of the investment or project, the partners in the business would simply lose their invested capital; and as there are no interest-bearing borrowed funds, there would be limited impact on banks and reverberation throughout the economy. The resulting economic downturn and adverse

fallout would be limited, with more tolerable economic and social consequences. Moreover, and more broadly, there is evidence that risk sharing reduces human angst and increases societal trust, cooperation, and social capital to bring humankind ever closer together.

While we are convinced that these changes in the financial system would enhance financial stability and in turn reduce the likelihood of severe economic downturns, we recognize that reforms, no matter how desirable, must also be pragmatic. We would recommend increasing reserve banking in steps with the goal of achieving one day, in the *very* distant future, close to 100 percent reserve banking and eliminating the tax incentives for debt financing to encourage more risk-sharing contracts and reduce (as opposed to eliminate) the supremacy of interest-based debt. We also underscore the belief that risk-sharing contracts would also benefit the financing of public projects and reduce the likelihood of financial stress for many governments.

Still, even anything approaching 100 percent reserve banking and eliminating the tax subsidies for debt to encourage risk-sharing contracts are unlikely to be broadly embraced anytime soon in the United States. A powerful special interest group, the financial industry, benefits from debt contracts, fractional reserve banking, and their implicit subsidies and preferential treatment. The financial industry is happy with the way things are. It will fight tooth and nail to maintain the status quo. So the only practical approach may be reforms in baby steps but with a clear utopia as the target.

Some may raise other questions about such a proposal to restore financial stability. How would these equity contracts be financed? Investment banks and mutual funds would do the financing. Recall that banks would engage in two broad activities: (i) keep depositors' deposits (safekeeping) and (ii) engage in investment banking (intermediation), that is, channel investors' capital and their own shareholders' capital into their desired risk-return category of investment in the form of equity investment and charge a fee for their services. Here the bank is not taking risk by investing its depositors' deposits. Yes, the bank could also invest a portion of its own capital in businesses and projects. The bank would monitor these investments and earn a fee, a fixed fee, or a fee contingent on the project's success, from investors. An entrepreneur instead of borrowing from a bank would get partners through the bank as the intermediary, partners who had channeled their capital through the bank to finance investment projects. Banks in their investment-banking mode would continue to do

what should be their main function now, namely, reducing the fallouts of asymmetric information (adverse selection and moral hazard) by assessing the risks associated with projects, monitoring management decisions, and charging a commensurate fee for their services. We should note that the failure of these investments would have limited effect on investors, the bank and its stockholders, and on the rest of the economy. It would reverberate little throughout the economy, as leveraging is limited.

If the business does well, investors benefit (and the bank if its continuing fees are contingent on business success). If the business fails, investors lose their capital (note that it is their own capital as it is not borrowed from a bank or other financial institutions) and the bank is left unscathed and intact. There is limited transmission to the broader economy. There is little likelihood of a total credit freeze. There would be significantly less chance of a severe and widespread financial crisis and its attendant negative fallouts even with reduced (not eliminated) interest-based debt contracts and something less than 100 percent reserve banking.

Again, we repeat that such a system could not be established overnight. There should be a well thought-out transition period of say 10 years to replace a significant percent of debt-based transaction in favor of risk-sharing contracts and increasing greatly the percentage of reserves in fractional reserve banking. In this way disruptions are minimized and familiarization nurtured. Banks will still make money. Businesses will be still financed. Severe financial crises and their fallouts will become a thing of the past. And the process of financialization with the growing domination of the financial sector over the real sector would begin to be reversed.

Focusing on the United States, we can confirm that financial crises have had deleterious economic impacts in the form of bankruptcies, significant fall in output (GDP), spike in unemployment, stagnant wage incomes, rising income and wealth inequality, costly government bailouts, and a decline in future economic growth. The economic cost of the most recent crisis is simply astounding, a figure in the vicinity of US GDP for one whole year, with attendant and additional psychological and social damage. The negative economic impact of a financial crisis can be expected to be more severe and prolonged than that of a run-of-the-mill recession. This is because financial crises are accompanied by an environment of heightened uncertainty that impair decision making, by credit freezes with no sectors of the economy spared, and by leveraging (runup in debt) that takes time to unwind (deleverage). The attendant

costs and fallouts of financial crises, economic as well as social, appear to be growing with each subsequent crisis. The essential reforms we have outlined would reverse this trend.

Financialization, or the growing domination of the financial sector over the real sector, and in turn financial crises may have played an important role in the recent growing income and wealth disparity in the United States. Financialization has favored those in the finance industry and those with capital at the expense of the rest of the economy. Financialization has increased the share of rentier income in total income, in particular, a rise in rentiers' income from interest (on bonds, mutual funds) and dividends (stocks and mutual funds), at the expense of the nonfinancial industry's retained profits and wage income. This concentration of wealth in favor of those who own capital is further reenforced by the "magic" of compounding, something that has been identified in the past by many noted economists. Financial crises have resulted in widespread bankruptcies, and borrowers with debt contracts (especially mortgages) end up losing some or all of their initial down payment (equity). Foreclosures are a result of debt leading to housing prices going down even further. Lenders (ultimately the wealthy who own financial assets, including bank shares) have contracts that impose all initial losses (the down payment equity) on the borrower (Mian and Sufi, 2014). Thus, depending on the extent of the asset price collapse, the borrower may be forced to absorb most, if not all, of the losses, while the lenders' equity (the rich) is senior and may be totally protected or bailed out by the government. As a result, severe financial crises and recessions exacerbate wealth inequalities by exposing borrowers (those whose capital ownership is small) and protecting lenders (the fortunate with surplus capital). The preeminence and prevalence of debt essentially magnifies the fall in asset prices because of foreclosures and concentrating losses on the indebted, invariably the poorer segment of society.

Growing income and wealth inequality is not only a social issue. The OECD (2014) has reported that growing income inequality has had a statistically significant negative impact on economic growth; and in the 20-year span from 1990 to 2010, rising inequality resulted in lost output equivalent to 7 percent of GDP for the United States and nearly 9 percent for the United Kingdom. The OECD claims: "[W]hat matters most for growth are families with lower incomes slipping behind." Clearly, the financial sector's contribution to financial intermediation has not been enhanced in recent years. If this had been the case, it would have been

reflected in improvements in real economic performance indicators, such as more rapid economic growth as opposed to a slowdown. Instead, the financial sector has grabbed a bigger slice of the economic pie through leveraged speculation that has been supported by governments and ultimately paid for by ordinary taxpayers in the advanced countries. Again, as we have said before, finance has become increasingly focused on trading as opposed to efficient intermediation.

Now here are some obvious questions. If the costs of financial crises are so high and if fixing the system so transparent, why hasn't it been done before? Why don't we do it now? First, and foremost, the financial industry does not want it. The industry is quite happy with the way things are. Fractional reserve banking allows the industry to create money and leverage. They are receiving government support and subsidies—subsidized deposit insurance, guaranteed bailouts for the biggest institutions, and preferential tax treatments—to take unwarranted risks and make money for themselves and their stockholders at the expense of taxpayers. Moreover, they never lose much as a result of financial crises and may even gain relative to the rest of the economy. From the financial industry's perspective, there is no reason to change. How do they get away with it?

The financial industry has invested to become arguably the most influential and powerful lobby in the United States in support of the candidacy of politicians who will do its bidding. During the period 1998–2010, the financial industry (finance, insurance, and real estate) contributed \$4.27 billion to lobbying or 15 percent of all contributed funds for lobbying, closely followed by healthcare.¹ As a recent confirmation of the financial industry's power over the US Congress, one of the most touted provisions in the Dodd-Frank Act, namely, restrictions on banks' ability to trade risky derivatives, was rescinded by the House on December 10, 2014, and by the Senate three days later as a part and parcel of getting an acceptable spending bill passed. This was done to satisfy Wall Street's biggest banks, including Citigroup and JPMorgan Chase. Lawmakers inserted a line that repealed this provision, Section 716, which required banks to separate and put the riskier trading of derivatives (such as credit default swaps and commodities trading) into holding companies not to be insured by taxpayers. "This bill is a one-two punch at middle-class voters," said Representative Steve Israel of New York, a member of the Democratic leadership (as reported in the *New York Times*, December 12, 2014). "It weakens financial regulation on big

banks and rewards Congress for doing so by increasing donation limits of big donors. This is exactly why middle-class voters have a contempt of Congress.” The new Congress, in January of 2015, picked up from the last Congress by considering the elimination of three other important provisions of Dodd-Frank.

In addition to the power of the financial industry, the “unknown” is invariably scary for most of us. There is a reluctance to take a road not taken and to venture into the unknown, no matter how safe and visible the road. Consumers love to borrow and banks love to lend. It is a marriage of convenience until a financial crisis raises its ugly head. The way things stand in the United States, even simple regulations cannot be adopted anytime soon, let alone an overhaul of the financial system. The US Congress appears to be willing to increase the likelihood of crushing economic and social costs in order to satisfy the greed of a few large financial institutions, their managers, and stockholders. Members of Congress appear to be more interested in financing their re-election campaigns than in advocating and pursuing the greater good. It is policy and regulatory adoption at its worst. It would be cheaper for the nation if the Congress simply gave cash handouts to its favorite “too big to fail” banks every year and avoided another \$14 trillion in direct economic costs and even more in related human and social costs.

So what can we expect in the future? One thing is certain. If things are left the way they are, there will be future financial crises and with increasing financialization the interrelated fallouts could be worse than anything we have seen, posing an existential threat to the pure market capitalist system. We say this for at least four reasons. First, the credit-debt-leverage-crisis nexus has not been broken. It maybe even stronger than it was before the recent crisis. Second, and as many observers have said before us, the adverse economic and social fallouts are intertwined and appear to be getting increasingly more ominous: recall simply the estimated loss in output from the recent crisis that could run to over \$14 trillion, a figure comparable to the US national economic output for one whole year; prolonged periods of unemployment, a regular fallout, are taking a heavier and heavier toll on the social fabric of society; and the worsening income and wealth distribution, which has roots in financialization and financial crises, will continue and in turn impair future economic growth. Third, and to us just as important, are the devastating social fallouts of recurring crises and their prolonged duration. Fourth, the path that we are on, a path that has nourished the financialization

of our economy, will eventually lead to catastrophic social consequences with diminishing opportunities, psychological hysteresis, and the marginalization of millions of families and individual lives. The problems we face—financial instability and financial crises, stagnant wage incomes, declining economic opportunities, growing income and wealth inequality, reduced economic growth, and societal fissures in the form of high unemployment and more—are interrelated and are best addressed as such. Our proposed financial reforms by reducing the likelihood of severe financial crises would reduce and reverse financialization and all that it entails, enhance long-term economic growth, reduce the periods of sustained unemployment, reverse the trend of growing income and wealth inequality, and reduce the need for government subsidies and bailouts that have socialized the cost of crises at the expense of average taxpayers.

These interrelated problems, which include recurring financial crises, pose an increasing threat to the capitalist market system. We believe that Adam Smith, the acknowledged father of modern economics, envisaged a different system from the one we have today. Smith touted the benefits of efficient markets for the allocation of resources across space and time. And he envisaged markets with rules, regulations, and supervision and founded on the bedrock of effective institutions. All of this and more he espoused in his most famous book, *An Enquiry into the Nature and Causes of the Wealth of Nations* (1776). But in his earlier book, *The Theory of Moral Sentiments* (1759), Smith provided the anchor or the mooring for his *Wealth of Nations*. The two books are to us inseparable. If the two books are not taken as inseparable, then a reasonable person would either conclude that the two tomes were written by two very different individuals or by one who was a serious schizophrenic! Adam Smith was a moral philosopher who clearly saw that unfettered markets could not guarantee outcomes that were socially defensible. Market participants had to translate the love of self into sympathy for others; otherwise the result could be a socially indefensible one. Today, especially in the aftermath of the recent financial crisis and its devastating fallouts, the capitalist market system may have lost its moral mooring and may be drifting into dangerous territory. We believe that serious financial reforms are at the foundation of a positive turnaround.

It is time to make a bold change by putting our financial house in order and on a better path. Yes, higher capital requirements for banks, better regulations, supervision and enforcement, and the like are always

helpful, but at best they will only delay the inevitable, another devastating financial crisis with devastating fallouts. We need to anchor our economic system on morality as envisaged by the father of the capitalist market system, Adam Smith; and adopt more fundamental reform of our financial system that reduces the supremacy of debt and debt financing, encourages risk sharing or equity finance, and increases the percentage of reserves in fractional reserve banking.

Note

- 1 http://en.wikipedia.org/wiki/Lobbying_in_the_United_States

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