Preface, Chapters 1 & 2
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Lost Decades

LOST
DECADES

ALSO BY MENZIE CHINN

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The Making of America's
LOST DECADES
Debt Crisis and the Long Recovery

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For
Laura
& Anabela

CONTENTS

FIGURES

PREFACE

The midterm elections were over, and the Republicans had made stunning advances. The GOP had picked up over seventy seats in the House of Representatives and seven seats in the Senate. Perhaps just as important, the Republicans had taken a number of crucial governorships from the Democrats, including the pivotal states of Michigan, Ohio, and Pennsylvania. The election was a dramatic reversal of the Democrats' landslide victory two years earlier, and was a particular blow to the president, who had swept into office in the midst of a devastating economic crisis.

Certainly the Democrats could be satisfied with some major legislative accomplishments, passed with their previous majorities. But now, a disappointing economy and stubbornly high unemployment rate had brought back to life a Republican Party that had appeared moribund two years earlier. For the foreseeable future, the Republicans, together with allies among conservative Democrats, would be able to block or force changes in just about any initiative the president had in mind.

The year was 1938, and the economic recovery from the Great

Depression was in deep trouble. Back in 1933, when Franklin D. Roosevelt became president, the country was in the fourth year of the deepest depression in its history. The Roosevelt administration had moved quickly and aggressively to try to bring the country's economy back to life. Roosevelt and his fellow Democrats in Congress purged the nation's banking system and imposed stringent new regulations. They created an ambitious array of federal programs to put the millions of unemployed to work. And they initiated the first serious federal social program in American history, Social Security.

By 1936 the economy was recovering. The unemployment rate had fallen to 14 percent, still high but down from where it was, 25 percent, when Roosevelt took office. Both national income and the stock market were rising rapidly. In light of the upturn, the Roosevelt administration resolved to tackle the federal government's budget deficit, which in 1936 had reached nearly 5 percent of gross domestic product (GDP), a level unprecedented in peacetime. Delivering on promises to trim the deficit, the administration cut spending by 20 percent and raised taxes by even more; within a year the budget was practically back to balance. Meanwhile, the Federal Reserve tightened monetary policy, apparently to avoid a resurgence of inflation.

In the aftermath of the fiscal and monetary retrenchment, in the summer of 1937 the American economy collapsed into a steep recession. Industrial production dropped by one-third, the stock market plummeted more than 40 percent, and the unemployment rate shot back up to 19 percent. As the American economy slumped, the administration's popularity faded rapidly. And the result of the 1938 midterm election reflected this loss of confidence in the federal government's ability to bring the nation out of the Depression.[1]

Today the United States and the world are slowly recovering from the most serious international economic crisis since the Great Depression of the 1930s. As was the case in the late 1930s, the causes and consequences of the crisis are hotly debated. And just as then, a great deal rides on an appropriate understanding of why and how the United States got to where it is today. How could the world's richest economy go broke? How did the world's most powerful banks collapse? Why would the most conservative government in modern American history nationalize enormous portions of the U.S. economy? Why did millions of American families lose their homes, and millions more their jobs? Whose fault is it all?

We have a unique perspective on these debates. We have spent, between the two of us, more than fifty years working on debt crises. We have lived through and studied financial and currency disasters in Europe, Latin America, Asia, and Russia. We have witnessed firsthand, and analyzed in detail, the human, social, and political wreckage of irresponsible borrowing. We have watched country after country lose decades of economic progress to the austere aftermath of financial crises. But we never feared that we would see a classic debt crisis in our own homeland. And we never imagined that our country could face the prospect of almost two decades lost to misguided policies, an unnecessary crisis, and a daunting task of economic reconstruction. Nonetheless, there is value in our ability to compare the current crisis to those we have known and investigated. As we examine the events of the past decade, and look toward the decade to come, we can draw on a wealth of comparative and historical experiences to guide our analysis.

The United States is in the midst of the greatest failure of economic policy, and of financial markets, of recent times. This is the story of how and why it got there, and of what the nation must do to repair a wounded economy.

The crisis

The most serious economic crisis of the past seventy-five years began as the summer of 2008 ended. In August and September, credit markets everywhere entered a downward spiral that spun faster and faster until, in the first two weeks of October, it seemed that the world economy might be coming to an immediate end. During those dark weeks and months, an international economic order that had inspired faith bordering on rapture around the world appeared to have turned on its creators and strongest supporters. The United States, the very center of economic globalization, was gripped in a panic that threatened to destroy the world economy. The collapse seemed to surge out of nothing and nowhere. One week there was mild concern about a sluggish housing market in the American Sunbelt, the next week the whole world was staring over a precipice into the end of global capitalism. The world's strongest economy turned into the sick man of international capitalism. The American paragon of capitalist virtue, protector of the free-market faith, took over huge swaths of the private sector. What happened? How could this come to pass?

The United States borrowed and spent itself into a foreign debt crisis. Between 2001 and 2007, Americans borrowed trillions of dollars from abroad. The federal government borrowed to finance its budget deficit; households borrowed to allow them to consume beyond their means. As money flooded in from abroad, Americans spent some of it on hard goods, especially on cheap imports. They spent most of the rest on local goods and services, especially financial services and real estate. The result was a broad-based economic expansion. This expansion—especially in housing—eventually became a boom, then a bubble. The bubble burst, with disastrous effect, and the country was left to pick up the pieces.

The American economic disaster is simply the most recent example of a "capital flow cycle," in which capital floods into a country, stimulates an economic boom, encourages high-flying financial and other activities, and eventually culminates in a crash. In broad outlines, the cycle describes the developing-country debt crisis of the early 1980s, the Mexican crisis of 1994, the East Asian crisis of 1997–1998, the Russian and Brazilian and Turkish and Argentine crises of the late 1990s and into 2000–2001—and, in fact, the German crisis of the early 1930s and the American crisis of the early 1890s. We can best, and most fully, understand the current debt crisis by understanding the dozens of debt crises that have come before it. What causes such crises? What can we learn from the paths to them, through them, and out of them?

To be sure, the most recent American version of a debt crisis was replete with its own particularities: an alphabet soup of bewildering new financial instruments, a myriad of regulatory complications, an unprecedented speed of contagion. Yet for all the unique features of contemporary events, in its essence this was a debt crisis. Its origins and course are of a piece with hundreds of episodes in the modern international economy.

For a century American policymakers and their allies in the commanding heights of the international financial system warned governments of the risks of excessive borrowing, unproductive spending, foolish tax policies, and unwarranted speculation. Then, in less than a decade, the United States proceeded to demonstrate precisely why such warnings were valid, pursuing virtually every dangerous policy it had advised others against.

Most analysts of the crisis miss this central point. Each of the many accounts published since 2008 has focused on one or another limited aspect of the crisis. Some follow the financial meltdown and response blow by blow, yielding vivid insights into the personalities and institutions involved. Other accounts emphasize the role of financial regulators in the collapse, documenting the influence of Wall Street over the deliberations in the halls of Washington, D.C. Yet others explain how the financial crisis caused so deep a global recession. Our analysis starts with the macroeconomic drivers of the experience, includes the political pressures, incorporates the regulatory enablers, and puts the crisis into a comparative and historical context, drawing parallels and lessons from the dozens of similar episodes from the past.

The American crisis immediately spread to the rest of the international economy. The world learned a valuable lesson about global markets: they transmit bad news as quickly as good news. The American borrowing binge had pulled much of the world along with it—drawing some countries (Great Britain, Ireland, Iceland, Spain, Greece) into a similar debt-financed boom, and tapping other countries (China, Japan, Saudi Arabia, Germany) for the money to make it possible. The collapse dragged financial markets everywhere over a cliff in a matter of weeks, with broad economic activity following within months.

Impact and implications

The global crisis raises the specter of global conflict. As governments scramble to protect their citizens, their actions can be costly to their neighbors: a bailout favors national over foreign firms, devaluation puts competitive pressures on trading partners, big deficits suck in capital from the rest of the world. The 1929 recession became a depression largely because of the collapse of international cooperation; the current crisis may head in that direction if international collaboration similarly fails.

With or without broader international complications, the United States faces hard times. The country lost the first decade of the twenty-first century to an ill-conceived boom and a subsequent bust. It is in danger of losing another decade to an incomplete recovery and economic stagnation.

In order to not lose the decade to come, the United States will have to bring order to financial disarray, gain control of a burgeoning burden of debt, and re-create the conditions for sound economic growth and social progress. None of this will be easy. The tasks are made more difficult by the fact, which we have learned to our alarm, that all too many policymakers and observers cling to the failed notions that got the country into such trouble in the first place. If Americans do not learn from this painful episode, and from others like it, they will condemn the nation to another lost decade.

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LOST
DECADES

CHAPTER ONE

Welcome to Argentina:
How America Borrowed Its Way into a Debt Crisis

Latin Americans tell of when, in difficult times, a local dictator defended his rule before a skeptical nation. "When I took office," he insisted, "we stood on the brink of an abyss. But since then, we have taken a great leap forward!" The bitter story circulated in the early 1980s, as Latin Americans faced the worst debt crisis in their history. Beginning around 1970, the countries of the region had borrowed hundreds of billions of dollars from banks in North America, Europe, and Japan. The frenzied borrowing kept the economies going. Brazil built up the developing world's biggest industries; Mexico went from being an oil importer to a major oil exporter; Chile's Pinochet dictatorship spurred the rise of huge private conglomerates. The borrowing also drove speculative bubbles in finance and real estate, but in these prosperous times some disproportionate enthusiasm was understandable.

In August 1982 came the great leap into the abyss. Squeezed by rising interest rates on their debt, and falling prices for their oil exports, the Mexican government announced that it could not make payments on its $80 billion foreign debt. Within weeks, loans dried up to all of Latin America, and soon to all of the developing world. Heavily indebted countries spent the next decade struggling through the aftermath of the crisis.

After 2001, Americans took a similar march toward their own indebted abyss. They borrowed trillions of dollars from foreigners and used the money for a national binge of consumption, financial excess, and housing speculation. Seven years later came the great leap off a financial cliff. In August 2008, borrowers and lenders alike looked down and saw nothing but air.

Deficits, round one: The 1980s

America started its journey to the brink almost thirty years earlier, when the country engaged in its first massive foreign borrowing of the modern era. In 1981, Ronald Reagan signed into law one of the largest tax cuts in American history. Over the next four years, the Economic Recovery Tax Act of 1981 reduced federal tax revenues by nearly half a trillion dollars (almost a trillion dollars in 2010 terms).[1]

Although it was clear that these tax cuts would immediately increase the government budget deficit, the Reagan administration argued that the tax cuts would soon pay for themselves and eliminate the deficits. The tax rate was too high, the argument went, so that reducing it would spur economic growth and the overall tax take enough to balance the budget. The idea was that there is a point at which the tax rate is so high that it actually discourages economic activity and reduces government tax revenues. The result would be a curve, with tax revenue rising up to the point where exorbitant taxes make the economy stagnate, after which point tax revenues start to fall. The curve was called a “Laffer curve” after conservative economist Arthur Laffer, who is alleged to have drawn it on a paper napkin for Dick Cheney, Donald Rumsfeld, and some other Republican politicians in the 1970s. The Laffer curve became a major justification for persisting with aggressive tax cuts even as budget deficits ballooned.

Paul Volcker was chairman of the Federal Reserve at the time. Unlike Laffer and many of the administration’s economic policymakers, Volcker was a pragmatic moderate who favored macroeconomic restraint. He had been appointed by President Jimmy Carter in 1979, largely to contend with persistently high inflation. Volcker did in fact concentrate on reducing inflation, with great success, and soon became the country's most prominent advocate of fiscal and monetary prudence. From his vantage point at the Federal Reserve, Volcker watched the erosion of the government's budgetary position after 1981 with dismay. He reflected later,

> The more starry-eyed Reaganauts argued that reducing taxes would provide a kind of magic elixir for the economy that would make the deficits go away, or at least not matter. . . . The more realistic advisers (everything is relative) apparently thought the risk of a ballooning deficit was a reasonable price to pay for passing their radical program; any damage could be repaired later, helped by a novel theory that the way to keep spending down was not by insisting taxes be adequate to pay for it but by scaring the Congress and the American people with deficits.[2]

The "starry-eyed Reaganauts" were wrong, and the Reagan tax cuts drove the federal budget into deficits larger than anyone had imagined possible. Experience demonstrated that while a Laffer curve might exist in theory, taxation in the United States—which after all has one of the lower tax rates in the industrial world—was far below the level at which reducing taxes would increase tax revenue.

Federal budget deficits averaged $200 billion a year during the 1980s, topping out at $290 billion in 1992. For the eight years of Reagan's presidency and the following four of the presidency of George H. W. Bush, the federal deficit averaged nearly 5 percent of GDP. An international financial policeman such as the International Monetary Fund would regard this level as quite dangerous, especially in good times. In fact, when the European Union set an upper bound on deficits for those countries regarded as reliable enough to join the euro zone, the limit was 3 percent of gross domestic product (GDP). By this standard, the United States had drifted well beyond the boundaries of fiscal responsibility.

As the federal government borrowed heavily to cover its deficit, the federal debt went from under $1 trillion in 1981 to over $3 trillion in 1993, well more than doubling on a per-person basis. For the first time since World War II, the government's debt was rising as a share of the economy, from a low of 26 percent of GDP to 49 percent. The deficits also, in the words of David Stockman, who ran the Office of Management and Budget for Reagan, "so impaired, damaged, fatigued, and bloodied" the political system as to turn it into something "like the parliament of a banana republic."[3]

The United States was looking like a banana republic in another way: its government was borrowing much of the money it needed from foreigners. While the United States had been a developing debtor nation in the distant past, those days had appeared long gone. Before the Reagan deficits, when the American government needed to borrow, it borrowed from Americans, by selling bonds to American investors. Economists who worried about the effects of this government borrowing were concerned that it would "crowd out" private borrowing. With more risk-free Treasury bonds to buy, Americans would buy fewer stocks and bonds of private companies. The companies would find it more expensive to borrow—nobody could get lower rates than the government—and this would inhibit private investment. But this is not what happened in the 1980s. For now, when the federal government looked to borrow, foreigners were just as likely to do the lending as Americans. This did not reduce, but in fact increased the amounts of capital available to the United States. Indeed, one of the reasons why the failure of the Laffer curve did not bring down the Reagan economic policies more generally was that the burgeoning budget deficits were covered by borrowing from abroad.

The U.S. government was able to borrow so much from foreigners because of the explosive growth of international finance over the previous decade. After the economic catastrophes of the 1930s, investors and financial institutions everywhere retreated to their home markets. For forty years, lending was almost exclusively domestic. Americans lent to Americans, Germans to Germans, Argentines to Argentines. But eventually memories of the terrible losses of the 1930s faded, new communications and electronic technologies made it cheaper and easier to do business across borders, and banks looked for new ways to make money. Over the course of the 1960s international finance revived gradually, picking up pace over the 1970s. By the early 1980s the gradually rising tide of global finance had become a flood: while the international financial system held barely $100 billion in the early 1970s, by the early 1980s it had surpassed $2 trillion.[4] Finance and investment had become globalized.

Financial globalization allowed the Reagan administration, and the Bush administration that succeeded it, to borrow over $100 billion a year from abroad to finance their budget deficits. European and Japanese investors, eager to buy American investments, snapped up most of the Treasury securities the federal government issued. Foreign lending allowed the deficits to grow without much of a direct effect on the stock of capital available to American firms and households.

Foreign borrowing helped fuel economic growth through the 1980s and allowed Americans to spend more than they earned. However, the country's growing foreign debt was not unmitigated good news. While borrowing from abroad was a boost to American economic activity, eventually the debts would have to be serviced. It was not clear that the price was worth paying, that getting money from foreigners now justified having to pay more to foreigners in the future. Some of the concern was with how the borrowed money was spent, for if it was being squandered, then certainly it was not a good deal.

There were good reasons to worry about where the money from large-scale foreign borrowing was going, and in fact much of the spending ended poorly. As budget deficits stimulated the economy, and capital poured into the country from abroad, waves of money swept through the financial system and into real estate. Housing prices soared, especially in rapidly growing parts of the nation, in the South and Southwest. With oil prices at historic highs in the early 1980s, oil-producing regions such as Texas grew particularly rapidly. Politicians rushed to get out of the way of the booming financial markets: the Reagan administration and Congress passed a flurry of laws reducing regulations on banks and other financial institutions.

But the financial frenzy eventually fizzled, especially as home prices began to decline in the previously booming states. The collapse of oil prices after 1985 hit Texas especially hard, given its dependence on the petroleum industry. The result was a wave of mortgage delinquencies and, eventually, bank failures. The failures were concentrated in the savings and loan industry. These financial institutions, long focused on housing loans, had been substantially deregulated in the previous few years, so that they were making riskier loans than they were used to. Many of the banks' own finances turned out to be shaky if not fraudulent, and the government regulators turned out to be sorely lacking. The result, between 1986 and 1995, was the failure of more than half of the country's savings and loans, over a thousand institutions with total assets of more than half a trillion dollars (about a trillion 2010 dollars).

As in many financial crises of the past, the savings and loan crisis revealed a pattern of shady financial dealing, influence-peddling, corruption, and outright illegality at the intersection of the real estate and financial markets.[5] One of the most spectacular instances concerned the Lincoln Savings and Loan Association of Southern California, whose owner, Charles Keating, contributed over $1 million to the campaigns of five U.S. senators—subsequently called the "Keating Five"—who intervened repeatedly on behalf of what turned out to be a largely fraudulent financial operation that ended up costing taxpayers $2 billion. The disaster even touched the White House: Neil Bush, son of then Vice President George H. W. Bush and a director of the failed Silverado Banking, Savings, and Loan Association in Colorado, was officially implicated in questionable conflicts of interests. Silverado's failure cost taxpayers over $1 billion. It took more than ten years to resolve the savings and loan crisis, at a cost to taxpayers of more than $150 billion.[6]

Although foreign money kept flowing into the United States, by the end of the 1980s the fiscal laxity of the decade was raising alarms of several sorts. The nation's debt, overall and to foreigners, was at disturbing levels and rising rapidly. The savings and loan fiasco showed, as had hundreds of capital flow cycles in the past, that these financial boom times could easily go bust. And while future generations could hardly complain about the burden that continued federal deficits were imposing on them, there were enough Americans worried about this that pressures mounted to rein in the Reagan- and Bush-era deficits. The money the American government borrowed from foreigners still had to be paid back, and the borrowing could not go on forever without causing concern.

From deficits to surpluses: the 1990s

Over the course of the 1990s, Washington struggled to come to grips with the burgeoning mountain of debt. In the 1992 presidential election, Bill Clinton defeated incumbent George H. W. Bush in large part because of discontent with Bush's management of the economy in the aftermath of a short recession. Bush was also penalized in some quarters for raising taxes to confront the deficit. Nonetheless, the Clinton administration that took office in 1993 made getting the federal deficit under control its principal economic policy goal. The government cut spending and raised taxes, despite the political unpopularity of both sets of measures. The politics of deficit control became particularly complicated after 1994, when the Democratic administration shared power with a Republican House and Senate. Nonetheless, over the course of the 1990s, the Clinton administration and Congress gradually, painfully, worked their way toward deficit reduction.

In 1993 the federal debt stopped rising as a share of GDP, and soon it began declining. Rapid economic growth did some of the work, as did the reduction in military spending once the cold war ended. However, the main story was that for the first time in many years, the government made politically difficult spending cuts and tax increases. As the twentieth century came to a close, the country finally—definitively, it seemed—had put the troubled legacy of deficits and debt behind it. Indeed, the economy was in the midst of a brisk expansion, driven in part by enthusiasm for new high-technology industries.

By 1998, the U.S. government was in an unaccustomed position: its deficits had disappeared. For the first time in forty years, the federal government was covering its expenses. After decades of budget deficits, the government ran a fiscal year 1998 surplus of $69 billion;

by 2000, the surplus was up to $236 billion. At this rate, the Congressional Budget Office estimated, the national debt would be paid off by 2006—for the first time since 1835.[7]

The growing surplus led to new debates, this time about what to do with it—whether to use the money to pay off the public debt, or to make provisions for Medicare and other government programs that were heading toward their own financial straits, or to use it for new spending programs, or to cut taxes. The *Wall Street Journal* editorialized, "it's time to start worrying about the booming federal surplus," and argued vigorously that the surplus justified tax reductions: "A tax cut is the only way to stop the politicians from spending us back into deficits."[8] The newspaper's editorial position was ironic for a conservative icon: it had been forgiving of Republican budget deficits but was now hostile to Democratic surpluses.

Those worried about the surpluses included the man who was by then chairman of the Federal Reserve, Alan Greenspan. Greenspan, appointed by Ronald Reagan in 1987 to succeed Paul Volcker, was a fiscal and monetary conservative like Volcker; but Greenspan was a longtime disciple of militant free-market ideologue Ayn Rand, and had a strong belief in minimal government involvement in the economy.

Greenspan, like the *Wall Street Journal* editorialists, worried that surpluses would put more money than was economically healthy into the hands of the government rather than the private sector. He told Congress that "a major accumulation of private assets by the federal government . . . would make the federal government a significant factor in our nation's capital markets and would risk significant distortion in the allocation of capital."[9] Greenspan's fear was that as the federal government ran bigger and bigger surpluses, it would invest the money in financial markets, which would eventually give the government control over many important investments. It would be better to reduce the surpluses, Greenspan argued, to get capital back into private hands. While more government spending could have done the job, this conflicted with Greenspan's small-government view; he distinctly preferred tax cuts.

Other observers expressed concern that as government debt was paid off, the Federal Reserve would run short of the Treasury securities it uses to guide monetary policy. In order to intervene in money markets to push interest rates up or down, the Fed typically buys and sells Treasury bonds. But if the federal government isn't borrowing, the Treasury does not issue many new bonds, and so the Fed does not have the ample supply of Treasury securities it normally uses to carry out its policies. "The Street doesn't have them to lend anymore," complained one market analyst, as observers speculated that the Fed might be reduced to using World Bank debt or some equally poor substitute to affect the money markets.[10] While the federal surpluses were welcome, they also led to vigorous debate over the appropriate way to deal with them.

Doubling down: from surplus to deficit, 2001–2007

George W. Bush put an end to the surplus debate within months after taking the presidential oath of office in January 2001. The Bush administration arrived in Washington with clear plans to take advantage of the large surpluses in order to reduce taxes, even if this created new deficits. The Republicans now controlled the presidency and both houses of Congress, and they quickly enacted a series of tax cuts. Part of the reasoning was driven by the desire to stimulate an economy that was stagnating in the wake of the collapse of a previous boom in information technologies (IT). The "dot-com bubble" had burst in early 2000, and neither the stock market nor the economy more generally had fully recovered. The administration hoped the tax cuts would help. It redoubled its commitment to deficit spending after the terrorist attacks of September 11, 2001, arguing that stimulative macroeconomic policies were justified in this environment. Tax cuts, budget deficits, and loose monetary policy could keep the country out of recession and get it growing again.

The turnabout in the government's finances was immediate and dramatic. In the spring of 2001 the Treasury estimated that it would repay $57 billion of federal debt in the third quarter of that year (June–September); six months later it announced that it would instead have to *borrow* $51 billion in those three months. As the *Economist* magazine noted, "The $108 billion difference between the two numbers is one of the largest plunges in the government's fiscal position ever recorded."[11]

Deficits during the George W. Bush administration quickly reached and exceeded the Reagan-era deficits. The administration started with a surplus of $236 billion in 2000. The tax cuts shrank federal government revenue by some $400 billion a year, reducing it from 21 percent of GDP in 2000 to 16 percent of GDP in 2004. By then the federal deficit was $413 billion—a dive into red ink of about $650 billion. Over the eight years of the Bush administration, the budget deficit averaged about 3.5 percent of GDP a year, a number matched in peacetime only by the Reagan administration (see figure 1). When George W. Bush took office, the federal government's debt owed to the public had been reduced to $3.3 trillion, 33 percent of GDP; when he left office, it was up to $5.8 trillion, 41 percent of GDP.

In the space of a few years, the Bush administration reversed the accomplishments of a difficult decade of budget-balancing, achieved with often painful spending cuts and tax increases. It bequeathed trillions of dollars in additional debt to future generations. But it also set off a broad-based explosion in borrowing more generally, and especially in borrowing from abroad. For as the federal budget

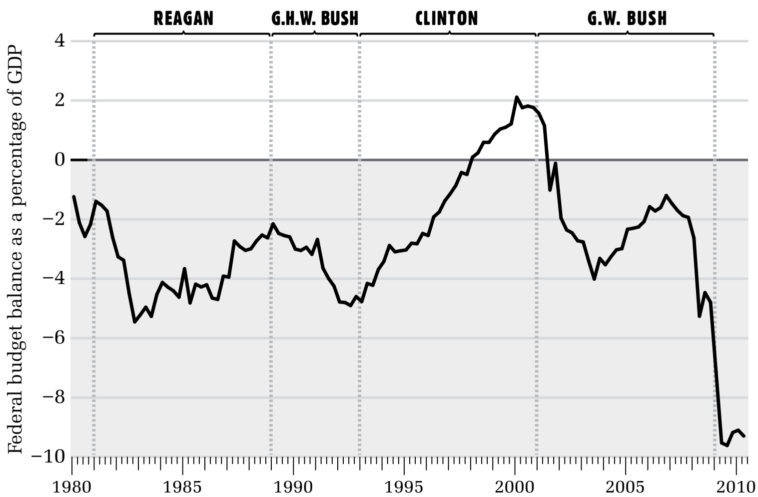

Figure 1. From deficit to surplus and back again: U.S. federal budget balance as a percentage of GDP, 1980–2010. Source: Bureau of Economic Analysis.

went from surplus to deficit, it dipped deeper and deeper into the enormous pool of capital that is the international financial system, borrowing ever greater amounts from abroad. Between 2000 and 2008, foreign holdings of federal government securities—bonds of the Treasury, and of other federal agencies—nearly quadrupled, increasing by $3 trillion.[12] By the end of 2008, the federal government owed foreigners almost $4 trillion; foreigners owned about two-thirds of the government's publicly held debt.[13]

Many in the administration felt that borrowing so much from foreigners was no matter, and perhaps even a good thing. Foreigners, they said, had so much faith in the U.S. government that they were willing to lend to it at very low interest rates. As debt fever spread to the private sector, and American banks and their customers began piling up debts to the rest of the world, the administration and its supporters argued that this simply reflected international confidence in the United States. After all, the American economy was one of the healthiest in the world, rife with profit opportunities; why shouldn't foreigners want some of the action?

Moreover, the fact that much of the foreign money flooding into the United States belonged to foreign governments looking for a place to park their currency reserves was yet another opportunity knocking on America's door. The United States could take advantage of the unique role of the U.S. dollar in world monetary affairs, of its "exorbitant privilege," as French policymakers had called it bitterly in the 1960s. The country could act like a banker to the world, attracting deposits at little or no cost due to its reliability and the centrality of its currency. Why not profit from the good reputation?

Some went so far as to assert that the country's borrowing spree was not the country's responsibility. In March 2005, Ben Bernanke was a member of the Federal Reserve's Board of Governors, the central bank's managing body; he would soon be appointed chair to succeed Alan Greenspan. Bernanke argued that burgeoning foreign borrowing was *not* mainly the result of "economic policies and other economic developments within the United States itself" but rather of extraordinarily plentiful international credit: "a significant increase in the global supply of saving—a global saving glut."[14] In this view, it was first and foremost foreign hunger for American assets that caused the debt buildup.

The availability of easy money from abroad certainly facilitated borrowing, but this argument is one-sided: foreigners hardly forced debts onto unwilling or unwitting Americans. After all, other rich countries with good international standing (Canada, the Netherlands, Germany) did not take advantage of their creditworthiness to turn themselves from creditors into debtors. It takes both lenders and borrowers to launch a borrowing boom. Americans—and especially the U.S. government—made conscious decisions to borrow abroad, starting in the most recent round with the fiscal deficits that burgeoned after the tax cuts of 2001.

And while deficit spending might have been justified for a while after 2001, the immediate justification did not last long. By 2003 the U.S. economy had clearly recovered and then some: Democratic Senator Kent Conrad (N.D.) complained that the economic policies were "a little like a drunk going on a binge. It feels good for a while, but you all know the hangover is coming."[15] Indeed, the country had just gone through twenty years of difficult and contentious struggles over deficit spending, which seemed to have been resolved with the emergence of surpluses in the late 1990s. Yet the deficits continued and even grew. Why, after so much pain and suffering to put the federal government's fiscal house in order, did the Bush administration ramp up the deficits well beyond what was needed to counter the 2001–2002 slowdown?

Political deficits

Like the earlier Reagan-Bush deficits, the George W. Bush deficits were primarily the result of large-scale tax cuts. Some supporters of the 2001 tax cuts resuscitated the Reagan-era argument that they would soon pay for themselves. Laffer-curve logic was often repeated by the younger Bush in justifying his tax cuts and deficits: "The best way to get more revenues [*sic*] in the Treasury is . . . [to] cut taxes to create more economic growth." President Bush's budget director reiterated that "the tax cuts . . . are not the [budget] problem. They are, and will be, part of the solution."[16] Despite the rhetoric, by 2001 there were virtually no remaining true believers in Laffer-curve and related arguments.[17] Why then the sudden descent back into uncontrolled deficit spending?

It is no coincidence that since 1980, Republican administrations have run substantial deficits, while the intervening Democratic administration was responsible for the only significant deficit reductions (and surpluses). Few Republican thinkers believe the economic argument for deficits, but many are explicit about the political goal involved: to restrain spending by their Democratic opponents. Milton Friedman, the Nobel laureate who was the intellectual godfather of Reagan-era Republican economic policy, stated it pithily: "the only effective way to restrain government spending is by limiting government's explicit tax revenue." The prominent conservative pundit Irving Kristol repeated, in the *Wall Street Journal*, that "tax cuts are a prerequisite for cuts in government spending." And Republican Senator Rick Santorum (Pa.) was pointed in 2003: "I came to the House as a real deficit hawk, but I am no longer a deficit hawk. I'll tell you why. . . . Deficits make it easier to say no."[18]

Republicans cut taxes to create deficits that restrained their opponents. They had little reason to restrain their own deficit spending. The strategy had worked well before. The Reagan and Bush administrations' mountains of debt severely limited the options available to the Democratic president to whom they bequeathed the debt, Bill Clinton. The George W. Bush administration had every reason to believe that its own debt accumulation would similarly constrain any future Democratic administration. As it turned out, it was right, although not precisely as it had planned.[19]

The Bush administration hoped to realize broader electoral benefits from its economic policies, in addition to the purely partisan political advantage. Tax cuts were politically popular, especially with the middle-class Americans who have traditionally been torn between the two parties. They would have been less politically attractive if they had been matched with spending cuts, especially in programs popular with middle-class voters, such as Medicare and Social Security, or with such powerful groups as the farm lobby. Fortunately for the administration, spending cuts were not necessary as long as the spigots of foreign capital remained open.

The rest of the country gets in the foreign-borrowing act

The U.S. government's foreign borrowing was just the start. The tax cuts boosted consumer spending, while the fiscal deficits spurred the economy more generally. Americans began borrowing to supplement their incomes, in expectation of future economic growth. And foreigners were willing to lend to Americans, even—perhaps especially—to American households. Foreigners had been investing in the United States at a reasonable clip during the late 1990s, but that capital inflow was particularly focused on investments in America's high-technology sector.

This was different; now most of the foreign loans that were not going to the government were going directly or indirectly to households, to allow them to increase their consumption of everything from consumer electronics to housing. American banks dipped increasingly into international capital markets in order to lend more and more to American households. They channeled much of this into housing and consumer finance. The impact of this increased borrowing on the American middle class was powerful—and, importantly for the government, electorally appealing.

Foreigners lent trillions to the U.S. government and trillions more to private American citizens and businesses. The most general measure of a country's foreign borrowing is its current account deficit. This measures the difference between what a country earns on its goods, services, investments, and other activities, and what it spends to buy such things from foreigners. Whatever a country does not pay for out of its income, it has to borrow—just like a company or a family. The current account deficit can thus be seen as a simple but reasonably accurate picture of how much capital, in the form of loans and investments, a country is receiving from the rest of the world. Over the course of the 1990s, with great foreign interest in American investments, the current account deficit averaged about $100 billion a year, rising toward the end of the decade as foreigners put money enthusiastically into high-technology investments during the dot-com boom. But this was dwarfed by the capital inflow of 2001–2008, when the current account deficit averaged $600 billion a year. This measure of America's foreign borrowing totaled about $5 trillion between 2001 and 2008. By then, nearly one-third of all the country's home mortgage debt was owed to foreigners as well.[20]

Any way you count, the United States was borrowing massively from abroad after 2000. The flow of capital to the country averaged about 5 percent of GDP over these years—a proportion comparable to the foreign capital inflow to Mexico, Indonesia, Brazil, Thailand, and other developing-country debtors when they are at the peaks of their borrowing. The United States was sucking in capital from the rest of the world, fueling its economic growth with funds borrowed from abroad.

The two deficits, fiscal and current account, pumped up American purchasing power. Increased consumption possibilities spread broadly throughout the economy. As the government spent more, the recipients of its largesse benefited. As the prices of homes rose, so did the ability to borrow against them, leading middle-income homeowners to more spending money. As credit became more readily available, even to those previously excluded from financial markets, more people could live better on borrowed money.

This debt-financed consumption had attractive political features for the party in power. For thirty years, working-class and middle-class Americans had seen their incomes stagnate, while the country's rich and super-rich had gotten ever better off. Over that time, the wealthiest 10 percent of the country's households had seen their share of the nation's income rise from one-third to half—which meant, of course, that the other 90 percent had seen their share drop from two-thirds to one-half of the country's total income.[21] In this context, it was easy to understand why there was so much latent anger over the gap between the rich and the rest. Access to easy credit and easily financed consumption helped take the edge off this resentment.[22] After all, who could worry too much about the distribution of income, or holes in the country's social safety net, when everybody had credit cards?

And as the capital inflow drove up housing prices, homeowners saw their principal assets rise in value. A president who had, after all, lost the popular vote in 2000 had many reasons to encourage the budget deficits, private borrowing, and consumption boom that developed after 2001. Tax cuts and deficit spending allowed the Bush administration to do two politically desirable things: increase its support, and limit the maneuvering room of the Democrats. The current account deficit permitted a politically popular boom in consumption. There were powerful political arguments for spurring, and encouraging, foreign borrowing by the government and by the country generally.

Where the money came from

For every borrower there is a lender; where were America's? Who in the world was so eager to invest in the United States, and why? After all, the phenomenon of so much of the world's capital flowing into the United States was a bit like water running uphill. Capital normally moves from rich countries, where capital is plentiful, to poor countries, where capital is scarce. The scarcity of capital in poor countries means interest rates are much higher there than in rich countries, and these higher rates draw foreign money in. But this was different: much of the money coming into the United States originated in countries whose people were much poorer than Americans, such as China. Why?

Three broad classes of investors financed the Bush boom. The first was the most traditional: wealthy individuals. Europeans, Japanese, and others were eager to add more American assets to their portfolios. The U.S. economy was growing twice as fast as the European average, and three or four times as fast as the economies of Germany and Japan. While the dot-com bubble had burst, taking with it a lot of foreigners' paper profits from the 1990s boom, the U.S. economy was still attractive. It was also safe, not a trivial consideration in the aftermath of a series of recent, catastrophic financial crises. Investors had chased higher returns in Latin America, East Asia, Turkey, and Russia, only to be hammered with huge losses and the two biggest defaults in history, of about $100 billion each, in Russia in 1998 and Argentina in 2001. Low-risk American loans seemed well worth the lower return. So hundreds of billions every year flowed into the United States from private investors in Europe, Japan, and elsewhere.

The second kind of investor in the United States came from oil-exporting countries in the Middle East. Many oil-rich governments establish endowments in which to save the enormous surpluses they accumulate, to be used in difficult times or when their oil runs out. Some of these "sovereign wealth funds," as they are called, tend to be cautious, for they are investing for the very long haul. For them, too, the security of the United States was particularly attractive.

A third kind of investor was another type of government fund, controlled by East Asian countries to hold their huge foreign currency reserves. Foremost among these was China, for less than obvious reasons. It is easy to see why the Middle Eastern countries with vast oil wealth and few people accumulated enormous reserves, but China is a poor country with a huge population whose income per person is barely one-fifteenth that of the United States. China certainly did not have capital to spare; instead, the government accumulates foreign reserves primarily to keep China's exports competitive on world markets.

For thirty years, since China's regime partly opened the country to the world economy, the government has emphasized producing manufactured goods for export to Europe, Japan, and North America. One key to this strategy has been maintaining a weak currency. China accomplishes this by intervening in the foreign exchange market by buying dollars with its own currency, the renminbi. This pushes up the value of the dollar relative to the renminbi, and keeps the Chinese currency weak.

Normally, exporters take the dollars (or other foreign currencies) they earn and exchange them for local currency to spend at home. When they do this, they raise demand for the local currency, which then goes up in value. This makes exports more expensive—but it also increases the real purchasing power and standard of living of the people, who can now buy more with their money. The process, when it takes place, is an example of an automatic economic adjustment: the currency of a country running a trade surplus tends to go up in value, making its goods less attractive and reducing the trade surplus.

But the Chinese government did not want the country's trade surplus to decline. If it let the market rule the supply of and demand for the Chinese currency, the renminbi would have gone way up in price.

This would have made Chinese goods more expensive to foreigners. And the Chinese government had staked its future on constantly increasing the country's manufactured exports. With hundreds of millions of farmers eager to work in the cities, the regime figured it needed to create ten million new urban jobs a year.[23] In addition, the private and public, foreign and domestic, export-industry factory owners were politically important to the government. All this militated for keeping the Chinese currency weak.

A government can keep its currency weak by "intervening" in the market for its currency, and by "sterilizing" the inflow of money from export earnings. As the exporters sell the dollars they earn for renminbi, the government buys up the dollars; then, instead of selling the dollars to somebody else, it invests them abroad. In the case of China, the government parked hundreds of billions of dollars in export earnings abroad. Then, to prevent the resulting increase in renminbi from driving up inflation, the government offset that effect by forcing banks to lend out less.[24]

China was joined by a tier of rapidly industrializing export powerhouses running from South Korea, Hong Kong, and Taiwan through Singapore and Malaysia. These governments, too, were looking for safe investments—and while not indifferent to profits, they were more interested in security than in the rate of return. So even though their money could easily have earned a higher rate of return at home than in the United States, the governments of these relatively poor countries invested in America.

East Asian exporters and some sovereign wealth funds run by major oil exporters wanted a safe and secure place to park dollars. American government debt was a perfect investment for them. And so, between 2001 and 2008, foreign governments did most of the lending to the U.S. government. By 2008, two-thirds of the $6 trillion in federal debt was owed to foreigners, and three-fourths of that was owed to foreign governments and their agents. China and Japan had each put about a trillion dollars into Treasury and other government securities, and other Asian exporters another half trillion.

While foreign governments invested their money primarily in loans to the U.S. government, other foreign investors wanted to lend to or invest in private enterprise. The government's budget deficit was the catalyst for the borrowing spree, which dipped largely into money from foreign governments. But within a couple of years, foreign private lenders and investors were centrally involved, especially in American private borrowing for the housing market. The United States had become the biggest international borrower in world history.

Foreign money and the national economy

So what was the problem? Foreign borrowing is as old as the world economy, and in the distant past the United States had been a major foreign borrower. The founding fathers themselves were intimately acquainted with the costs and benefits of a country's foreign debt. America's national and state governments borrowed heavily to finance the War for Independence and the first years of the new nation. By 1790 the debt was about $40 million, equal to more than one-fifth of the country's GDP (a comparable share today would be about $3 trillion). About one-fourth of the debt was owed to foreigners. Alexander Hamilton, the nation's first Treasury secretary, insisted that the government repay all these debts, owed by states and the national government alike. Debt repayment, although costly and controversial, signaled the reliability of the new nation to future lenders and made further borrowing possible.

America's thirst for foreign loans lasted over a century and was central to its economic development. The rapidly growing nation borrowed more internationally than any other country during the nineteenth century, and financed much of its growth with foreign money. One of the country's most urgent priorities was developing its transportation infrastructure, and much of this was done with foreign money. Early on, foreigners, mostly British, provided half of the $8 million needed to build the Erie Canal.[25] When Europeans saw its enormous success—the canal paid for itself within a few years after its 1825 opening—they eagerly lent to other American states to finance new canals and set up new banks. By 1841, the states owed about $200 million, about half to foreigners; as a share of GDP, this $100 million was roughly equivalent to a trillion dollars today.

As the nation continued to grow, Americans borrowed from European lenders to build many of the canals, railroads, mines, and mills that allowed the country to develop. Indeed, many of America's principal financial institutions got their start bringing American borrowers and European lenders together. J. P. Morgan's father launched the family's financial business by moving to London and selling American investments to Europeans. August Belmont emigrated to New York as the Rothschilds' American agent and soon became one of the country's leading financiers. While Europe was where the money was, America was where many of the most profitable investment opportunities were. All through the nineteenth century, foreigners lent to and invested heavily in the United States. And the nation's borrowing experience illustrates the fact that there is nothing inherently wrong with foreign loans.

"A national debt, if it is not excessive," Alexander Hamilton said, "will be to us a national blessing."[26] And Hamilton was right: foreign borrowing can make eminently good sense. It makes money available to people who can use it, from people who would rather invest it than use it. If the loans are applied wisely, they make both borrower and lender better off. Corporations borrow to expand production; students borrow to go to college. As long as a corporation makes more from the expansion than it has to pay in interest, both borrower and lender profit. As long as a student's earning power is increased by more than the interest rate, both he and the lender—and perhaps society—are better off.

Foreign borrowing, like any borrowing, makes sense if the borrowed money is used productively. Inasmuch as it increases the ability of the borrower—individual, firm, government, nation—to service its debt, it can pay for itself and pay handsomely for the creditor as well. The borrowed money doesn't have to do this directly; it can increase productivity indirectly. When a state or national government borrows to improve roads, ports, or schools, for example, the hope is that this will speed economic growth indirectly, so the government can repay the loan out of increased taxes on a larger economy.

Bad bets and bad debts

Theory or no theory, anyone with even a passing knowledge of history or finance knows that the history of finance is littered with debt crises, episodes in which a country borrowed heavily but then collapsed into financial distress. The world has seen many credit cycles, both domestically and internationally, with spectacular booms and busts on national and international financial markets.

All through the nineteenth and early twentieth centuries, rapidly developing countries borrowed regularly from European investors, and just as regularly collapsed into debt crises. The Great Depression of the 1930s caused terrible debt problems everywhere, and virtually every debtor nation defaulted on its debts. When international lending revived in the late 1960s, international banks poured hundreds of billions of dollars into developing countries—especially in Latin America. This, too, ended in crisis after the 1982 Mexican default. But once that passed, lending resumed—until a new round of crises hit financial markets, from Mexico in 1994 to East Asia in 1997–1998 to Russia, Turkey, Brazil, and Argentina from 1998 through 2001.

Even American foreign debt had its disasters. The country's first major borrowing boom, in the 1820s and 1830s to build canals and set up banks, ended very badly. For while some of the money went to viable, profitable projects, some also went to questionable public works and weak banks. In 1841 and 1842, in the midst of a deep recession and financial crisis, many states could not pay their debts; some repudiated them. In fact, the State of Mississippi has refused to honor these debts for over 150 years. The creditors have not forgotten: the British Council of the Corporation of Foreign Bondholders regularly reminds the state's governor that "the Council cannot acquiesce in an unjustifiable default merely because it has been successfully maintained for many years." The Council does note, somewhat forlornly, to its members that "the State of Mississippi does not reply to communications from the Council."[27]

But that was then, and the United States today—the State of Mississippi aside—is not Thailand or Turkey. Most investors expected America's foreign debt to be different because the United States did not seem to suffer from the problems that have plagued other troubled debtors. Remember that both debtors and creditors profit if the debts are used productively; and if any country seemed sure to use money productively, it was the United States.

However, there are no sure bets in finance, and there are many reasons why the uses to which borrowed money is put can turn out to be less productive than expected. First, there is uncertainty about the rate of return on an investment. It is not always clear that a particular project will be worthwhile—the price of exportable resources goes down, or mines don't pan out, or factories can't stand up to the competition.

Second, the effective interest rate on the loan can change. This might be because the interest rate is adjustable, as many interest rates are these days. It might also be because the interest rate is fixed while prices decline, which makes the *real* interest rate—the interest rate compared to the rate of inflation—that much higher. In both instances, lenders and borrowers are hit by unexpected events that make the loans less attractive and less likely to be paid.

The crisis of the 1930s drove down the return on debtors' investments, even while it raised the effective interest rates they paid. During the Depression, prices of most goods dropped precipitously; farm and raw materials prices declined especially rapidly. This hit particularly hard at heavily indebted farmers in the United States and developing countries abroad. Meanwhile, the cost of paying off debts stayed the same. Debtors in the millions were unable to service their debts; soon the banks that had made the loans were insolvent, financial systems collapsed, and economies collapsed with them. In the early 1980s, developing-country debtors were particularly hard hit when the Federal Reserve pushed up American interest rates to over 20 percent, because the debtor nations' loans were at variable interest rates and these rates went up accordingly.

Debts can go bad when lenders and borrowers make debt decisions for reasons that have little to do with the financial feasibility of the debt. Bank loans, for example, are often made by individual loan officers who may be long gone from their current position when the loans go bad. If loan officers are promoted on the basis of the quantity of loans they make and not their quality—for it will be years before their quality is known—they have incentives to push loans even onto borrowers whom they know are not really creditworthy. Borrowers, too, can have reasons to take on debts they know they cannot service; they can declare bankruptcy, get out from under their obligations, and still enjoy the debt-financed lifestyle for a time.

Another source of bad loans is "moral hazard," behavior undertaken in the expectation that if anything goes wrong, somebody will step in to bail the debtors and creditors out. Banks may make questionable loans, and companies and households may take them, if they believe that they are implicitly insured by a government concerned about the systemic implications of widespread debt defaults. Banks regarded as "too big to fail" may take risks which banks that actually could fail would not.

Some loans made for reasons that are not purely financial involve "herding," the tendency of lenders to "follow the leader." When some financial institutions are making money on loans to Latin America, or to high-tech start-ups, or to young homeowners, there is pressure on other financial institutions to chase the money. It is hard to explain to shareholders why a bank is passing up profit opportunities that other banks seem to have found. So new lenders rush in, pushing loans out the door as fast as they can. But just as financiers can flock together in making new loans, so can they flee en masse at the first sign of trouble.

The East Asian crisis of 1997–1998 demonstrated how quickly financial fads and fashions can turn. Early in 1997 East Asia was the darling of international investors, with investments flowing into the region at the rate of nearly $100 billion a year. But in the summer of 1997, asset and housing booms in the region began to go bust. A financial crisis erupted, and by the end of the year capital was flooding out of every country in the area. Within two years over $200 billion had fled. Often investors deserted a country for no other reason than that the country was within a thousand miles of a financial trouble spot. Herding helped in good times, but the harm it did undoubtedly outweighed its benefits.

The modern world economy has seen dozens of cycles of debt and debt crises. Typically the borrowing starts slowly, as the best-informed or most adventurous lenders move in. Over time new lenders—less well informed—follow the leaders and add their money. Eventually the lending accelerates into a boom, in which lenders need to lend ever more to keep expanding and borrowers need to borrow just to keep up their debt service payments. Ultimately it all comes to an end, usually with a crash, and lending dries up until enough of the debt is forgiven, or forgotten, or both. There are good reasons to be wary of foreign borrowing, for it can go wrong if used poorly, or if overtaken by unforeseen events, or if poorly motivated.

America was different . . .

To most international lenders, none of these concerns seemed relevant to the United States. The world's most dynamic economy was built on productive investments. Its free-wheeling markets made sure that only profitable investments survived. Its financial transparency guaranteed full information and a minimum of surprises. And its sophisticated regulators knew when and how to manage markets least and best. If there was a safe place to invest, the United States was it.

But not everyone was convinced that America's foreign borrowing was going to end well. Starting soon after 2001, prominent economists Maurice Obstfeld and Ken Rogoff wrote paper after paper arguing that the United States was "on an unsustainable trajectory."[28] Lawrence Summers warned an International Monetary Fund audience in October 2004 that America's position represented "a system that is uneasy in its consequences and unlikely to endure indefinitely as debt accumulates."[29] Menzie Chinn wrote in 2005, "U.S. citizens and foreign governments *do* need to worry about the current account deficit. . . . There is a looming crisis."[30] Nouriel Roubini and Brad Setser argued, in a widely discussed paper late in 2004, that "the tensions created by this system are large, large enough to crack the system in the next three to four years."[31] For those who saw trouble on the horizon, the only real question was whether the path downward would be sudden or gradual—a "hard landing" or a "soft landing," as the debate went.[32] The warnings proliferated as deficits grew and debts accumulated.

But the warnings largely came from academic observers, and very little of the concern wore off on the general public, or the general investing public, or on policymakers. To some extent this was because the data were confusing and contradictory.[33] To some extent it was because academic supporters could also be found with the less alarmed view that this level of American foreign borrowing "is not only sustainable, it is perfectly logical" and that "the system will last."[34] But many observers simply refused to believe that the United States could borrow its way into trouble. And sitting politicians had little reason to question their good fortune in presiding over an economic expansion and consumption boom.

The United States was not alone in the exuberance of its foreign borrowing. A phalanx of rich countries had, like the United States, found that economic success made them popular with investors and lenders. Most prominent among those that joined the United States in the borrowing boom of the early 2000s were the United Kingdom, Ireland, and Spain. They all, like the United States, borrowed heavily from the rest of the world.[35]

The United Kingdom has long had, or fancied it had, a special relationship with the United States, and indeed its borrowing spree was especially similar to that of the United States. Between 2000 and 2007, the United Kingdom averaged a current account deficit of $50 billion a year, borrowing an average of 2.4 percent of GDP from the rest of the world every year. American foreign borrowing was about double that as a share of GDP, but British borrowing was substantial. Similarly, while the U.S. government was averaging deficits of 3.6 percent of GDP between 2002 and 2007, the British government was close behind at 2.8 percent of GDP. Both countries had deregulated their financial systems in major ways over the course of the previous twenty years, and London and New York were the two global leaders of financial innovation and experimentation.

Across the Irish Sea, an even more exaggerated version of the American drama was being acted out. After digging itself out of a large debt crisis in the early 1980s, Ireland became one of the fastest-growing economies in the world. By 2005, the Celtic Tiger was one of the world's richest nations, far ahead of its former colonial master, Britain. This prosperity was built on a highly educated, English-speaking workforce, on productive high-technology manufacturing, on membership in the European Union, and eventually on adoption of the euro. On the basis of this extraordinary economic success—after all, Ireland had been a poor country for most of its history—the country began, like the United States and the United Kingdom, to suck in capital from the rest of the world.

And Ireland did borrow. The current account deficit averaged about $4 billion a year between 2000 and 2007, equivalent to a thousand dollars per inhabitant per year, or 2 percent of GDP. But this is only part of the story. Over the course of the 1990s, Ireland turned itself into an international banking center to rival Switzerland and Luxembourg. Hundreds of financial institutions set up shop in Dublin, and Irish banks expanded aggressively abroad. As Ireland flourished as a financial center, the four big Irish banks borrowed more and more internationally to lend to the booming local economy. In 2003, Irish banks owed about $12 billion to the rest of the world, but by 2007 they owed $130 billion, equal to nearly two-thirds of the country's GDP, or about $100,000 for every household in Ireland.[36]

Spain, too, joined the ranks of the world's borrowing nations in the new millennium. Spaniards borrowed about $1 trillion abroad after 2000, and the pace of borrowing quickened as time went on: in 2007 the current account deficit was over 10 percent of GDP, a staggering figure. The booming economy drew in capital, and also drew in people, half a million immigrants a year.

Spain and Ireland had one important difference from the United States and the United Kingdom, and one important similarity to each other: the euro. Foreign lenders had good reasons to be wary of Spain and Ireland, which had gone through financial difficulties many times over previous decades (and centuries, in the case of Spain). But membership in the euro zone gave the two countries a new attractiveness. They were growing extremely rapidly, in part because the euro facilitated their trade and investment ties with the rest of Europe. And foreign lenders had good reason to believe that the Spanish and Irish economies were now protected by the broader euro umbrella. These more peripheral countries were now so closely linked to such core euro member states as Germany, France, and the Netherlands that the new European Central Bank, and its member governments, would have to ensure that other member governments could pay their debts. Finally, with price stability enshrined in the European Central Bank's mandate, anxieties about inflation in either country disappeared.

In the event, American foreign borrowing turned out not to be that different from other countries' foreign borrowing. Beneath all the complexities of modern financial innovation and regulation (and its absence), the American experience was like that of borrowing nations past and present. Foreign debts made the good times better; they made the bad times worse. There have been tidal waves of international capital flows to and from borrowing nations for centuries. But there has rarely been a capital flow cycle quite so enormous in its upswing as the American borrowing boom of 2001–2007,and there has rarely been a crash quite so dramatic or so global as the American collapse of 2008.

No one factor on its own could have caused a crisis of this magnitude. The capital inflow might have been managed more effectively; the borrowed funds could have been used more productively; financiers may have had reasons to behave more prudently; regulators should have recognized the implications of the risks they were allowing banks to take. In what follows, we trace how all these forces came together to bring down the American and international financial system. We start by delving into the origins and effects of America's foreign borrowing binge.

CHAPTER TWO

Borrowing, Boom, and Bust:
The Capital Flow Cycle

In the early 1990s, Thailand went through a tremendous construction boom. As tens of billions of dollars flooded into the country, lending to real estate firms soared. Builders doubled the amount of office space in Bangkok in just over three years. Cranes lined the skyline, and new suburban developments sprouted all over town. But by early 1997, the building boom was in trouble. In February, one banker reported bluntly on the state of the real estate market: "There are no transactions." One-fifth of all the housing units built in the previous five years was empty. One-fourth of all the office space in Bangkok was vacant. Stock prices of real estate companies were down nearly 95 percent. Thai banks found that nearly half of all the loans on their books were bad. Within a few months, Thailand crashed into the gravest financial crisis in its history.[1]

And so it went in the United States. In 2004, the suburbs of Las Vegas and South Florida were booming with building activity. New developments were mapped out and built, prices were soaring, banks were eager to lend, people were impatient to buy. By 2010, a drive through these suburbs was surreal: neighborhood after neighborhood was empty. Either the new housing had never been occupied, or the formerly enthusiastic new owners had defaulted, been foreclosed on, and moved out. The boom had gone bust, and it dragged the rest of the American economy—and the world economy—with it.

How did America's foreign borrowing spree go so awry? What made our debt-financed boom turn out as badly as those of Thailand, Mexico, Russia, Argentina, and dozens of other countries in the past? What was it about the $5 trillion Americans borrowed from foreigners between 2001 and 2007, or the way they borrowed it, or the way they spent it, that proved so unsound?

Federal deficits and Fed policy

America's foreign borrowing began in 2001 with the federal government suddenly shifting from having a massive surplus to accumulating a massive deficit. As the government dipped into international financial markets, eventually borrowing a couple of trillion dollars, the deficit spending had three broad effects. First, in cutting taxes by hundreds of billions of dollars a year—an estimated $2 trillion over a decade—the government gave taxpayers that much more money to spend. Second, borrowing by the federal government sustained, even increased, government spending during the 2001 economic slowdown. This put money into Americans' hands to help stimulate the economy. Third, the deficit allowed the government to increase military spending in the aftermath of the September 11, 2001, attacks, especially after the invasions of Afghanistan and Iraq. Thus, federal foreign borrowing increased both public and private spending.

The Federal Reserve's policy of driving interest rates lower than they had been in decades was the next major spur to American borrowing. The Fed's principal tool of influence on the economy is its benchmark interest rate, the Federal Funds rate, which is what banks charge each other for money. Most people can't get the Federal Funds rate, but when banks pay less, or more, for their money, they adjust the interest rates they charge consumers and businesses accordingly. So the Fed's interest rate policy has a profound impact on the economy through its effect on borrowing and lending. If the economy is in the doldrums, the central bank can stimulate it by reducing interest rates and encouraging borrowing, which increases spending. If the economy is "overheating," risking inflation, the Fed can restrain it by raising interest rates and discouraging borrowing, which reduces spending.

The most widely accepted guideline for interest rate policy is one devised by John Taylor, a distinguished Stanford University macroeconomist. In 1993 Taylor proposed a relatively simple rule that central banks can follow to achieve price stability, low unemployment, and policy credibility. This "Taylor rule" adjusts the interest rate in line with changes in the inflation rate and the rate of economic growth, and is generally seen as defining an appropriate target for a reasonable monetary policy. A monetary policy that is too "tight"—with interest rates too high—could slow economic growth, while a monetary policy that is too "loose"—with interest rates too low—could lead to excessive borrowing and inflation. Over the course of the 1990s, monetary policy had generally been restrained and in line with the Taylor rule. For example, from 1995 to 2000, the Fed kept the Federal Funds rate at about 3 percent above the rate of inflation: inflation averaged 2.5 percent a year, while the Federal Funds rate averaged 5.5 percent. When George W. Bush was elected president, in November 2000, the rate was at 6.5 percent with inflation at about 3.4 percent.

Alan Greenspan was in charge of the nation's monetary policy at the time. After his initial appointment as chairman of the Federal Reserve by Ronald Reagan in 1987, he was reappointed by George H. W. Bush in 1991, reappointed again by Bill Clinton in 1996, and again in 2000. Greenspan, a lifelong Republican, had close ties, as we mentioned earlier, to Ayn Rand's "Objectivist" movement, which champions a radical individualist view of society. Rand herself argued, in a 1964 book called *The Virtue of Selfishness*, for "full, pure, uncontrolled, unregulated laissez-faire capitalism."[2] Nonetheless, Greenspan served under President Clinton and seemed committed to monetary moderation and fiscal prudence. It came as a surprise to many when, despite his traditional fiscal conservatism, Greenspan supported George W. Bush's 2001 tax cuts and the large deficits they caused.

Soon after the 2001 Bush tax cuts went into effect, Greenspan's Fed began bringing interest rates down precipitously. By September 2001 the benchmark rate was about 3 percent; in December it went below 2 percent and kept falling. The central bank justified the policy because growth was slow in the aftermath of problems in the high-technology sector and after the terrorist attacks of September 11, 2001. This seemed reasonable. But the Fed kept pushing interest rates down.

Long after the economy began growing again, through most of 2003 and 2004, the Federal Funds rate stayed around 1 percent—the lowest rate in more than forty years. Greenspan raised the rate above 2 percent only in December 2004. Meanwhile, inflation was substantially higher than the prevailing interest rate. From 2002 through 2004, while the Federal Funds rate averaged 1.4 percent, the Consumer Price Index averaged 2.5 percent growth, so that the central bank's main interest rate was well *below* the rate of inflation. When an economy has "negative real interest rates"—that is, interest rates less than the inflation rate—lenders are effectively giving money away, and people have tremendous incentives to borrow.

The Federal Reserve was breaking the Taylor rule: a Taylor-rule Federal Funds rate would have averaged almost 3 to 4 percent between 2002 and 2004, rather than the barely 1.4 percent that was in place.[3] This was an extraordinary episode in American monetary policy, during which the central bank purposely held interest rates below the rate of inflation for several years. Although it is always hard to know what goes on at the Fed, some cynics felt that Greenspan was trying to make sure that President George W. Bush would reappoint him when Greenspan's term ended in 2004. Certainly Greenspan's unexpected support for large-scale deficit spending, coupled with the uncharacteristically lax monetary policy, suggested an attempt to curry favor with the administration. In the event, Bush renominated Greenspan for an unprecedented fifth term as Fed chair in May 2004. And the low interest rates of 2002–2004 certainly helped secure the reelection of President Bush, who, after all, had lost the popular vote in 2000. As if to confirm the suspicions of the cynics, interest rates began rising again after the 2004 presidential election.

With interest rates at historic lows, and foreigners still eager to lend, Americans themselves borrowed in ever larger amounts. The total indebtedness of Americans—to each other and to foreigners—had been generally stable or slowly rising during the 1990s, equaling about 2.6 times the country's GDP by 2000. Between then and 2007, the country's total debt soared by $22 trillion, rising to over 3.4 times output. In those seven years, the debt of the average American rocketed from $93,000 to $158,000.[4] While this was spurred by the burgeoning gross debt of the federal government—which went from $5.6 trillion to $9 trillion in those years,[5] from about $20,000 per person to about $30,000 per person—private borrowing was galloping ahead as well. And while much of the financial action involved Americans lending to Americans, the scale of the borrowing was only made possible by the inflow from abroad.

Foreigners supplied much of the money that was allowing Americans to live beyond their means. Lending to the U.S. government was direct: foreigners simply bought Treasury securities. But foreign lending to individual Americans was largely indirect, intermediated through a complex financial system and a dizzying array of complicated financial instruments. In some cases, American banks borrowed from foreign banks or investors, using the additional funds to relend to American households. In other cases, American loans were packaged into bonds and other securities that were then sold to investors. In this latter process, called "securitization," an American investment bank might bundle together thousands of mortgages or credit card debts to underwrite a bond issue to be sold to investors, including those abroad. The bonds in question would compensate the investors out of the interest payments these thousands of homeowners and credit card holders made on their debts. The bond was a good deal for the foreign lenders, as it allowed them to diversify their holdings among many mortgages and credit cards, and gave them access to loans they regarded as high earning and safe. The ultimate borrowers, the homeowners and credit card holders, had no idea that much of the money they were borrowing eventually came from Germany, Kuwait, and China, but that was the reality.

Who was doing all this borrowing? The United States had been running a current account deficit—that is, borrowing from abroad—

before 2000, but the proportions were smaller and the purposes to which the money was put were quite different. In the several years before 2000, the principal foreign debtors in the United States were private corporations and households, each of which was borrowing from abroad an amount equivalent to about 1 percent of GDP—the government was in surplus, and so it was not borrowing. But after 2000 there were two crucial changes. First, the total amounts borrowed skyrocketed, so that by 2003–2007 they were triple and quadruple what they had been ten years earlier. Second, the borrowers changed dramatically. Now the government was the largest single user of borrowed money. And as interest rates plummeted and private individuals were drawn into the financial frenzy, households doubled and tripled their foreign borrowing. Meanwhile, corporations actually went into surplus, financing their activities out of profits.[6]

The fact that America's foreign borrowing was going exclusively to the government and to private households was a warning signal. International financial institutions, such as the International Monetary Fund, typically advise developing countries that borrowed funds should go into investments that raise the nation's capacity to produce, and so to pay off its debts. Government budget deficits and residential housing are unlikely to be productive; if the IMF saw a developing country using foreign debt to fund budget deficits and housing construction, it would raise red flags. And in fact the head of the Bank for International Settlements, the central bankers' central bank, did voice his concern early in 2006. Noting that the money America borrowed was going to federal deficits and residential investment, he observed, with typical understatement, "This combination does not raise US productive capacity." It meant, he said, that "major macroeconomic risks are at high levels and rising" and warned of "potential abrupt adverse changes in the financial environment."[7] But almost nobody was listening. Living on borrowed time was too appealing.

On borrowed funds

American households borrowed ever more, even surpassing the government in foreign borrowing in 2005. Americans borrowed to buy cars and computers, racking up credit card debt to go on vacation and go out to dinner. Between 2000 and 2007, consumer credit rose by a trillion dollars, from $1.5 to $2.5 trillion.[8] And Americans borrowed to buy houses—especially to buy houses. As interest rates declined, tens of millions of Americans took advantage to refinance their mortgages or to buy new homes.

Household borrowing drove a remarkable growth in the housing market and a striking rise in housing prices. The average price of American homes, as measured by the widely used Case-Shiller index, was generally stable over the 1990s, but it skyrocketed after 2000 (see figure 2). Mortgage lending soared from about $750 billion in 2000 to over $2 trillion a year between 2002 and 2006. As more loans were written, average housing prices doubled in the country's major cities between 2001 and 2006—and rose by much more in some places. Merrill Lynch estimated that half of all new private-sector jobs created after 2001 were related to housing, and as one observer noted, "For all intents and purposes, real estate *was* the economy."[9]

The housing boom was particularly pronounced in the South and Southwest. The population there was growing three times as fast

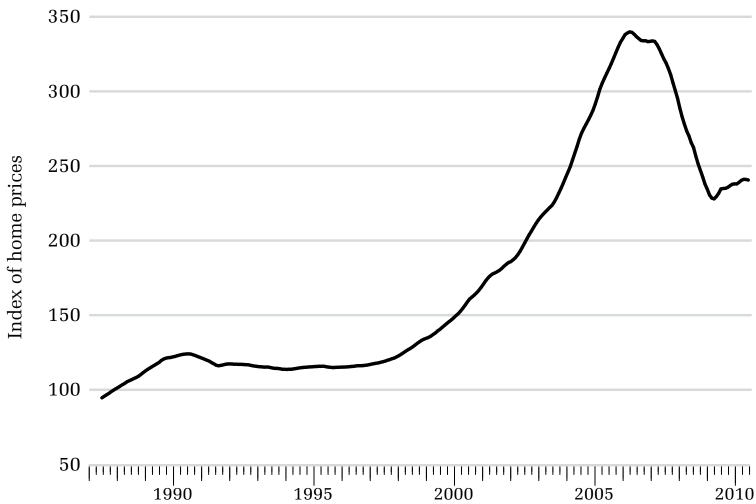

Figure 2. The housing boom. Case-Shiller home price index for ten major cities, seasonally adjusted, 1987–2010. 1987 = 100. Source: Standard & Poor's.

as in the rest of the country, by two million people a year. In South Florida, people camped out overnight to be at the head of a line of thousands to buy into a new development in Wellington, near Palm Beach. Over three thousand people showed up for the development's grand opening, and the developers sold $35 million worth of homes in one weekend. A few miles south, in Weston, Florida, more than eight hundred hopeful buyers paid a thousand dollars apiece just to enter a lottery for a chance to buy one of 222 new townhouses; every last one sold within seven hours.[10] Scenes like these were repeated in Phoenix and San Diego, Tampa and San Antonio. And home prices skyrocketed accordingly: between 2000 and 2006, the median price of a home in Miami went from $150,000 to over $400,000; in Las Vegas, from $135,000 to $310,000.[1]

Despite the soaring prices, more Americans than ever found it easy, and cheap, to borrow to buy a home. The expansion of home ownership swelled the ranks of the homeowners, and the gain in housing wealth made existing homeowners better off. Making it easier for American families to buy their own home—or at least to live in a home whose mortgage was in their name—has been the goal of many American politicians. The appeal of this to politicians was reminiscent of a previous era in British politics. In the 1980s, Margaret Thatcher's government sold off many of the country's public housing units to their residents. Among other things, this created a large new group of homeowners who were more likely to vote for Thatcher's Conservative Party.[12]

The George W. Bush administration crafted its own variant of the Thatcher policy, called the "ownership society." While there had been a push to expand home ownership under the Clinton administration, particularly in historically disadvantaged neighborhoods, the Bush administration's new efforts were much broader.[13] It championed private ownership in general and home ownership in particular. As President Bush told the National Association of Home Builders in 2004, "Home ownership gives people a sense of pride and independence and confidence for the future. . . . [W]e're creating . . . an ownership society in this country, where more Americans than ever will be able to open up their door where they live and say, welcome to my house, welcome to my piece of property." The president was greeted with enthusiastic chants of "Four more years! Four more years!" from the home builders in attendance.[14]

Rising home prices and easy money drove a broader increase in other consumer spending. Those who already owned their own homes could take advantage of ready credit and the higher value of their homes to refinance their mortgages at lower payments and take cash out. The more housing prices rose and the lower interest rates got, the more existing homeowners could borrow against their homes. This in turn would allow them to spend more—transforming a home, as the saying went, into an ATM. By one estimate, for every thousand-dollar increase in a home's value, a family who would otherwise have had trouble borrowing could increase consumption spending by $110. As the national median house price shot from under $140,000 in 2000 to nearly $250,000 in 2006, the borrowing and housing booms allowed a median cash-strapped family to spend $12,000 more than otherwise—enough to buy a car, or take several vacations, or to remodel that now more valuable home.[15]

Banks and other financial institutions profited handsomely from the borrowing boom. Whether they brought foreign lenders together with domestic borrowers, or originated mortgages and consumer loans, or innovated intricate financial instruments, there was much more work to be done and much more money to be made. Increased financial activity inflated the size of the financial sector, which added over a million jobs and increased its share of the country's GDP from 7.0 to 8.3 percent in the ten years to 2007. The earnings of people in finance—especially at and near the top—soared along with housing and stock prices. Whereas the salaries of engineers and financiers with postgraduate degrees were roughly equivalent until the middle 1990s, by 2006 financiers were making one-third more than engineers. By then, one careful study estimated, financiers were overpaid by about 40 percent. The financial services sector was much bigger than it needed to be; every year, people in finance were earning at least $100 billion more than was economically justified.[16]

Foreign debt–fed spending by Americans sucked in imports, more than doubling the country's trade deficit from 2001 to 2006. By then, Americans were buying abroad over $750 billion more than they were selling abroad. The big story here was a surge in imports, from $1.4 trillion in 2001 to $2.4 trillion in 2007.

Swelling imports were great for consumers, who found stores filled with inexpensive goods from abroad, but they devastated American manufacturing, especially producers of labor-intensive goods who competed most directly with imports. Between 2000 and 2007, the country lost almost three and a half million manufacturing jobs, nearly one-sixth of the total. Computer and electronics manufacturers shed a quarter of a million jobs. Garment and textile producers were particularly hard hit, losing over 300,000 jobs, more than one-third of the total. Burlington Industries of North Carolina, once the world's largest textile producer with over forty plants around the world, went bankrupt, and by early 2005, the sector was losing a factory a week, along with 1500 jobs.[17]

A predictable bubble

The massive inflow of funds, the bloated financial sector, the surging imports, the orgy of consumption, the bubble in the housing market: all this was eerily familiar to anyone who had lived through, or observed, earlier debt crises. America was looking like any one of dozens of developing countries that had borrowed themselves into the poorhouse over the previous forty years.

Latin Americans might recall their borrowing in the 1970s and early 1980s, before their debt crisis began in 1982. Governments spent far more than they took in, and used foreign funds to fill the gap between spending and taxes; the Argentine and Mexican governments borrowed about half of what they needed from foreigners. The banking systems, which handled much of the capital inflow, swelled; those of Chile and Argentina doubled and tripled their share of the economy in a few short years. Housing prices soared; they increased by nearly tenfold in Chile over a little more than a decade. Stock markets boomed. And then it all came crashing down after August 1982, driving Latin America into a lost decade of depression, hyperinflation, and slow growth.[18]

The same pattern was repeated fifteen years later in East Asia. Hundreds of billions of dollars flooded into the region's rapidly growing economies. By 1995, countries like Thailand and Malaysia were borrowing amounts equal to more than 8 percent of GDP every year, using foreign money to finance one-fifth and more of their total investment. Thai banks tripled their real estate lending between 1990 and 1995, as the property market boomed. All over the region there were spectacular increases in housing prices, in stock market indices, and in the size of banking sectors. But in 1997 it all collapsed. By the time it stopped falling, the Thai stock market was down almost 80 percent from its pre-1997 peak.[19] This roller coaster ride was repeated in the middle and late 1990s in Russia. And at roughly the same time in Turkey. And in Mexico again in the early 1990s. And with an extraordinary vengeance in Argentina in the 1990s, leading up to a spectacular implosion in 2001.

America's housing and financial booms, and its gaping trade deficit, followed a well-worn script, one acted out by dozens of countries sliding down the slippery slope of this capital flow cycle. Large-scale foreign borrowing caused all of these domestic pathologies.

Anatomy of a boom

When a country's government, people, and firms borrow abroad, capital flows into the country, which increases the ability of local residents to buy goods and services. Some of what they buy are hard goods, such as cars and consumer electronics. In the American borrowing boom, the connection was often direct, as easy money helped consumers finance purchases of these big-ticket items.

More spending on computers, clothing, furniture, and other things that can be traded easily across borders increased imports by 50 percent between 2001 and 2005. Meanwhile, exports grew very slowly, so that by 2005 the trade deficit was well over $700 billion. The average American family of four was buying $30,000 worth of goods and services from abroad every year, while the country was only selling $20,000 worth abroad per family. The difference was paid with borrowed money.

Borrowers also spend borrowed money on things that can't easily be traded internationally: housing, financial services, medical care, education, personal services. Increased demand for these goods and services simply drives up their prices. Their supply also increases, but not quickly enough to meet all of the increased demand—it takes a long time for the supply of single-family homes or doctors to grow. Just as foreign borrowing causes a surge in imports, it causes a surge in the relative prices of housing, restaurant food, medical care, and other services.

Those living through a borrowing boom see these developments in a number of ways. People have more money to spend, and things from abroad seem cheaper, for example, imports and vacations. At the same time, goods and services that do not enter world trade get more expensive. This can be a boon to some, such as homeowners whose properties rise in value. But it can also lead to soaring prices for health care, education, and transportation. Higher prices for these services also drive up the price of manufacturing at home, again making it hard for local producers to compete with foreigners.

Economists capture this process by dividing everything in an economy into two types of goods and services. One type of good can easily be traded across borders: clothing, steel, wheat, cars. Because these goods are traded, their prices cannot vary much from country to country (leaving aside trade barriers and transportation costs). The value of these "tradables" tends toward an international price, times the exchange rate. The Mexican price of steel is simply its world price times whatever the peso is worth today.

A second kind of good or service has to be consumed where it is produced; it cannot be traded at all or easily. These "nontradables" are mostly services, such as haircuts and taxi rides. The prices of nontradable services can vary widely, since there is little international competition, for instance, in haircuts. Travelers know this intuitively: cars cost pretty much the same everywhere, while haircuts and taxi rides can be much cheaper in some (especially poor) countries than in others. The main nontradable is housing, and shelter is a crucial part of every household's budget—in America, it accounts for about a third of consumer spending.

A borrowing boom raises the prices of nontradables, such as financial services, insurance, and real estate. This is good for those who work in these industries, and for people who own nontradables, such as housing. But the surge in imports, and the rise in other prices, is bad for producers of tradables, such as manufactured goods and agricultural products.

This is precisely what was happening to the United States after 2001. Nontradables sectors boomed, while tradables sectors lagged. Between 2000 and 2007, prices of services rose by 25 percent, while prices of durable consumer products declined by 13 percent. The import surge and the rise in nontradables prices savaged the manufacturing and agriculture sectors, which together lost nearly four million jobs. But finance, insurance, and real estate were growing at more than three times the pace of manufacturing, adding over a million jobs in five years.[20]

Sometimes foreign borrowing drives the country's currency up directly. Foreigners lend to Americans by buying American bonds, mortgages, and other securities. To do so they also have to buy dollars, so the dollar's value rises. The stronger currency makes imports cheaper in domestic currency, and locally produced goods more expensive to foreigners. Local residents buy more imported goods, local producers sell less of what they make, the trade deficit grows, and national producers of traded goods complain. Back in the early and middle 1980s, when the Reagan administration's budget and current account deficits led to a rise in the dollar's value by more than 50 percent, imports soared and exports collapsed, millions of manufacturing jobs were lost, and demands for protection from foreign goods skyrocketed.

Economists capture both of these effects—on the currency, and on the relative prices of tradables and nontradables—with the concept of the "real exchange rate." This takes into account both the "nominal" exchange rate—a currency's stated value in terms of another currency—and the relationship between prices at home and abroad. A currency's real exchange rate can rise, or appreciate, in one of two ways. First, prices can stay the same while the currency rises in nominal value. If the dollar goes up from 1.0 to 1.2 euro while American and European prices stay the same, Americans can buy 20 percent more with their dollars in Europe. The second way is for the currency to stay the same while American prices and wages rise by 20 percent. Then, again, Americans can buy 20 percent more in Europe with their dollars because European prices are now that much lower than American prices.

The American trajectory after 2001 was in line with the typical experience of a country embarked on a major foreign borrowing binge, with some variations. In developing countries, borrowing booms are often accompanied by a spike in the ostentatious consumption of luxury cars, foreign liquor and perfume, and expensive electronics by affluent consumers who take advantage of the easy money to buy imports they couldn't normally afford—or to travel abroad. When Latin America is in the expansion phase of one of its debt cycles, the airplanes to Miami and Los Angeles are crowded with Latin American tourists. On the way back to Buenos Aires or São Paulo, the Argentines and Brazilians cram the baggage holds and overheads full of American televisions and computers that now seem ridiculously cheap to them. Americans didn't need to travel any farther than the nearest Wal-Mart to fill their homes with foreign goods. Meanwhile, as borrowing increases the amount of money people have to spend, they use some of this increased purchasing power to buy financial assets and real estate. So stock prices and housing prices rise dramatically.

The United States was right on track.

The Bush boom bubbles

By 2005, the joint effects of America's foreign borrowing and loose monetary policy were everywhere. The capital inflow swelled imports and pumped up demand for nontraded goods and services. Nontradables sectors, especially financial services, insurance, and real estate, expanded rapidly. Low interest rates allowed consumers to buy more goods on credit, and more households to buy a home. Those who already owned their home found that rising housing prices and low interest rates made it irresistible to borrow and consume even more. The same was true about the spectacular rise in the stock market and in financial investments more generally: as households saw their retirement and other savings rise, they had every reason to consume more and save less.

Rising home prices, falling interest rates, and soaring consumption fed on each other. Families whose homes were more valuable saw themselves as wealthier, and greater wealth justified more spending. There was nothing fictitious about this new-found wealth, for the family could use it to borrow and spend even more. Millions of Americans found that they could make use of a financial arrangement that was becoming commonplace, a home equity line of credit, to borrow against their now more valuable home. The new money could then be spent on home improvements, new appliances, or a vacation. As one Las Vegas resident told his wife in 2005, "Honey, I told you we'd live in a million-dollar house some day. . . . I just never thought it would be this one."[21]

But by 2005 the housing boom seemed clearly to have turned into a bubble.[22] Housing prices were rising virtually everywhere, and in some areas they had reached levels that were almost certainly unsustainable. For example, by early 2006 the median home price in San Diego was $500,000. But a standard index of affordability, which calculates how many households could afford the basic cost of living in their homes, reveals that barely one San Diego household in twenty could afford to live in the region's median home.[23]

As early as September 2003, the country's most prominent real estate economists, Karl Case and Robert Shiller, were warning that the country might be in a housing bubble. At that point their conclusion was only guardedly pessimistic.[24] By the middle of 2005, Shiller was more definite, arguing in a prominent *New York Times* article that "the housing craze is another bubble destined to end badly."[25]

It seemed clear to many that the United States was waltzing down a path well worn by other countries that had ended up in serious crises. The economic expansion had become a boom, and the boom had created a bubble in the housing and financial markets. And, in fact, many economists and other observers started sounding alarm bells about the panoply of potential problems, of which the housing bubble was just one. At least as worrying were the fiscal deficit, the current account deficit, the burgeoning foreign debt, the consumption boom, and the swollen financial markets.

Many of the cautionary notes came from impeccable sources. Raghuram Rajan took leave from teaching finance at the University of Chicago's business school to serve as chief economist of the IMF for much of the boom period, from 2003 until 2007. In August 2005, at an annual gathering at Jackson Hole, Wyoming, he was explicit about the risks inherent in financial globalization. While the rise of finance had brought undoubted benefits, he argued, "the financial risks that are being created by the system are indeed greater" than in the past. He pointed out that while free-wheeling and internationally linked financial markets can draw economies up together, they can also pull them down together, which could conceivably cause "a catastrophic meltdown."[26]

New York University economist Nouriel Roubini warned so often, and so alarmingly, of trouble to come that journalists dubbed him "Dr. Doom." Late in 2006, he told an audience that the United States faced "a once-in-a-lifetime housing bust, an oil shock, sharply declining consumer confidence and, ultimately, a deep recession . . . homeowners defaulting on mortgages, trillions of dollars of mortgage-backed securities unraveling worldwide and the global financial system shuddering to a halt." Dr. Doom went on to point out that "these developments . . . could cripple or destroy hedge funds, investment banks and other major financial institutions like Fannie Mae and Freddie Mac."[27]

As housing prices began to decline late in 2006, warnings of impending doom proliferated. Early in 2008, with housing markets already in trouble but long before the scale of the crisis was clear, economists Ken Rogoff and Carmen Reinhart were arguing that the United States showed clear signs of a classic capital flow cycle leading to a financial crisis. Rogoff knows crises: like Rajan, he served as chief economist of the IMF (from 2001 to 2003). One of the Reinhart-Rogoff papers asked, "Is the 2007 U.S. sub-prime financial crisis so different?" and gave a resounding "no" answer. Rogoff and Reinhart pointed out that "the run-up in U.S. equity and housing prices," often regarded as bellwethers of an impending collapse, indeed "closely tracks the average of the previous eighteen post World War II banking crises in industrial countries."[28]

But for every Cassandra warning of impending trouble, there was an Apollo to neutralize the dire predictions. Some were blinded by their own economic or political interests, others by partisanship or ideology.

Special interests and special pleading

Why did the Bush administration ignore all the warnings, and all the signs that the economy was in an unsustainable bubble? To be sure, no government likes to put the brakes on a hard-driving economy. One of the most famous phrases in all of economic policymaking is that of William McChesney Martin Jr., chairman of the Fed from 1951 to 1970, who described the job of a central banker as being "to take away the punch bowl just as the party gets going."

In the case of the roaring Bush boom and bubble, some powerful interests had a major stake in keeping financial and housing markets rising. The lending boom and deregulation swelled the financial system like never before, in ways closely linked to housing markets. American bankers had written millions of mortgages whose viability was predicated on continually rising housing prices. If housing prices leveled off, or even fell, many of these mortgages would go bad and drag the creditors with them.

The political economy of housing itself was closely related: much of the increased lending and spending went into housing, so that home builders and related industries made spectacular profits, as did those in the real estate business. The construction industry, including home builders, is well organized and well represented in Washington. The industry is historically close to the Republican Party—three-fourths of its federal political action committee (PAC) contributions between 2000 and 2006 went to the Republicans.[29] When, in 2005, a presidential panel recommended reducing subsidies for home builders and homeowners, the housing lobby swung into action and effectively killed any talk of reform.[30] A little later, the National Association of Home Builders, one of the country's principal business political donors, threatened to halt all of its congressional contributions in response to a perceived lack of congressional willingness to support the lobby's proposals, a move that led one citizen's watchdog to remark, "What the home builders have done is expose the underbelly of the connection between money and politics."[31]

Realtors, too, are highly political—the National Association of Realtors is typically the largest single PAC contributor to national candidates—and leans strongly toward Republicans. Even Freddie Mac and Fannie Mae—two government-sponsored agencies that support the housing market by buying up mortgages from banks that originate them—made massive political contributions, some $170 million during the boom decade.[32] Academic studies have confirmed the general impression that mortgage lending became increasingly politicized as the boom progressed. One such analysis found that campaign contributions and lobbying by the mortgage industry, along with the importance of real or potential subprime mortgage borrowers in a congressman's district, had a powerful impact on congressional voting behavior toward the housing boom, and that this impact gained strength as the boom went on.[33]

The administration had to take electoral considerations into account too. Many of the states benefiting most directly from the building boom were politically important, either because of their size or because they were hotly contested between the parties: Florida, Colorado, Arizona, Nevada.

And as the boom continued, it was not just that influential interest groups had come to rely on the formula established after 2001; it was that any interruption in the process was a threat. Many of the newly written mortgages had been made to borrowers who were barely able—if able at all—to service their debts, in the expectation that rising housing prices would make the properties worth more, hence more creditworthy. This bet would pay off, however, only if housing prices continued to rise. And much of the growth of the financial system had been built on the edifice of new housing-finance instruments that depended on the underlying value of the mortgage loans. If the mortgages that served as foundation to the financial edifice went bad, the entire building risked collapsing, floor by floor. So the housing boom had not only been lucrative; it had made the profitability, perhaps even the very survival, of major industries reliant on its continuation. A substantial slowdown risked bringing down the entire house of cards. Any government would contemplate this possibility anxiously, especially one that was reliant on political support from the regions where the housing boom was strongest, and from industries most dependent on a continuation of the boom.

And so defenders of faith in the Bush boom abounded, typically in and around the Bush administration. Early in 2005 in the *Washington Times*, James Miller III, who had served as Ronald Reagan's budget director, lauded "the efficient U.S. arrangements for housing finance" as "the envy of every other country." The trillions going into home loans reflected the accumulated wisdom of a competitive financial system: "Gone are the days of mortgage credit crunches and exorbitant mortgage rates spreads. American homeowners . . . are assured of a steady, liquid, and generally affordable supply of mortgage credit. And investors, both domestic and foreign, are provided a flow of debt- and mortgage-related securities that are highly liquid, transparent, and secure."[34]

Also in 2005, Alan Reynolds of the Cato Institute disparaged the "economic pessimists, who try to persuade us terrible things are about to happen. A perennial favorite is the 'housing bubble' about to burst, with a supposedly devastating impact on household wealth. . . . In short, we are asked to worry about something that has never happened for reasons still to be coherently explained. 'Housing bubble' worrywarts have long been hopelessly confused. It would have been financially foolhardy to listen to them in 2002. It still is."[35]

A few months later Larry Kudlow, the *National Review's* economics editor, wrote a column titled "The Housing Bears Are Wrong Again," whose subtitle claimed that the housing sector was "writing [a] how-to guide on wealth creation." In it, Kudlow dismissed "all the bubbleheads who expect housing-price crashes in Las Vegas or Naples, Florida, to bring down the consumer, the rest of the economy, and the entire stock market."[36] In the subsequent three years, the housing sector oversaw the destruction of trillions of dollars in household wealth; and housing prices in Las Vegas and Naples, Florida, declined by over 50 percent, bringing down the consumer, the rest of the economy, and the entire stock market. And despite Miller's faith in the mortgage market, the lack of transparency and liquidity in the securities being snapped up by investors, domestic and foreign, very nearly brought down the entire international financial order.

The fact that many of the optimists worked for the housing industry might have been a tip-off. One, David Lereah, then the chief economist of the National Association of Realtors, published a book in 2005 called *Are You Missing the Real Estate Boom?* and re-released it in February 2006 with an even less subtle new title: *Why the Real Estate Boom Will Not Bust*. Of course, Lereah's advice devastated those who followed it. Nonetheless, as he told *BusinessWeek* several years later, after leaving his position with the housing lobby, "I worked for an association promoting housing, and it was my job to represent their interests."[37]

Nonetheless, most Americans found it more appealing to sit back and enjoy the rapid growth, rising housing prices, and supremely bullish stock market. Certainly the government had little reason to rein in the celebratory consumption binge—especially as a controversial war in Iraq threatened the administration's popularity. In any case, the United States was hardly alone in living in a financial and housing bubble.

America has company

People in other parts of the world had also discovered the attractions of debt-financed consumption. Local regulators also encouraged new financial opportunities and new financial instruments. And they all went through the same sorts of experiences as the United States.

The government and people of the United Kingdom, like their American brethren, borrowed heavily from abroad to increase consumption—as in the United States, British investment as a share of GDP actually went down between 2000 and 2007. The country's imports skyrocketed while exports stagnated, so the trade deficit shot from $50 billion in 2000 to $180 billion in 2007. "Getting cheap goods from Asia," remarked one economist, "has boosted purchasing power so UK consumers have gone on a big spending binge—on many services."[38]

Meanwhile, the housing market in the United Kingdom was going through a boom even greater than the American one: the average price of a house sold in the United Kingdom skyrocketed from £80,000 in 2000 to £180,000 in 2007, an increase of 125 percent. In dollar terms, at market exchange rates, the increase was even more staggering, from $130,000 to $350,000. The average house in London cost nearly £500,000 by 2007, nearly $1 million; housing prices over the decade rose more than four times faster than people's incomes. In two-thirds of the country's towns, housing was priced beyond the financial reach of average government workers.[39]

The financial markets in the United Kingdom bubbled upward with its home prices. The City, London's financial center, had become the engine of growth for the entire economy. The City alone employed nearly 350,000 people and was adding workers at the rate of nearly 100 a week. By 2004 the country's financial sector already accounted for nearly one-third of the nation's economy, its economic output double that of British manufacturing.

Ireland was, if anything, embarked on an even more remarkable debt-financed consumption boom. As tens of billions of dollars poured into the Irish banking system from Asia and the rest of Europe, and thence into the Irish economy, familiar patterns emerged. The financial services and construction sectors grew ever more outsized. By 2007, nearly one-third of Irish workers were in construction or finance—about double the proportion prevailing in the recent past. In 1997 there were 245,000 people employed in the construction and financial services sectors, about 15 percent less than in industry; by 2007, this was up to 568,000 workers, just about double the number of those employed in manufacturing.

Irish borrowing turned the country into a major financial center and created a housing bubble that put all others to shame. Between 1997 and 2007 the *average* house price in Dublin shot up from $115,000 to $550,000. This was remarkable for a medium-size city in a small country with an ample supply of buildable land. By 2007, the average house in Dublin cost two and a half times as much as the median house in America's metropolitan areas, and substantially more than the median house in the New York metropolitan area. Most of this housing bubble was financed abroad—the net indebtedness of Irish banks to the rest of the world went from 10 percent of GDP in 2003 to 60 percent in early 2008.[40] And it was accomplished without any unusual financial developments—no subprime mortgages, no novel approach to securitization. It was just an old-fashioned housing bubble, fueled by old-fashioned foreign borrowing.

Spain, too, built its housing and financial bubble much the old-fashioned way, borrowing a trillion dollars and more abroad. And as with the other deficit nations, the lion's share of the borrowing went into a housing boom and bubble. The cost of housing rose so rapidly in Spain that there was serious concern about pricing much of the population out of the market. This led to the proliferation of "mini-flats," apartments of 30 square meters (about 320 square feet), and their aggressive promotion by the country's housing minister. Even this was no guarantee of affordability; in a distant suburb of Madrid, mini-flats were going for nearly $200,000.[41]

It was not just membership in the euro zone that made foreigners eager to lend to Spain and Ireland; the monetary policy of the European Central Bank in Frankfurt encouraged Spanish and Irish households and firms to borrow. Both Spain and Ireland had relatively high interest rates before the euro was created in 1999; afterward interest rates in the two countries moved quickly down toward euro-zone levels. On top of this, after 1999 euro monetary policy was set, for the euro zone as a whole, by the European Central Bank in Frankfurt. Between 2002 and 2005 the Central Bank, like the Fed, kept interest rates very low—2 or 3 percent when inflation was about 2 percent. This meant that real interest rates—taking inflation into account—were around zero for the average euro-zone country. But Spain and Ireland were growing faster than the rest of the new euro bloc, and their prices were rising faster than elsewhere. This meant that in Ireland and Spain, where inflation was 3 or 4 percent, real interest rates were negative. In Spain, for example, while mortgage interest rates had been around 11 percent in the late 1990s, by 2005 they were down to 3 or 4 percent—roughly the same as inflation. As in the United States, this gave people a powerful incentive to borrow as much cheap money as they could, to buy houses that were rising in value 10 percent or more every year.

At the height of the building boom, as in Ireland, one Spanish worker of every seven was employed in housing construction. Half a million new homes were being built every year—roughly equal to all the new homes in Italy, France, and Germany *combined*—in a country with about 16 million households. The amount of housing loans outstanding skyrocketed from $180 billion in 2000 to $860 billion in 2007. Over the ten years to 2007, housing prices tripled, second only to Ireland among developed countries; by then, the average house in Madrid cost an unheard-of $400,000.

Plenty of people sounded alarms, abroad and in the United States, that these bubbling economies were headed for trouble. But it was hard for national governments basking in the light of booming economies to take the alarms seriously. Between the economic and political influence of bankers and home builders, the electoral importance of those who were benefiting from the expansion, and the political requirements of incumbency, it was easy to keep the machine going, even if the best mechanics were warning about its weaknesses. After all, there had been warnings before, and sometimes they hadn't come true. Perhaps this capital flow cycle, this borrowing boom, was not like the ones that had come before it; perhaps it would keep going without crashing and burning.

"We are different"

People in the United States, United Kingdom, Spain, Ireland, and the other big borrowing nations were not the first to believe—or to want to believe—that they would escape calamity, that they were different.[42] Generations of politicians, in scores of countries, have convinced themselves that warnings of economic dangers are overblown. Capital flow cycles of the sort the United States was experiencing are enormously enjoyable to almost everyone, especially governments that can take the credit for the upswing. Forewarnings of impending problems are never welcome, even though in retrospect it would probably have been wise—and even self-interested—for governments to take them seriously. Public opinion, and voters, are rarely kind to governments that oversee earth-shaking crises. So why do politicians ignore intimations of impending doom?

Good times often reinforce themselves, not least in the minds of politicians. When the economy is growing, they tend to credit their own talents; when the economy hits the skids, politicians tend to blame outside forces. And when an economy is growing particularly strongly, and attracting trillions of dollars from investors around the world—whom, one assumes, are putting their money where their beliefs in quality are—and history's most sophisticated financial system is trumpeting the wonders of advanced risk management, then it is easy to convince oneself that previous cycles that ended badly are no guide to current developments. Our economy is sound. Our people are unusually productive. Our economic management is extraordinarily competent. Our institutions are uniquely secure.

Such beliefs are common, however, to almost all such capital flow cycles, including those that ended unambiguously badly. The tendency to ignore warning signals is nearly universal and goes back hundreds of years.[43] Denial often lasts long after the fact, when in retrospect it seems obvious to everyone that they had experienced an unsustainable boom. After most recent debt or currency crises, at least some of the policymakers in office at the time of the crisis continued to insist that the problem was with irrational speculators, or politically motivated opponents, or misinformed foreigners. This was true after Mexico crashed in 1994—two of the country's leading economic policymakers insisted years later, against all the economic evidence, that "Mexico experienced a politically triggered speculative attack, not a crisis based on the misalignment of real phenomena."[44] The architect of Argentina's boom and bust between 1991 and 2001 insisted in its aftermath variously that the collapse was due to "excessive provincial spending" or to the fact that "Argentina's main trading partners were strongly devaluing their currencies" or by "the perception of important leaders that there was foreign support for liquidating all debts, including private debts."[45]

Policymakers may hope that their luck will carry them through, or they might engage in what could be called "rational procrastination." A collapse could happen, which would be a bad thing, but it might come well into the future—and far into the future for a politician usually means after the next election. Facing a trade-off between recession now versus recession later makes the choice easy: you're in office now, somebody else will be in office later.[46] Or the forecasts might be wrong, and a wonderful surprise—a drop in the price of oil, a rise in the price of an export commodity—might solve the problem. So you roll the dice: don't adjust, keep the boom alive, hope that the experts are wrong and the economy either stays healthy long enough for you to win the election, or it gets bailed out by some happy coincidence. It's a long shot, but if the alternative is the end of your political career, it might be a gamble worth taking to try to resurrect your political fortunes.

And so perhaps the Republicans weren't simply ignoring the economic advice. Perhaps they were hoping that the decline would come late enough to allow them to win the 2008 election. Or perhaps they were hoping that something unexpected, and wonderful, would come along to salvage the economy. In the event, they were wrong on both counts, but maybe it was politically worth the risk. Anyway, it is not as though there were massive political pressures to rein in the expansion and impose economic restraint. But why weren't there? Certainly somebody other than academic observers had an interest in keeping the American economy from collapsing.

Who might have belled the cat?

The forces for American economic restraint were weak. They often are in boom times—but not always. There have been instances in which a bubbling economy that experts tag as unsustainable is brought down gradually. It doesn't happen that often, and it doesn't happen without cost. Nonetheless, if policymakers can decompress a booming economy before it turns into an irreversible bubble, they may be able to avoid a terrible crash.

This was, for example, the case of Brazil in the mid and late 1990s. Like Argentina a few years before, Brazil in 1994 fixed its currency to the dollar to bring inflation down. This worked, and by 1997 the economy was booming. But signs of stress were everywhere. Because inflation had come down gradually, the real exchange rate had been going up (appreciating): prices of nontradables had risen about 50 percent relative to tradables. As a result, millions of jobs were lost in the tradables sectors, especially manufacturing and agriculture, and the job growth in service sectors did not keep up with losses elsewhere. Soon economists began insisting that the government needed to delink the currency (called the "real") from the dollar and devalue. The Brazilian government delayed a bit, until the 1998 election was over and won. But in January 1999 the government did in fact devalue the real. The shock pushed the country into a very mild recession, from which the economy recovered quickly.[47] Meanwhile, it was increasingly clear that Argentina needed to do the same, devaluing its currency to avoid a crisis. Yet successive Argentine governments refused to act. By 2001, the long-delayed adjustment was forced on the country—leading to history's biggest default and Argentina's most severe economic collapse. But Brazil had avoided the worst, demonstrating that government action to avoid a collapse is not impossible. When does it happen?

Some things delay a constructive government response to an impending crisis, while others seem to permit or accelerate one.[48] It is no surprise that an impending election makes a government very reluctant to hit the economic brakes. So too does political weakness, as a fragile government is unlikely to be able to get support for harsh policies. By this standard, if the Argentine elections had been earlier, and the Argentine government had been more secure in office—like its Brazilian counterpart—it too might have engineered a more gradual decompression.

Another force for delay is debt. If governments, firms, and households in a booming economy have taken on large debts, slowing the economy is likely to increase the real burden of debt. In a boom, prices of assets like housing and stocks rise, so that loans taken out against them are lucrative. But if prices stop rising, or fall, the real debt burden grows. Again, this was the case in most of the financial and currency crises of the 1980s and 1990s: heavily indebted companies and governments needed the merry-go-round to continue.

Some economic and political forces—in particular, the influence of manufacturers and farmers—tend to rein in borrowing booms. The reason goes back to the impact of foreign borrowing on tradables and nontradables. Binges such as those experienced by borrowing countries raise domestic prices and wages. Local manufacturers and farmers eventually find themselves priced out of world markets. Since borrowing also leads to a surge of imports, often imports that compete with local products, the results can be disastrous for domestic industry and agriculture. One of the strongest predictors of government action to pop a currency or financial bubble before it becomes unmanageable is the size of the manufacturing and farming sectors: the bigger they are, the more political power they have, and the sooner the government acts.

In the American borrowing boom of the early and middle 1980s, in fact, American farmers and manufacturers were vocal in their concern. Between 1980 and 1985, that era's capital inflow led the prices of services to rise twice as fast as those of manufactured goods, while farm prices actually dropped. In this instance, the problem was reflected in a very strong appreciation of the dollar, which farmers and manufacturers were desperate to limit or reverse. The strong dollar, the president of Caterpillar said, was "the single most important trade issue facing the U.S."[49] Sympathetic members of Congress introduced a flurry of protectionist trade bills, and manufacturers tripled the number of protectionist complaints they filed with the International Trade Commission.[50] This pressure was important in encouraging the Reagan administration to work to restrain the dollar's value, eventually moderating and reversing the harm it was doing to America's farmers and manufacturers.

But after 2001, there were few such expressions of concern. The economy had changed fundamentally in less than twenty years, and many of the manufacturing industries that had complained so bitterly in the 1980s had long since left the country. Where there had been nearly 20 million manufacturing workers in America in 1980, by 2006 there were barely 14 million; manufacturing had plummeted from employing more than one in five American workers to just one in ten. Globalization had led many American industries to outsource production to lower-wage locations, mainly in East Asia and Latin America. Many of the industries that had not shifted production simply shrank or went out of business. Meanwhile, American farmers had become so reliant on government supports that their market position was less relevant than their political backing. And a worldwide increase in farm prices in 2007 stanched whatever agricultural concerns there might have been. So while the Bush boom had effects of special concern to American manufacturers and farmers engaged in international competition—it led to a huge upsurge in imports and raised the price of doing business in America—there were now very few such manufacturers and farmers around. The potential complainants had taken their factories elsewhere, gone out of business, or resigned themselves to relying on government handouts. There was almost nobody left to complain.

Staying out of trouble

Those who thought that the Bush boom between 2001 and 2007 was unique were wrong. The main features of the American trajectory were common to the United States, Spain, Ireland, and the United Kingdom—and to Iceland, Greece, to the Baltic states of Lithuania, Estonia, and Latvia, and to many other countries that became major debtors over the course of the decade. In these countries, as in dozens of others over hundreds of years, foreign borrowing fostered financial and housing booms, and trade deficits.[51] The United States after 2001 could not escape the macroeconomic realities of a borrowing nation.

But there is nothing inevitable about borrowers running into crises. Nor is it inevitable that the problems of borrowing countries will lead to crisis. This is true even if the problems are homemade, as they were in the United States, whose fiscal and monetary policies were central to the borrowing boom and eventual bubble.

The man who took over from Alan Greenspan at the helm of the Federal Reserve in 2006, Ben Bernanke, was intellectually well equipped to evaluate financial threats. Bernanke is an MIT-trained economist who was chair of the Princeton University Department of Economics until he joined the Fed's Board of Governors in 2002. Three years later, Bernanke took over the chairmanship of the Bush administration's Council of Economic Advisers, and after only a few months in that position he was appointed to succeed Greenspan at the Fed.

Bernanke was only the second Fed chair to have an academic background in economics (the first was Arthur Burns, who served in the 1970s).[52] Bernanke was indeed a prominent and respected academic economist long before assuming his post. Much of his scholarship, with titles such as "Permanent Income, Liquidity, and Expenditure on Automobiles," was of interest only to other scholars.[53] But Bernanke also had a major interest in financial crises, and his most famous scholarship looked at what happened to countries during the Great Depression. On the basis of detailed studies of the Depression experience, in the United States and elsewhere, Bernanke concluded that the scale of a country's collapse did not just depend on its macroeconomic conditions, or on its debt burden, or on how serious the shocks it faced were. What really pushed a country over the brink, from a recession to a full-fledged catastrophe, was a financial system prone to panics, one that could not withstand the series of monetary and other shocks to which it was subjected.[54]

Bernanke's conclusion, that financial strength could help protect against crisis, should have reassured Americans. Certainly it reassured Bernanke, who early in 2007 attempted to set minds at rest about the possibility that the growing difficulties in one segment of the mortgage market might portend more extensive problems: "the effect of the troubles in the subprime sector on the broader housing market will likely be limited, and we do not expect significant spillovers from the subprime market to the rest of the economy or to the financial system."[55]

So calm continued to reign among policymakers and the general public, even as the housing market began to slow in 2006 and 2007 and as problems developed in one segment of the mortgage market, that for subprime mortgages. For the American financial system was, by common agreement, one of the world's most stable. There had not been bank panics in the United States since the 1930s. There were dozens of state and federal regulatory agencies watching over the financial system. Macroeconomic imbalances might be the unavoidable result of the country's foreign borrowing, but strong banks and sober regulators were a guarantee against serious crisis.

Or so it seemed.