Slouching Towards Utopia?: An Economic History of the Long Twentieth Century, 1870-2016

XXIV. The Near-Second Great Depression

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14.1: Causes and Cures of Depressions

There was no excuse for the world to have been caught so flat-footed by the financial crisis of 2007-8. There had been previous crises in Mexico in 1994-5, East Asia in 1997-98, Russia in 1998, and then in Brazil, Turkey, and Argentina. All knew that a crisis might have a catastrophic outcome—that countries hit by financial crisis often experienced a very sharp and sometimes permanent growth slowdown. And all saw signs of trouble: global current account imbalances, unusually low interest rates, and bubble-like asset prices seemed to indicate a world that was becoming increasingly prone to financial turbulence.

Yet one consequence of the neoliberal turn was that financial markets were more lightly regulated than they had been in the past. Another was a pronounced distrust of activist governments—especially those that took preemptive action when some might doubt its necessity. And the third was a tendency to think that markets were smarter than governments. All three of these consequences, in the context of the mid-2000s, stored up immense trouble.

14.1.1 Says's Law and Says's Recantation

Recall that French economist Jean-Baptiste Say had claimed back in 1803 that there was no such thing as a "general glut": an economic depression. Excess supply on the market of some commodity, he claimed, was automatically and necessarily

excess demand for another. What was claimed to be a general depression was merely an imbalance in supply—and workers needed to get on their bikes, as British conservative politician Norman Tebbitt said in 1981, and move over to the sectors where there was excess demand. Recall that British economist John Stuart Mill parried in 1829 that there could too be a "general glut". An excess demand for cash was an excess supply of everything else—including labor. Why? Because if you have an unsatisfied demand for, say, yoga lessons, the only way to satisfy that demand is to go out and work more and use what you earn to buy yoga lessons. But if you have an unsatisfied demand for cash, you can either (a) work more, or (b) spend less buying other things. Some people will spend less, and their lack of demand will then become lack of supply, as people who have worked and produced will find themselves stuck with excess inventory they have to liquidate at a heavy loss. And recall that back in 1829 Say agreed with Mill: there could be a "general glut", if something, like a financial crisis, caused workers, businesses, and financiers to demand to hold more cash and caused banks to refuse to extend credit and create deposits as far.

Now let us note that there are three ways in which an excess demand for cash can emerge:

14.1.2: A Monetarist Depression

One way that an excess demand for cash can emerge is if something happens to reduce the economy's money stock—the amount of cash, plus other assets (like bank account balances reflecting previous deposits in, or lines of credit extended by banks) used as means of payment; or if something happens to raise demand for cash and other means-of-payment assets. Those who seek to hold more cash (and other means-of-payment assets) then try to sell the interest-paying assets they hold in order to raise cash.

But in the economy as a whole, everything has to add up: one person can sell an interest-paying asset only if someone else buys it. So in the aggregate these sales do not repair the imbalance—they do not shrink the supply of interest-bearing assets and increase the supply of cash—they only lower the price and raise the interest rates on interest-paying assets. That is how you can tell if you are in a monetarist depression: unemployment will be high, and interest rates will be high too.

A monetarist depression has a natural cure: (a) the government needs to print cash or get banks to make loans and extend credit and so increase deposits (and other

means-of-payment assets); or (b) "confidence" has to be restored so that the demand for cash shrinks back to normal.

In the standard IS-LM graph framework set out by economist John Hicks back in 1937, the problem is that the LM curve is shifted too far to the left, and needs to be pushed to the right, by restored confidence or monetary expansion.

14.1.3: A Keynesian Depression

A second way that an excess demand for cash can emerge is if something happens to reduce the economy's stock of savings vehicles—assets, interest-paying or capital gains-yielding, that people use to transfer purchasing power forward in time from the present to the future. If the economy is short of savings vehicles, they will sell for a high price—the interest rate on them will be low. As interest rates fall, however, cash begins to look like an attractive savings vehicle: it does not pay interest, but holding it is a good and safe way (in the absence of inflation) to move purchasing power forward in time from the present to the future. As cash is pressed into service as a savings vehicle, demand for it goes up—and the excess demand for cash that produces the downturn and high unemployment emerges.

You can tell that you are in a Keynesian depression when unemployment is high, but when interest rates are not also high, but rather very low.

A Keynesian depression has a different cure. Yes, restoring "confidence" can work—but it works largely by inducing businesses to invest more in boosting their capital stocks, and in the process of so doing finance their capital investment by issuing more stock and bonds, and so increasing the supply of savings vehicles in the economy. But there is a more direct way: the government is a fine creator of savings vehicles in the form of its debt, so it can issue bonds that people will buy, thus pushing some of the cash drafted into being a substitute savings vehicle out of that role, and use the purchasing power to put people to work directly by paying them to make useful stuff. Note that the standard monetarist cure—having the central bank expand the money stock by buying bonds for cash—will not work: yes, the supply of cash will go up, but the private market's demand for cash will go up as well, as the reduction in bonds out there in the market will raise the quantity of cash pressed into service as savings vehicles by as much as the quantity of cash increases.

In the standard IS-LM graph framework set out by economist John Hicks back in 1937, the problem is that the IS curve is shifted too far to the left, and needs to be pushed to the right, by restored confidence or fiscal expansion.

14.1.4: A "Minskyite" Depression

Then there is a third type of depression: the kind we saw in 2008-10. Unemployment rose very high. But interest rates are not all high, and they were not all low. Interest rates on safe assets—like U.S., German, and Japanese bonds—reached unbelievably and astonishingly low levels. But interest rates on risky bonds were not low: they were, instead high, and sometimes very very high indeed. The world was not short of cash: central banks flooded the zone with cash. The world was not short of savings vehicles in general: you could buy risky savings vehicles—private debt that was not AAA-rated, and the stocks of companies that faced some market and growth risk—for an absolute song. What the world was short of was of safe assets.

The private sector cannot then create safe assets: if it could, then it would already have done so, since the shortage means that safe assets can be sold at a very high price. So the government has to step in. The central bank can take risk off of the private sector's and onto its own balance sheet by buying up not short-term safe government bonds but long-term risky assets for safe cash, thus increasing the supply of safe assets, while reducing the risk borne by the private sector and freeing up that risk appetite for deployment elsewhere. The problem is that this "quantitative easing" would need to be done on an enormous scale to be effective. The government can—as long as the government's debt is perceived as a safe asset —raise the supply of safe assets by issuing bonds that people will buy, and use the purchasing power to put people to work directly by paying them to make useful stuff. But will doing so crack the government's status as a provider of safe assets? In 1931 the government of Austria tried this trick when it took over the debt of the unsafe Credit-Anstalt bank, and found that it had made the problem worse, as so doing had made people lose confidence in its own debt, which had previously been seen as safe. And this, too, needs to be undertaken at immense scale to be effective.

Or the government can offer loan guarantees and asset swaps, and be so doing transform savings vehicles regarded as unsafe into safe assets. This is by far the cheapest and most effective. But it requires that the government have the expertise to price its loan guarantees and swaps effectively: if it prices them too high, no one takes them up and the economy crashes; if it prices them too low, financiers take the government—and the public—to the cleaners. This approach has been

formalized in the Bagehot-Minsky rule: in such a crisis—with a safe-asset shortage and a rapidly approaching depression—the government needs to *lend freely* (in order to expand the safe-asset supply) on collateral that is *good in normal times* (accepting that those whom it is thus subsidizing are getting a very good deal, since times are definitely not normal) but do so *at a penalty rate* (so that the amount by which financiers, especially financiers whose previous imprudence has created the confidence crash and the safe asset shortage, profit is distinctly limited).

One problem with this Bagehot-Minsky rule is that it treats unequals equally: those who have been financially imprudent and bear some responsibility for the crisis get bailed out along with those whose only fault was getting caught in the unexpected financial whirlwind. A second problem is that it requires skill, good judgment, and luck to carry out. A government without confidence in its own technocratic chops, or that fears a political backlash from bailing out too many perceived as unworthy, may decide to give up on following some or all of the Bagehot-Minsky rule. In that case, its policy is reduced to attempting to use sorcery to summon the confidence fairy to rescue the economy.

My old teacher from MIT, Charlie Kindleberger liked to say that engaging in this "lender of last resort" policy was greatly fraught:

The presence of a lender of last resort weakens the self-reliance of the banking system and increases its likelihood of falling into excesses of overtrading, revulsion, and discredit...

which he then qualified by snarking that overreliance on arguments that depressions were "useful" because they taught people "self-reliance" "has overtones... that there is no use providing the poor with housing since they will only keep coal in the bathtub..."

Thus Kindleberger saw a genuine dilemma, that makes economic policy under such circumstances not for scientists or craftsmen but rather "an art." The lender-of-last-resort:

should exist... but his presence should be doubted [beforehand].... This is a neat trick: always come to the rescue in order to prevent needless deflation, but always leave it uncertain whether rescue will arrive in time or at all, so as to instill caution in other speculators, banks, cities, or countries.... some sleight of hand, some trick with mirrors... because... [nonappearance] has such unhappy consequences for the economic system...

Writing 170 years earlier about the same dilemmas of economic and monetary management, British Prime Minister Robert Peel expressed confidence that economic policymakers—at least British economic policymakers—would do what was essential to preserve the general prosperity whether or not it fit easily within traditional practices or the letter of the law: "a pecuniary crisis... may occur in spite of our precautions; and if it does and if it be necessary to assume a grave responsibility, I dare say men will be found willing to assume such a responsibility..."

14.2: The Housing Bubble and the Housing Crash 14.2.1: The Global Savings Glut

The 2007-8 financial crisis and subsequent recession left the Global North 10% poorer than it otherwise would have been. There are many who argue that this business-cycle catastrophe was an unavoidable result of the housing bubble in the United States. Many still claim that the bubble's deflation triggered the financial crisis. But that is not true. The bubble had already deflated substantially before the crisis erupted.

Recall that by mid-2008, home prices had returned to, or even fallen below, levels supported by their underlying fundamentals, and employment and production in the residential construction industry had declined to levels far below trend. The work of rebalancing asset valuations and reallocating economic resources across sectors had already been accomplished. To be sure, there still would have been around \$500 billion worth of financial-asset losses in the form of defaults on subprime mortgages and home-equity loans. But that is only one-quarter of the relative share what global equity markets lost in seven hours on October 19, 1987. In should not have been enough to sink the global financial system. Indeed, Ben Bernanke, then Chair of the US Federal Reserve, seemed confident in the summer of 2008 that the correction in housing prices had not triggered any unmanageable financial crisis. At the time, he was mainly focused on the dangers of rising inflation.

And then the bottom fell out because beliefs changed. Investors came to believe that financial markets were saddled with highly elevated risk. This led to the sudden run on both the shadow and non-shadow banking systems, as investors scrambled to dump assets. The increased risk that they had imputed to the system became a reality. Like triage nurses in an emergency room, they quickly assessed the patient and then ran with their initial diagnosis as if there were no other option.

Nothing about the fallout from the crisis was inevitable. Had the Fed been in possession of contingency plans for putting too-big-to-fail institutions into receivership and becoming the risk-bearer of last resort, we would be living in a very different world today. Chance, contingency, and policy error played the decisive role in the crisis and its aftermath.

Yet there is a logic. Such crises of belief are manifestations of a chronic condition that must be managed. The seeds of the next Kindlebergian sequence — displacement, optimism, enthusiasm, crash, panic, revulsion, discrediting — have already been sown by the very policies that were needed to address the last downturn.

Begin with the global savings glut of the early 2000s. The end of the high-technology computers-and-communications boom and dot-com bubble in 2000 greatly reduced the flow of productive places in which people could put their savings worldwide.

At the same time the rise of Asia greatly increased the supply of savings worldwide. Traditionally, industrializing countries have run trade deficits with the world economy's rich, developed, North Atlantic core as those industrializing and growing fast buy machinery and other capital goods they cannot (yet) make at home. But by 2000 rapidly-industrializing economies in Asia and oil-exporting economies in the Middle East ran large trade surpluses with the North Atlantic. They took the extra money they had earned with their trade surpluses and saved it, looking to buy assets (primarily bonds) in North Atlantic economies (primarily the U.S.). For China, especially, this became a development strategy: maintain full employment in Shanghai by (indirectly) lending America's consumers the renminbi they need to keep their purchases up.

The result was what then-future Federal Reserve Chair Ben Bernanke called a "global savings glut": a (planned) excess demand for savings vehicles worldwide. Economists found themselves greatly puzzled not only that long-term rates were too low when viewed in the international context, but also that they were too low when viewed in America's domestic context. Budget deficits were rising, which increases the demand for savings. Dollar depreciation was expected, which ought to diminish the supply as those in other countries hesitate to commit their funds, fearing they would be paid back in depreciated dollars.

Yet financial market participants were unpuzzled. They saw the high demand for long-term dollar-denominated securities as partly due to Asian central banks are buying in order to hold down their currencies, and partly due to companies are not undertaking the kinds of investments that would lead them to issue many long-term bonds. It was a shift in the functioning of the global economy that had pushed interest rates down, and was likely to keep them down.

This glut threatened to turn the small global economic downturn of 2000-2002 into a big downturn, unless some way was found to boost the amount of bonds being newly issued by businesses seeking to expand and so satisfy the excess worldwide demand for savings vehicles. Globally, central banks responded to the global savings glut by flooding the world with liquidity—buying bonds for cash and promising to continue such easy-money policies in the future, with an eye toward lowering interest rates and thus the cost of capital to firms, and thus getting firms to respond by increasing their plans to build capacity. To some degree this worked as intended: corporate investment did rise. But to some degree this had unintended consequences: Lower interest rates generated a mortgage and a financial engineering boom, which generated a housing boom, and then a housing bubble, and then a housing crash, and that generated our current deep economic downturn.

Home prices, however, rose much more than they should have given low mortgage rates. Suppose that you believe that the inflow of savings from China and elsewhere was going to continue for a decade, and was going to depress the cost of capital to mortgage lenders by 2% per year. Even if all of that reduction was passed on to borrowers, it would only have allowed them to pay an extra 20% for houses. Yet the price of houses in America roughly doubled between 1996 and 2006.

So the next stage in our study of the origins of the downturn is to look at mortgage finance and financial engineering in the 2000s.

14.2.2: Mortgage Finance and Financial Engineering in America

14.2.2.1: Securitization and the Concealment of Risk

By now the litany is familiar: the old model of banking, in which banks held on to the loans they made, was replaced by the new practice of originate-and-distribute. Mortgage originators—which in many cases had no traditional banking business—made loans to buy houses, then quickly sold those loans off to other firms. These

firms then repackaged those loans by pooling them, then selling shares of these pools of securities; and rating agencies were willing to label the resulting product chicken—that is, to bestow their seal of approval, the AAA rating, on the more senior of these securities, those that had first claim on interest and principal repayment. And everyone ignored both the risks posed by a general housing bust and the degradation of underwriting standards as the bubble inflated. When the bust came, much of that AAA paper turned out to be worth just pennies on the dollar.

The usual way this story is told conveys the impression that Wall Street had no incentive to worry about the risks of subprime lending, because it was able to unload the toxic waste on unsuspecting investors throughout the world. But this claim appears to be wrong: while there were plenty of naive investors buying complex securities without understanding the risks, the Wall Street firms issuing these securities kept the riskiest assets on their own books. And they also bought risky assets issued by other financial institutions. And Europe managed to inflate similar giant housing bubbles without turning to American-style complex financial schemes. There was securitization; there was concealment of risk; there was much more irrational exuberance.

14.2.2.2: The Housing Bubble

Between 1997 and 2007, all throughout the North Atlantic, real estate prices soared. The prices of housing more than doubled in the British isles, nearly doubled in Spain, and rose by 75 percent in the United States.

You may hear that there were also government programs that provided subsidies to mortgage lenders and borrowers. But this played net to no role at all in the runup of prices. The public subsidies enterprise mortgage lenders like the Federal National Mortgage Administration—FNMA—"Fannie Mae"—had existed long before the 2000s. You could attribute a runup in housing prices in the 1940s and in the 1950s to their appearance and existence. But you could not so attribute a runup in housing prices in the 2000s. The lending that allowed the purchase of houses at rising prices was primarily made not by government-sponsored enterprises like Fannie Mae but by private specialized mortgage lenders like the infamously-bankrupt Countrywide.

You may also hear that there was a Federal Reserve that cut interest rates too far. The logic here is equally dodgy. The Federal Reserve did reduce the overnight rate on loans between banks from 6.5% per year in 2000 to 1% per year in 2003. But

western Europe's central bank, the ECB, reduced interest rates by only half as much as did America's Federal Reserve—yet Europe's housing bubbles were if anything larger than those in the United States. Moreover, suppose that the Federal Reserve does reduce interest rates by 3% per year too much, keeps them low for three years, and that all of that reduction gets passed through to mortgage borrowers. That break on interest rates means only that borrowers can afford to pay an extra 9% to buy their house. That is an order of magnitude too small to account for any significant part of the housing price runup.

Was U.S. government policy at fault at all? Yes, but not because the Federal Reserve's cutting interest rates boosted prices or because the government encouraged Fannie and its cousins to lend into the housing bubble. Financial regulators failed to use their authority to stop excessive risk-taking. As Paul Krugman and Robin Wells write: "conservatives would like to put soft-hearted politicians at the center of this story, they don't belong there." But in a sense they do belong there—only their soft hearts weren't bleeding for working-class Americans hoping to buy houses, but for very rich mortgage speculators hoping to evade regulation and leverage up their large portfolios:

The bubble got started largely thanks to the global savings glut, but that it developed a momentum of its own—which is what bubbles do. Financial innovations such as the securitization of mortgages may have made it easier for the bubble to inflate—but European banks managed to extend too much credit without such frills. However, it is clear that there were major failures in oversight, in both Europe and America. And the bubble reached its peak in 2005.

At that moment concern about financial stability shifted from America's enormous trade deficit to its surging property markets and real-estate bubble. Could an obviously overheating market be cooled without sending America, and its main trading partners around the world, into an economic tailspin?

Yet the American housing bubble saws deflated without trouble. By mid-2007, housing prices appeared well on their way back to sustainability. That had been accomplished without a recession. And there was good reason to think that the United States had escaped trouble.

14.2.2.3: The Housing Crash

What happens when bubbles burst? Invariably, a lot of paper wealth disappears. But that, in itself, isn't enough to turn a burst bubble into a catastrophe for the

economy as a whole. The stock crash of 2000–2002 was a \$5 trillion hit to US household wealth. It created a lot of pain for people counting on capital gains for their retirement, but it didn't trigger any broader systemic crisis. The housing bust was an \$8 trillion hit—not all that much bigger than the stock crash, once one takes into account both inflation and economic growth in the interim. But it produced the worst global crisis since the 1930s. Why?

One answer is that policymakers were looking in the wrong direction. It became clear in the second half of 2007 that there was potential trouble, not so much because the housing bubble had largely collapsed, but because too many financiers had made too leveraged bets on a continued boom in housing prices. The Federal Reserve reacted by standing ready to provide liquidity at normal market rates to institutions that found themselves momentarily embarrassed by illiquid counterparties. But it showed little willingness to take broader action—to substantially ease monetary conditions, or begin acting as a lender-of-last resort. The fear was that responding to trouble caused by imprudent lending would provide a safety net—a "Bernanke put" on asset prices. That would encourage more imprudent lending in the future.

But by the end of the year art was no longer clear that was appropriate. Federal Reserve Vice Chair Don Kohn was among those nervous first: "we should not hold the economy hostage to teach a small segment of the population a lesson", he warned in late 2007. But his view was distinctly a minority one back then, and remained a minority view until it was too late.

There are two main answers to the question of why some asset bubbles do so much damage when they burst. The narrow answer focuses on the financial sector; the broad answer argues that debt and leverage among nonfinancial players such as corporations and home owners are equally important.

The global real estate bust of 2005-2008, unlike the bursting of the dot-com bubble, raised justifiable concerns about the soundness of banks. Financial institutions, by and large, weren't exposed to technology stocks. They were, however, very much exposed to losses from mortgage defaults. But how could an old-fashioned panic happen in the modern world? Generations of economics instructors had told students that bank runs—like the famous scene in the movie "It's a Wonderful Life"—were a thing of the past. In the United States, conventional banking was increasingly supplanted by a variety of alternatives, these days usually grouped together as "shadow banking", that were not properly regulated and were not properly supported by deposit-insurance and established

lender-of-last-resort channels. Investors began parking their money not in bank deposits but in "repo" (repurchase) agreements—very short-term loans to hedge funds and investment banks. Repo yielded higher interest rates, but their owners needed to be sure to sell first or else they would not get their money back if their debtor ran into trouble. Runs on repo brought down the investment banks of Bear Stearns and Lehman Brothers.

In Europe, the breakdown of the traditional banking safety net took a somewhat different form. Banks in the bubble areas of Spain, Ireland, Iceland, and the UK made loans that far exceeded their deposits, which they supplemented by borrowing from other banks and investors. This extra funding could and did dry up. And these European banks were backed by their national governments, not by the European Central Bank—which meant that when really major banking problems arose in some countries, the ability of those nations' governments to backstop their banks came into question.

14.3: Panic and Depression

Thus the real estate bust created a crisis of confidence in much of the world's financial system, and eventually paralyzed crucial parts of that system. Signs of strain began appearing in the late summer of 2007; all hell broke loose after the failure of Lehman in September 2008. During the winter of 2008–2009 borrowing costs for almost everyone except governments soared, if they could get credit at all. And the world economy looked dangerously close to a complete meltdown.

14.3.1: The "Fundamental" Problem Was Not Large

This teetering-on-the-edge of a Great Depression-sized macroeconomic catastrophe came as a surprise to me. Nine months earlier, in March 2008, I had reasoned that the problem was not larger, and that the risks were very manageable. Consider:

- There were 5 million houses that should not have been built in the desert between Los Angeles and Albuquerque.
- There was \$100,000 in mortgage debt on the average overbuilt house that would not be paid, and that has to be eaten by somebody
- Hence there was a \$500 billion financial loss from the housing crash that holders of financial securities would have to bear, one way or another

- But the dot-com crash has been a \$3 trillion financial loss
- And the dot-com crash pushed the unemployment rate up by only 1½%
- Hence the financial crisis was unlikely to have large effects on the economy.

But the market reasoned differently. The market reasoned:

- There were \$500B in losses that we know of
- And all the trained professionals who assured us that these were safe
- Lied, or
- Did not understand the world
- Therefore we need to dump our risky assets—at any price—and buy safer ones—at any price

And as investors dumped assets they had thought were safe but turned out to be risky, it turned out that there was then a very limited supply of truly safe assets. And urgency to sell in panic greatly increased the risk of holding on to the risky assets that were held. The result was a financial accelerator of 40: a \$500 billion destruction of wealth via badly thought-out investments building houses brought the total value of global financial wealth down by forty times as much, from \$80 trillion to \$60 trillion.

We can see the process of recognition that assets regarded by safe are not safe at all in the internal discussions and judgments at the then-largest bank in the world—Citigroup—as it tried to understand its holdings of mortgage-backed securities in 2007. The SEC vs. Citigroup civil court case settled in 2010 gives us a window into this process of recognition: that assets widely regarded as safe were in fact not so.

Tracking the documents, it seems clear that in January 2007 the top management of Citi thought that it owned \$26 billion of safe MBS. By April 2007, the top managers thought that Citi had reduced its asset holdings to about \$20 billion of relatively-safe MBS, and recognized that there was an additional \$38 billion on its books—but was confident that that \$38 billion were absolutely and totally safe, so that there was no calculable possibility of any loss that needed to be taken into account in any planning scenario. And by July 2007 Citi's top managers thought that they had reduced their relatively-safe holdings to \$13 billion, and their absolutely safe exposure to an additional \$33 billion.

Then in the late summer and fall they changed their mind.

In September 2007, Citi concluded that it has probably lost \$100 million on its \$13 billion of relatively-safe MBS. By October, Citi believed that it has lost \$1.6 billion on its \$13 billion of relatively-safe MBS—but that it had no losses on what is now seen as an additional \$43 billion of exposure.

And then in November 2007 Citi concludes that it has lost \$10 billion on its \$55 billion of MBS—and that none of them were safe assets at all.

Citi ultimately lost about ³/₄ of the \$55 billion that at the start of 2007 it had thought were safe places to park its wealth.

14.3.2: Where Had the Regulators Been?

Milton Friedman had written in his *Program for Monetary Stability* that (a) if you promise your depositors/creditors that they can get their money quickly, and (b) if you also promise your depositors/creditors that their money is safe, and (c) if there is any chance at all that this promises create "systemic risk", then (d) you need to be tightly regulated—regulated so tightly that the only assets you can invest in are U.S. Treasury bonds or things of similar safety. John Maynard Keynes had written in his *General Theory of Employment, Interest, and Money* that "perhaps all investments should be long-term and indissoluble—like a marriage..." He had written this precisely because he, like Milton, feared a panicked flight to safety, and the collapse of risky asset prices that such a panicked flight to safety would produce.

There are lots of people to blame. You can blame the Clinton administration for acquiescing in Senate Banking Committee Chair Phil Gramm's desire to repeal Great Depression-era laws separating government-guaranteed commercial banks from other investment banks. (However, the biggest failures and near failures took place in organizations that did not mix commercil and investment banking: Lehmann, Bear Stearns, AIG). You can blame the Clinton administration for deciding not to regulate financial derivatives. You can blame the Federal Reserve for thinking that there was value in exploring new models of providing credit. And you can blame its chair, Alan Greenspan, for asking himself "who am I to tell lenders who want to lend that they cannot lend to borrowers who want to borrow?" and answering "I am nobody"—thus greatly underestimating the seriousness of the situation. You can blame the George W. Bush administration for not just dipping its toe into the waters of financial regulation but engaging in an ideological crusade for deregulation, on the grounds that it is the people on Wall Street whose personal fortunes are at risk who are much better at assessing and managing risks than the government.

14.3.3: Depression

And so spending and employment collapsed. And the U.S. unemployment rate rose to a peak of 10% in late 2009.

It should not have risen so high. By early 2008 it was clear that the world and the American economy were in recession—although professional Republicans eagerly disputed that in the oped pages and on TV, hoping to make their bones and win influence and office. But it was not yet foredoomed that the recession would be substantial. Governments should have played it safe. It was most imprudent to assume that things would not get worse. Yet that is what governments and central banks did.

Yes, fiscal prudence is important in the long term. But a financial crisis is not the time for long-term thinking. And it was clear that there was a financial crisis. Governments should have boosted purchases and let the short-run deficit go where it needed to be to preserve full employment. China did so—indeed, starting its massive fiscal-stimulus and job-creation policies in the middle of 2008. China continued to grow. The United States did not do so. In the United States, employment was not to begin to recover until 2012.

By the spring of 2008, central banks should have already dropped safe interest rates the normal five or so percentage points they are dropped when a recession becomes clear. They did not: they were worried about inflation instead, even though there were no signs that the latest oil boom was feeding through into expectations of wage increases or price rises in other sectors.

Why the Federal Reserve in the summer of 2008 listened to right-wing demands to contract demand to rein in inflation is unclear to me. Headline inflation was getting the, well, headlines. But technocratic central banks exist to look beyond the headlines. Perhaps Bernanke was too eager to wait for consensus before he took policy action. If so, there is a very bitter lesson here: when a financial crisis of unknown magnitude is clearly gathering, one must pursue the policies of an Eeyore: assume the worst, and act on it, because you can always back down and reverse course should you have overreacted. Yes, you will suffer grave embarrassment and scorn. But that is what you are paid to do.

And financial regulators should have been worrying about how to mobilize the world economy's risk-bearing capacity, because all signals in asset prices were that private markets were greatly underestimating possible risks.

With the subprime mortgage meltdown of August 2007, the dangers in the situation had become clear. Yet governments seemed to want not just warnings in financial markets of the risk of a large depression, but actual evidence of collapsing employment before they began to take strong action. Yet by then it would have been—and was—too late to preserve global full employment.

But none of these steps were being taken in early 2008.

Even worse, in late 2008 the Federal Reserve and the U.S. Treasury made near-fatal mistakes. They seem to have lost sight of the main thread, and acted to pursue two subsidiary goals: (1) to keep as much economic activity as possible under private-sector control, (2) to prevent the princes of Wall Street who led us into the crisis from profiting from the systemic risk that they created. In so doing they lost the game. By the end of 2008, it was very clear that full employment could not be maintained, and that a deep depression could only be avoided by an immediate and massive fiscal expansion.

The desire to prevent the princes of Wall Street from profiting from the crisis was reflected in the Fed-Treasury decision to let Lehman Brothers collapse in an uncontrolled bankruptcy without oversight, supervision, or guarantees. The logic behind that decision was that, previously in the crisis, equity shareholders had been severely punished when their firms were judged too big to fail. The shareholders of Bear Stearns, AIG, Fannie Mae, and Freddie Mac essentially had ownership positions and all their wealth confiscated for pennies. But this was not true of bondholders and counterparties, who were paid in full. The Fed and Treasury feared that a bad lesson was being taught. To unteach that lesson required, at some point, allowing some bank to fail, and persuading some debt holders and counterparties that the government guarantee of support to institutions that were too big to fail was not certain. In retrospect, this was the major mistake.

It was at this point that the Treasury made the second mistake. Because it tried to keep the private sector private, it sought to avoid partial or full nationalization of the components of the banking system deemed too big to fail. In retrospect, the Treasury should have identified all such entities and started buying common stock in them—whether they liked it or not—until the crisis passed. Yes, this is what

might be called "lemon socialism". But there are times when lemon socialism is appropriate policy. And the second half of 2008 was one of them.

And so the depression became a deep one. In September 2008 I was confident that the world's governments were capable of keeping the world economy out of a deep and long depression. But by March 2009 it was clear that they had not. The problem was not that governments were unsure about what to do. The problem was that assembling the political coalition to do more than had been done in the winter of 2008-9 was judged impossible. I was told that the prudent thing was to see how 2009 turned out, and then go back to the political system for further actin in 2010. At the time that seemed to me—and was—most imprudent.

The rise in unemployment could have risen much higher. Alan Blinder and Mark Zandi asked the baseline question: What would the economy have looked like, and where would the unemployment rate have peaked, had the government followed the cold-turkey policies advocated by Republicans after Obama took office? The answer they came up with for a peak unemployment rate was: 16%. That seems credible to me: that is about halfway between what the actual peak was and what peak unemployment was in the Great Depression.

In their judgment—and mine—the alphabet soup of interventions by the Federal Reserve to guarantee loans, expand the money supply, and take risk off of the private sector's balance sheet was quite effective. The TARP and the TALF and the HAMP and Federal Reserve "quantitative easing" policies and extra deficit spending via the ARRA and all the other government interventions have accomplished 6% of the 10%-reduction-in-unemployment-relative-to-where-it-would-otherwise-have-been job that the government should have carried out when the crisis hit. That is $\frac{3}{5}$ of the job: a glass half-full is not empty.

On the other hand, the glass was $\frac{2}{5}$ empty. And forecasts as of 2011 that the restoration of full employment would take a long time were accurate. The employment rate for 25-54 year olds—too old to be in school, too young to be retired—peaked at 82% in 2000 and then at 80% in 2007. It fell to 75% in 2009. It was still at only 76% in 2013. It did not reach 78% until the end of 2016, was still short of 79% when 2017 ended. There was no "bounce back" rapid recovery. Indeed, for the first four years of the recovery, workers' abilities to find jobs barely improved at all.

14.3.4: Applying the Bagehot-Minsky Rule.

The glass of economic policy in the United States was thus about ½ full as far as the "lend freely" part of proper economic policy is concerned. How about the "on collateral good in normal times" part? And how about the "at a penalty rate" part? of proper economic policy is concerned. In fact, it is doubtful that there is a glass at all.

In this crisis, the U.S. government has done reasonably well on the "lend freely" part—the glass is about two-thirds full. It has done much worse on the "penalty rate" part of the Minskyite policy prescription.

Policymakers did rush in. Financial institutions were bailed out at taxpayer expense; guarantees were extended to restore confidence—Ireland, for example, took the extraordinary step of guaranteeing all Irish bank debt; central banks and government agencies stepped in as "lenders of last resort," providing credit where banks could or would not. These measures were successful in stemming the panic: by the early summer of 2009, most measures of financial stress had subsided to more or less normal levels. And as we noted at the beginning of this review, the world economy ended its headlong plunge.

But the actions taken were perceived to have been unfair. Financial bailouts are always so, because they reward those who made bad bets on risky assets. But a policy that leaves the owners and controllers of risky financial assets impoverished is a policy that shuts down dynamism in the real economy. A crash in prices of risky financial assets sends a message: shut down risky production activities and don't undertake any new activities that might be risky. But there aren't enough safe, secure, and sound enterprises to absorb all the workers laid off from risky enterprises. The political problem can be finessed: as Don Kohn, a vice-chairman of the Federal Reserve, recently observed, teaching a few thousand feckless financiers not to over-speculate is much less important than securing the jobs of millions of Americans and tens of millions around the globe. Financial rescue operations that benefit even the unworthy can be accepted if they are seen as benefiting all—even if the unworthy gain more than their share of the benefits.

When Vice Presidential candidate Jack Kemp attacked Vice President Al Gore in 1996 for the Clinton administration's decision to bail out Mexico's feckless government during the 1994-1995 financial crisis, Gore responded that America made \$1.5 billion on the deal.

Similarly, Clinton's treasury secretary, Robert Rubin, and IMF Managing Director Michel Camdessus were attacked for committing public money to bail out New York banks that had loaned to feckless East Asians in 1997-1998. They responded that they had not rescued the truly bad speculative actor, Russia; that they had "bailed in," not bailed out, the New York banks, by requiring them to cough up additional money to support South Korea's economy; and that everyone had benefited massively, because a global recession was avoided.

In 2009, however, the U.S. government could say none of these things. What was concrete and visible were continued bankers' bonuses and a real economy that continues to shed jobs.

Focusing more on the "penalty rate" part would have at least moderated that perception of unfairness—and given more of a political base for further actions, if the old ones had not been perceived as too much of a present to the princes of Wall Street.

And the "on collateral good in normal times part"? At what seems in retrospect to have been the decisive moment, the Lehman bankruptcy, they did not. Why not? Sometimes what I hear is that they did not believe they had legal authority to do so. And when I hear this, I also hear nineteenth-century British statesman Robert Peel say that he is confident that policymakers would rise to the occasion should a "pecuniary crisis" impose on them "grave responsibility". Robert Pee would be disappointed. Sometimes I hear that failing to rescue Lehman was a way of substituting for their failure to charge a "penalty rate" on those who were bailed out. Walter Bagehot and Hyman Minsky would be disappointed.

14.4: Taking the Foot Off the Gas Pedal

As we noted, there was not much of a recovery from 2008-10. But if the fundamental problem lay with a crisis of confidence in the banking system, why didn't a restoration of banking confidence brought a return to strong economic growth? The answer is that banks were only part of the problem.

In Hyman Minsky's framework of analysis, financial stability sets the stage for future crisis, because it encourages a wide variety of economic actors to take on ever-larger quantities of debt and engage in ever-more-risky speculation. Sooner or later the music stops: there is a "Minsky moment". Prudence returns. Isn't this new prudence a good thing? No. When one individual tries to pay down debt, that's all

well and good—but when everyone tries to do it at the same time, the consequences can all too easily be destructive for everyone involved. The process of destruction is easiest to see in the financial sector, where everyone's attempt to pay off debt by selling assets all at the same time can lead to a vicious circle of plunging prices and rising distress. But the problem isn't necessarily restricted to finance.

These broader problems of debt and deleveraging arguably explain why the successful stabilization of the financial industry has done no more than pull the economy back from the brink, without producing a strong recovery. The economy is hamstrung—still crippled by a debt overhang. That is, the simultaneous efforts of so many people to pay down debt at the same time are keeping the economy depressed.

So what would the right answer have been? It would have been, after 2010, for governments to move in the opposite direction—to become, in effect, the borrower of last resort, issuing debt and continuing to spend as the private sector pulls back.

Yet that did not happen. Instead, policymakers took their foot off the gas.

From the end of World War II until 2007, Western political leaders at least acted as if they were interested in achieving full employment, price stability, an acceptably fair distribution of income and wealth, and an open international order in which all countries would benefit from trade and finance. True, these goals were always in tension, such that we sometimes put growth incentives before income equality, and openness before the interests of specific workers or industries. Nevertheless, the general thrust of policymaking was toward all four objectives.

Then, after 2008, the goal of rapid reattaining full employment dropped off Western leaders' radar, even though there was neither a threat of inflation nor additional benefits to be gained from increased openness. Likewise, the goal of creating an international order that serves everyone was summarily abandoned. Both objectives were sacrificed in the interest of restoring the fortunes of the superrich, perhaps with a distant hope that the wealth would "trickle down" someday.

At the macro level, the story of the post-2008 decade is almost always understood as a failure of economic analysis and communication. We economists supposedly failed to convey to politicians and bureaucrats what needed to be done, because we hadn't analyzed the situation fully and properly in real time. But many of us did understand.

For example, consider the Greek crisis: When the Greek debt crisis erupted in 2010, it seemed to me that the lessons of history were so obvious that the path to a resolution would be straightforward. The logic was clear. Had Greece not been a member of the eurozone, its best option would have been to default, restructure its debt, and depreciate its currency. But, because the European Union did not want Greece to exit the eurozone (which would have been a major setback for Europe as a political project), Greece would be offered enough aid, support, debt forgiveness, and assistance with payments to offset any advantages it might gain by exiting the monetary union.

Instead, Greece's creditors chose to tighten the screws. As a result, Greece is likely much worse off today than it would have been had it abandoned the euro in 2010. Iceland, which was hit by a financial crisis in 2008, provides the counterfactual. Whereas Greece remains mired in depression, Iceland—which is not in the eurozone—recovered, and recovered quickly. Using Iceland as our measuring stick, the cost to Greece of not exiting the eurozone is now equivalent to 150% of a year's GDP—and counting.

Yet the clear failure of austerity to restart the economy in Greece or the rest of the eurozone did not cause European policymakers to rethink their approach in the first half of the 2010s. Instead, they seemed to be double down. In this, sadly, they repeated the story of the 1930s. As the American commentator Matthew Yglesias pointed out, Europe's major center-left parties at that time recognized that what was being done was not working, but nonetheless failed to offer an alternative:

It was left to other parties with less worthy overall agendas – Hitler, for example – to step in and say that if the rules of the game led to prolonged spells of mass unemployment, then the rules of the game had to be changed...

One would have thought we were capable of learning from the past, and that the Great Depression was important enough in European history that policymakers there would not be repeating its mistakes. And yet...

In America, as well, the foot was lifted off the gas pedal early in the 2010s. The summer of 2011 found Federal Reserve Chair Ben Bernanke painting a rosy scenario: "we expect a moderate recovery to continue and indeed to strengthen" because "ouseholds also have made some progress in repairing their balance sheets—saving more, borrowing less, and reducing their burdens of interest payments and debt." Moreover, deflation in commodity prices "help[s] increase household

purchasing power." Plus: "the growth fundamentals of the United States do not appear to have been permanently altered by the shocks of the past four years."

But at that moment state and local budget-cutting has slowed America's pace of investment in human capital and infrastructure, adding a third percentage point to the downward shift in the country's long-term growth trajectory. After the Great Depression of the 1930's, the vast wave of investment in industrial capacity during World War II made up the shortfall of the lost decade. As a result, the Depression did not cast a shadow on future growth. There is no analogous set of floodlights being deployed to erase the shadow that was cast by 2008-10. On the contrary, the shadow lengthened with each passing day of stalled recovery. And the "Roosevelt put"—confidence that full employment would be rapidly reattained because reattaining it was the government's highest priority, and hence that one should hire and invest as if rapid recovery was guaranteed—was no longer present because its premise, that reattaining full employment was the government's highest priority, was simply not true.

Why the political leaders of the global north did not do more to keep their foot on the gas pedal in the first half of the 2010s greatly puzzles me. Three times in my career I have concluded that my understanding of the world was substantially wrong. The first time was when my analyses failed to predict the Mexican peso crisis of 1994-5, the second time was the fall of 2008 when it became clear that large banks had no control over either their derivatives books and central banks had neither the power nor the will to maintain aggregate demand in the face of a large financial crisis, and the third time was the early 2010s. Then a nominal demand shortfall of 8% relative to the pre-recession trend, no signs of gathering inflation, and unemployment rates in the North Atlantic region at least three percentage points higher than any credible estimate of the sustainable rate was accompanied by clamor to enact policies that would reduce output and employment in the short run. There was at that moment no likelihood of reforms of Wall Street and Canary Wharf aimed at diminishing the likelihood and severity of future financial panics, no likelihood of government intervention to restore the normal flow of risky finance through the banking system, nor any effective political pressure to expand or even extend the anemic government stimulus measures that have been undertaken. "Just as families and companies have had to be cautious about spending", said Barack Obama, "government must tighten its belt as well." Here we reached the limits of my mental horizons as a neoliberal, as a technocrat, and as a mainstream neoclassical economist. The global economy was suffering from a grand mal seizure of slack demand and high unemployment. We knew the cures. Yet we seemed determined to inflict further suffering on the patient.

There are partial explanations. Some economists, like Carmen M. Reinhart and Kenneth Rogoff, saw the dangers of the financial crisis, but greatly exaggerated the risks of public spending to boost employment in its aftermath. Others, like then-US Federal Reserve Chairman Ben Bernanke, understood the importance of keeping interest rates low, but overestimated the effectiveness of additional monetary-policy tools such as quantitative easing. The moral of the story is that if only we economists had spoken up sooner, been more convincing on the issues where we were right, and recognized where we were wrong, the situation today would be considerably better. Still others, like me, understood that expansionary monetary policies would not be enough; but, because we had looked at global imbalances the wrong way, had missed the principal source of risk—US financial mis-regulation—and were still trying to catch up to the situation in order to give accurate policy-relevant advice.

Columbia University historian Adam Tooze has little use for this narrative; he sees deep historical currents where I see, in addition, technocrats' errors of analysis and communication. Financial deregulation and tax cuts for the rich became idols for the right. George W. Bush's administration decided to wage an ill-advised war against Iraq, effectively squandering America's credibility to lead the North Atlantic through the crisis years. The Republican Party began to suffer its nervous breakdown, eventually embracing a brutish, race-baiting reality-TV star, many Democrats swooned for a self-declared socialist senator with scarcely any legislative achievements to his name. This is Tooze's view. "This denouement," he writes, "might have seemed a little cartoonish," as if life was imitating the art of the HBO series "Veep."

Yet where Tooze sees currents, I see contingency and bad luck.

There is a striking contrast between presidents that reinforces my confidence in my view. Barack Obama could see what was coming. Indeed, he warned against it. Back in 2004, when he was still a rising star in the Senate, Obama had warned that failing to build a "purple America" that supports the working and middle classes would lead to nativism and political breakdown. In the Great Depression President Franklin D. Roosevelt knew what to do to address problems of such magnitude. "The country needs…bold persistent experimentation," Roosevelt said in 1932, at the height of the Great Depression. "It is common sense to take a method and try it; if it fails, admit it frankly and try another. But above all, try something." Obama had a better view beforehand of what might happen. Yet he was unwilling to follow in Roosevelt's footsteps.

Had he been more aggressive, would things have been very different? Professional economists could not convince those in power of what needed to be done, because those in power were operating in a context of political breakdown and lost American credibility. With policymaking having been subjected to the malign influence of a rising plutocracy, economists calling for "bold persistent experimentation" were swimming against the tide—even though well-founded economic theories justified precisely that course of action.

But, then, nobody expected very much from Roosevelt back in the 1920s.

14.5: Secular Stagnation

Perhaps the element of the situation that future historians will find least comprehensible is the unwillingness of governments to borrow and spend. Starting in the mid-2000s there came an era of what Larry Summers has named "secular stagnation": very low interest rates on safe (but not on risky) bonds, driven by a shortage of risk bearing capacity and a hunger for safe assets on the part of insecure private investors. That means that, as long as the "secular stagnation" interest rate configuration remains, governments can truly borrow for free. Hence they should, especially since financial markets expect this era of "secular stagnation" to last for a long time.

By now most economists agree. Harvard Professor Ken Rogoff muses about how Britain can and should use expansionary fiscal policy to keep Brexit from being a total disaster, stating that it had: "never been remotely obvious to [him] why the UK should be worrying about reducing its debt-GDP burden [currently 84%], given modest growth, high inequality and the ... decline in ... interest rates ..." My old teacher Olivier Blanchard used his American Economic Association presidential address to make the case that public debt is a tool governments should use when they need to—and that now there is a very strong case that they need to.

What Rogoff and Blanchard are saying today is standard policy economics. In fact, I always found it hard to believe—and still do—that anybody can take exception to it. Whenever the private sector stops spending enough to keep unemployment low and jobs easy to find, the public sector needs to fill the gap in aggregate demand. This may lead to fears that public debt would rise "too high," so that issuing more debt to finance additional government purchases would represent a bad deal, even if it boosted employment. But the deal would be bad only if the government had to

borrow at a high interest rate, as was the case at the start of the 1990s. And the deal would be risky only to the extent that the government might have to roll over its debt at a high interest rate. Thus, the bond market would signal when the deficit needed to be cut, and the debt-to-GDP ratio placed on a downward trajectory.

Yet for the past decade, public debate in the Global North has regarded this as a fringe, "ultra-Keynesian" belief. I date the full flowering of this affliction to January 27, 2010. That evening, in his State of the Union Address, then-US President Barack Obama announced that it was time for the government to tighten its belt, that he was going to freeze government spending, and that he would veto bills passed by the then-majority-Democratic Congress that overstepped his red line. At the time, my first reaction was that issuing a veto threat against his two chief lieutenants, House Speaker Nancy Pelosi and Senate Majority Leader Harry Reid, was a unique way of building intra-party comity, and a previously unheard-of way of maintaining a functioning governing coalition.

Obama's former economic-policy staffers say that he was the Global North's most rational and best-behaved ruling politician in the first half of this decade. And they are right. But it is a powerful indicator of that Obama's address —delivered when the US unemployment rate was still 9.7%—went so strongly against John Maynard Keynes's 1937 observation that "the boom, not the slump, is the right time for austerity at the Treasury."

The arithmetic always seemed clear to me. Starting in 2009, the U.S. government could borrow for 30 years at a real interest rate of 1% per year—or less. Given this, an additional \$500 billion in infrastructure spending would yield enormous benefits to the government and for the country, and at no cost: investors would have effectively been willing to pay the United States to be the custodian of their wealth because they were so desperate to hold safe assets. That is the kind of environment we find in "sec

14.6: Risks for the Future

In the 2050s, when economic historians compare the "Great Recession" that started in 2007 with the Great Depression that started in 1929, they will praise the immediate response of the US Federal Reserve and the Department of the Treasury to the crisis in 2007 was first-rate, whereas the response immediately after the stock-market crash of 1929 was fifth-rate, at best. The aftermath of the 2007-2008

financial crash was painful, to be sure; but it did not become a repeat of the Great Depression, in terms of falling output and employment.

I have no serious complaints about the policies implemented by the United States Federal Reserve, which had the main burden of responsibility for "managing" the crisis. I wish that they could have done more. I wish—as the Fed does —that some way could have been found to make financial-sector equity holders bear an even larger share of the losses that are coming down the road than they have borne so far or are likely to bear. But I agree with Fed Vice Chairman Donald Kohn that it is not wise to focus on teaching financiers lessons about moral hazard when doing so risks collateral damage in the form of the destruction of millions of jobs.

On the other hand, future historians will also say that the longer-term US response after 2007-2008 was third-rate or worse, whereas the response from President Franklin Roosevelt, Congress, and the Fed in the years following the Depression was second- or even first-rate. The forceful policies of the New Deal-era laid the foundations for the rapid and equitable growth of the long postwar boom.

US per capita national income peaked in 2006, just before the Great Recession, and was still 5% below that point in 2009. Within three years, however, it had returned to its 2007 peak; and, if we are lucky, it will end up being 8% above its 2007 peak this year.

By contrast, four years after US per capita national income peaked in 1929, it was still down 28%, and would not return to its 1929 peak for a full decade. In other words, there can be no comparison to the Great Depression, at least in terms of decreased per capita national income.

But nor can there be any comparison to the Great Recession in terms of weak productivity growth. Within 11 years of the peak of the pre-Depression business cycle in 1929, output per worker was up 11% and still growing rapidly. By contrast, output per worker this year is only 8% higher than its pre-Great Recession peak, and that figure continues to rise slowly.

So, within 11 years of the start of the Depression, Roosevelt and his team had gotten US per capita national income back to its previous peak while pushing output per worker 11% higher. Moreover, they did that having started from a position in 1933 that was incomparably worse than what US policymakers faced in late 2009. When historians look back at the two periods, they will have to conclude

that the relative performance after the Great Recession was nothing short of appalling.

In assigning blame for this dismal track record, Democrats point to the fact that Republicans turned off the spigot of fiscal stimulus in 2010, and then refused to turn it back on. Republicans, for their part, have offered a range of incomprehensible and incoherent explanations for the anemic growth recorded since the financial crisis.

Some Republicans, naturally, blame Obama and his signature legislative accomplishments like the 2010 Affordable Care Act (Obamacare) and the 2010 Dodd-Frank Wall Street Reform and Consumer Protection Act. Others blame the unemployed, those who have dropped out of the labor market altogether, or those who want to work but supposedly have nothing of value to contribute – the so-called "zero marginal product workers."

There is much more truth to the argument offered by the Democrats, even if Obama and his team also deserve a fair share of the blame for pursuing inappropriate fiscal austerity in the early stages of the recovery. At any rate, austerity is not the whole story. And when thinking about what comes next, the most worrisome aspect of the post-2007 response is that those who implemented it, and those who succeeded them, still do not recognize it as a failure.

For example, Fed policymakers, with a few honorable exceptions, still insist that they did the best they could, considering the fiscal headwinds at the time. Likewise, Obama administration policymakers still pat themselves on the back for preventing a second Great Depression, and say they did the best they could, given recalcitrant Republican congressional majorities after the 2010 midterm elections.

At the same time, right-leaning economists still busy themselves arguing that the Obama administration's fiscal policies and then-Fed Chair Ben Bernanke's monetary policies were dangerously inflationary. If we are to believe them, we should consider ourselves lucky to have escaped the fate of Greece or Zimbabwe.

But as Christina D. Romer and David H. Romer of the University of California, Berkeley, have shown, countries throughout the post-war period that lacked the monetary or fiscal space to deal with a financial crisis often suffered from output shortfalls of 10% or more even a decade after the fact.

It has now been 11 years since the start of the last crisis, and it is only a matter of time before we experience another one – as has been the rule for modern capitalist economies since at least 1825. When that happens, will we have the monetary- and fiscal-policy space to address it in such a way as to prevent long-term output shortfalls? The current political environment does not inspire much hope.

Whenever the next downturn looms, North Atlantic central banks do not have the policy room to fight it effectively. Should a recession arrive, the US Federal Reserve would ideally be able to cut interest rates by five percentage points, as is customary in such situations. But with short-term safe interest rates currently at 2.4%, it cannot. And with euro and yen interest rates still around zero, the European Central Bank and the Bank of Japan would be unable to help much, either

Looking ahead, therefore, the big risk is not that inflation will start spiraling upward, with the Fed unable to raise interest rates fast enough to stabilize the economy. Rather, it is the downside risk that a year from now, the North Atlantic will be in recession, governments will not provide enough fiscal stimulus, and the Fed won't be able to reduce interest rates enough – leaving it nearly helpless to even try to stabilize the economy.

The logical response to such an asymmetric risk is—or ought to be—to buy insurance to cover it. Worryingly, however, the Fed is not taking out any policy insurance at all against a possible recession, despite having at least three possible options from which to choose.