

The Economic Impact of the American Recovery and Reinvestment Act

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The new president and Congress are working to implement a large fiscal stimulus plan to mitigate the severe economic downturn. The latest step in this effort is the plan put forth by House Democrats in mid-January. As laid out in the American Recovery and Reinvestment Act, the plan would cost \$825 billion over two years and include a large number of spending increases and tax cuts.¹ The national, industry and state economic impacts of this stimulus plan are assessed in the following analysis.

The House stimulus plan will not reverse the current recession, but it will provide a vital boost to the flagging economy. With the stimulus, there will be 4 million more jobs and the jobless rate will be more than 2 percentage points lower by the end of 2010 than without any fiscal stimulus. Without stimulus, unemployment will rise well into the double digits by this time next year, and the economy will not return to full employment until 2014.

Any fiscal stimulus plan has to be about more than dollars and cents to be effective in lifting spirits and the economy, however. It must be passed quickly and explained well so that households and businesses are convinced it will work. Unless the plan helps dissipate the current dark mood of pessimism, it will not stem the economic downturn.

Introduction

The global financial system has effectively collapsed, undermining investor, household and business confidence, and pushing the economy into a lengthy and severe recession. Real GDP, employment, industrial production and retail sales are falling sharply, and unemployment is rising quickly. Policymakers are working to implement a large fiscal stimulus package; yet even with such stimulus, the economy appears headed toward its worst downturn since the Great Depression.

The proximate cause of the crisis was the collapse of the U.S. housing market and the resulting surge in mortgage loan defaults. Hundreds of billions of dollars in losses on these mortgages have undermined the financial institutions that originated and invested in them, including some of the world's largest. Many have failed, and others are struggling to survive. Banks fear extending credit to one another, let alone to businesses and households. With the credit spigot closing, the global economy is withering. Global stock investors have dumped holdings as they come to terms with the implications for corporate earnings. A self-reinforcing adverse cycle has begun: The eroding financial system is upending the economy, putting further pressure back on the financial system as the performance of assets from credit cards to commercial mortgage loans sours.

This cycle can only be broken by aggressive and consistent government action. In the United States, the public policy response to the financial crisis has been without precedent. The full faith and credit of the U.S. government now effectively backstop the financial system, significant parts of which have been nationalized. With the takeover of Fannie Mae and Freddie Mac, the government makes nearly all the nation's residential mortgage loans. And as the \$700 billion Troubled Asset Relief Program is deployed, the government is gaining sizable ownership stakes in the nation's largest financial institutions.

In an effort to restart money and credit markets, the Federal Reserve has vastly expanded its role. The Fed has adopted a zero interest rate policy, and in an attempt to bring down long-term interest rates, it has made clear that the funds rate will remain there indefinitely. The Fed is also ramping up a policy of

quantitative easing, in which it effectively prints money to purchase securities and extend loans to financial institutions that use their securities as collateral.ⁱⁱ The central bank is already purchasing commercial paper and debt issued by Fannie Mae and Freddie Mac and the mortgage securities they insure. If conditions continue to erode, the Fed will turn to buying long-term Treasury bonds and perhaps eventually municipal bonds, corporate bonds, and even corporate equity.

Money markets have responded to the Fed's unprecedented actions. Libor has fallen, suggesting that the interbank lending market is performing better. Commercial paper rates have fallen, and the volume of new issuance has increased sharply. Residential mortgage rates have also declined, with 30-year fixed rates for prime conforming borrowers falling from above 6% to below 5%. Despite the improvement, money-market conditions remain far from normal, and even after financial institutions begin lending more freely to one another, they will be slow to extend credit to households and businesses, considering their worries about creditworthiness in a severe recession. Moreover, lower mortgage rates will not quickly revive home sales, given rising unemployment and plunging house prices. The link between the Federal Reserve's actions and the economy runs through the financial system. With that system in disarray, the efficacy of monetary policy has been significantly impaired.

Policymakers have also worked directly to shore up the housing and mortgage markets and broader economy. A number of programs have been put in place to enable stressed homeowners to avoid foreclosure. These include FHA Secure, Hope Now, and Hope for Homeowners. Fiscal stimulus measures, including last summer's refundable tax rebates and investment tax incentives, have provided some economic support.

Much more needs to be done to quell the financial panic and mitigate the severe downturn. The remaining \$350 billion in TARP funds must be deployed aggressively and broadly. Most of the initial \$350 billion in TARP funds was used to inject equity into the financial system; while this helped forestall a complete collapse, it did not significantly improve the flow of credit to households and businesses. To do this, some of the remaining TARP money must be used to either purchase troubled assets from distressed institutions and/or provide guarantees against losses on those assets. This will help establish a market and a price for these assets, which is necessary for private investors to determine the value of financial institutions, a necessary condition for them to begin providing capital to these institutions.

The remaining TARP money should also be used to fund a much larger and more comprehensive foreclosure mitigation plan. Millions of homeowners owe more than their homes are worth, and unemployment is rising quickly. Foreclosures, already at record high levels, are sure to mount. The Hope Now and Hope for Homeowners programs face severe impediments, and even under the best of circumstances will likely be overwhelmed by the wave of foreclosures still coming. No plan will keep house prices from falling further, but quick action could avoid the darker scenarios in which crashing house prices force millions more from their homes, completely undermining the financial system and economy.ⁱⁱⁱ

The top priority should be the implementation of a large fiscal stimulus package. The House Democratic plan proposed in mid-January includes both increases in government spending and tax cuts. The plan costs approximately \$825 billion, equal to 5.5% of the nation's gross domestic product. This is not as costly as the public works projects of the 1930s, but it is costlier than the 3% of GDP spent to stimulate the economy during the tough downturn in the early 1980s. The cost of the current package would thus be consistent with expectations regarding the severity of this downturn. At 5.5% of GDP, the stimulus would also be about enough to ensure the economy stops contracting by the end of 2009 and that GDP returns to its prerecession peak by the end of 2010—reasonable goals.

The mix of tax cuts and spending increases in the stimulus package is designed to provide both quick relief and a substantial boost to the struggling economy. The tax cuts will not pack a big economic punch, as some of the money will be saved and some used to repay debt, but they can be implemented quickly. Aid to state and local governments will not lift the economy, but it will forestall cuts in programs and payrolls that many governments would be forced to make to meet their states' constitutional obligations to balance their budgets. Infrastructure spending will not help the economy quickly, as it will take time to get even "shovel-ready" projects going, but it will provide a significant economic boost. Because the economy's

problems are not expected to abate soon, this spending will be especially helpful this time next year.

With government making so many monumental decisions in such a short time, there will surely be unintended consequences. Some may already be evident: Nationalizing Fannie Mae and Freddie Mac while not rescuing Lehman Brothers from bankruptcy may very well have set off the financial panic. The Treasury Secretary's reversal on the use of TARP to purchase troubled assets began a chain of events that resulted in the near failure of Citigroup. And policymakers need to be wary of the costs of their actions, as global investors will eventually demand higher interest rates on the soaring volume of U.S. Treasury debt. Any measurable increase in long-term interest rates would be counterproductive; its effect on the housing market and the rest of the economy would offset the economic benefits of the fiscal stimulus.

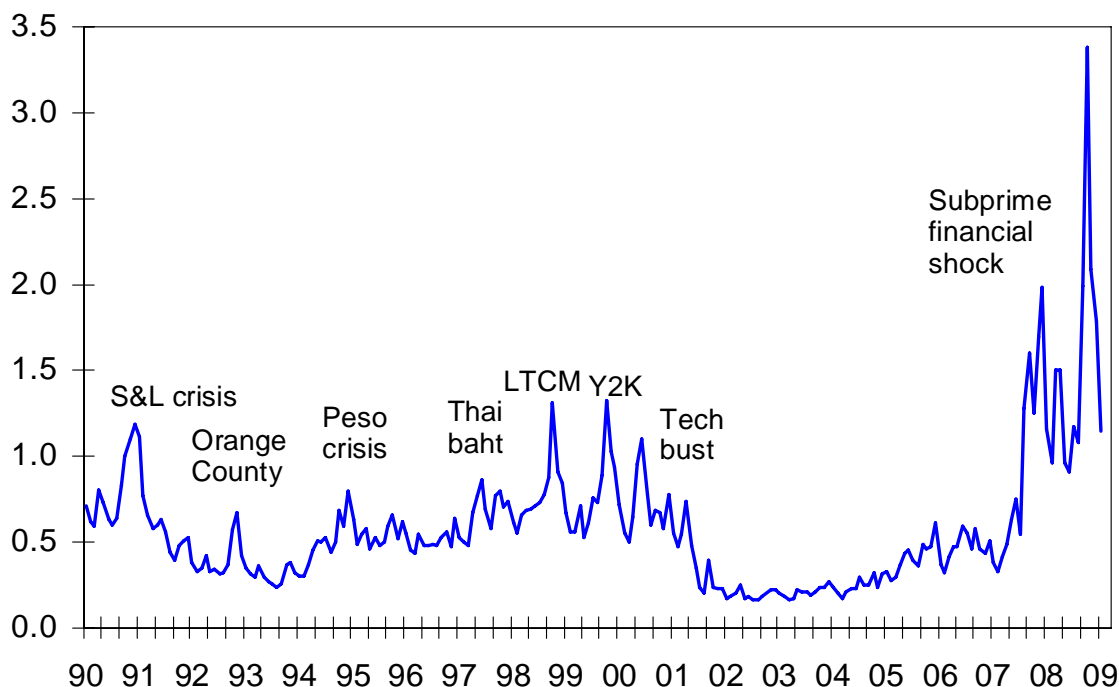
But policymakers' most serious missteps so far have come from acting too slowly, too timidly, and in a seemingly scattershot way. Early in the crisis, there were reasonable worries about moral hazard and fairness: Bailing out those who took on, originated or invested in untenable mortgage loans would only encourage such bad behavior in the future. And a bailout would certainly be unfair to homeowners still managing to make their mortgage payments. But as the crisis deepened and continued, those worries hindered policymakers far too long, allowing the panic to develop. With so many people suffering so much financial loss, moral hazard is less of an issue. Debate about whether it is fair to help stressed households stay in their homes appears quaint. Their problems are clearly everyone's problems. Only concerted, comprehensive and consistent government action will instill the confidence necessary to restore financial stability and restart economic growth.

Economic backdrop

The need for more policy action grows more evident as the financial and economic backdrop darkens. The financial panic that began in early September with the nationalization of Fannie and Freddie may have passed its apex, but the collective psyche remains frazzled. And even if the panic soon subsides, substantial economic damage has been done. The collapse in confidence, the massive loss of wealth, and the intensifying credit crunch ensure the U.S. economy will struggle for some time.

Money markets are improving thanks to massive intervention by global central banks, but remain far from normal. The difference between three-month Libor and three-month Treasury bill rates—a good proxy for the angst in the banking system—is still an extraordinarily wide 100 basis points (see Chart 1).^{iv} This is down from the record spreads of mid-October, which topped 450 basis points, but it is still very high compared with past financial crises, not to mention the average 50-basis point spread that prevails in normal times. The Fed's program to purchase commercial paper directly from issuers has pushed those short-term rates down as well, but they too are still very high.

Chart 1: The Financial System Remains in Disarray
Difference between 3-month Libor and Treasury bill yields



Credit markets remain badly shaken. Bond issuance has come to a standstill. No residential or commercial mortgage-backed securities have been issued in recent months, and there has been little issuance of junk corporate bonds and emerging market debt. Asset-backed issuance of credit cards and vehicle and student loans and issuance of municipal bonds also remain severely disrupted. Investment-grade bond issuance has held up somewhat better, but that too all but dried up in October and early November. Credit spreads—the extra yield investors require to be compensated for investing in riskier bonds—also remain strikingly wide as investors shun anything but risk-free Treasury bonds. The difference between yields on junk corporate bonds and 10-year Treasuries had ballooned to over 2,000 basis points, and the difference between emerging debt and Treasuries to over 1,200 basis points. Historically, yield spreads for both have averaged closer to 500 basis points.

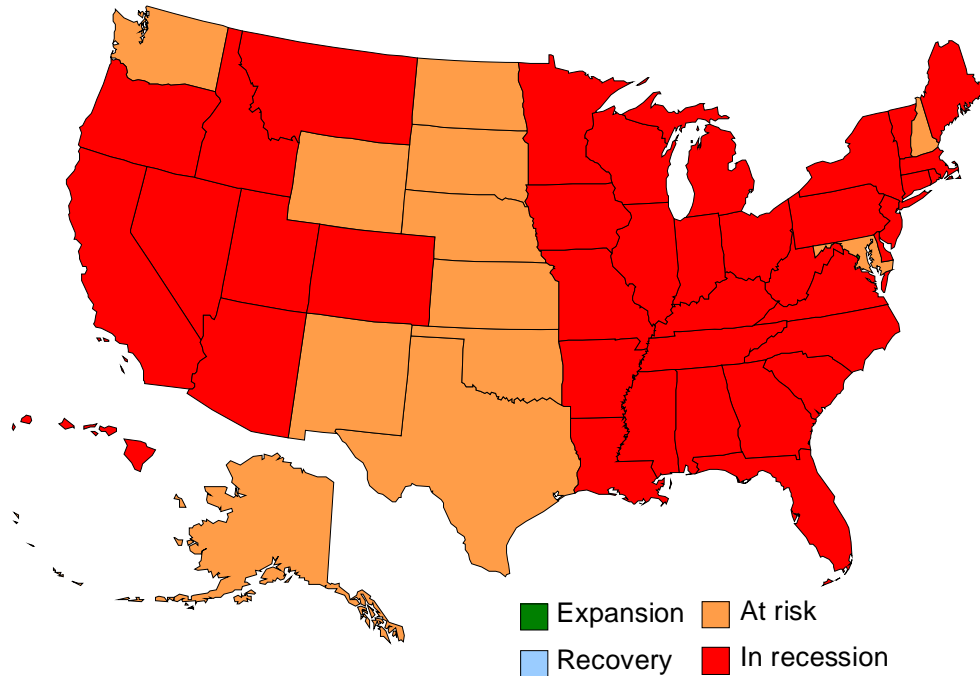
Commodity and foreign currency markets have been roiled. Oil prices have fallen more than 50% from their record peaks in early July, and prices for commodities from copper to corn have plunged. The global recession has undercut the financial demand that had sent prices surging this past summer. Economies reliant on commodity production have been hit hard, and their currencies have rapidly depreciated. The Canadian dollar, which had been close to parity with the U.S. dollar as recently as this summer, has dropped back to less than 80 U.S. cents, and the Brazilian real has fallen more than 40% against the U.S. dollar since the panic began.^v

Volatility in global stock markets has been unprecedented and the price declines nerve-wracking. Since the downdraft began a few months ago, global stock prices are off 30% in local currency terms and more than 40% from their year-ago highs. No market has been spared. The declines have been so precipitous that U.S. and European bourses have tried imposing limits on short-selling, and Russia has suspended trading for days at a time, but without meaningful effect. Mutual fund, 401(k) and hedge fund investors simply want out of stocks, regardless of the losses and any associated penalties.

Even if the global financial system stabilizes soon, substantial damage has already been done. The U.S.

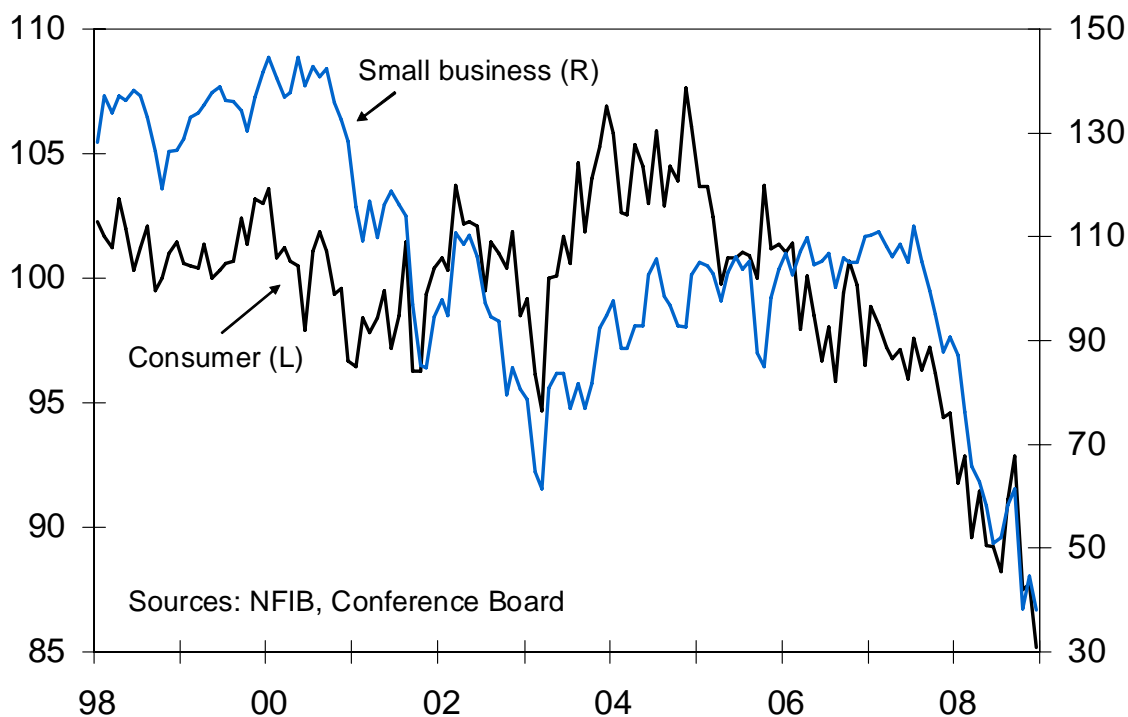
economy was struggling before the financial panic hit; it has been in recession for over a year. Real GDP fell in the last quarter of 2007 and again in the third quarter of 2008.^{vi} Some 2.6 million jobs have already been lost so far on net, and the unemployment rate has risen nearly 3 percentage points to 7.2%. The downturn is broad-based across industries and regions, with 38 states now in recession (see Chart 2).^{vii} Data since the panic hit have been uniformly bad, suggesting the downturn is intensifying. Retail sales, vehicle sales and industrial production have plunged, and the increase in unemployment insurance claims in January is consistent with another monthly job loss of 500,000.

Chart 2: Recession From Coast to Coast



The panic's most immediate fallout is the blow to confidence. Consumer confidence crashed in October to its lowest reading since the Conference Board began its survey more than 40 years ago. This is all the more surprising given the plunge in gasoline prices during the month; cheaper motor fuel in times past has always lifted households' spirits. Small business confidence as measured by the National Federation of Independent Businesses has also plunged to a record low (see Chart 3). Current events have so soured sentiment that they are sure to have long-lasting effects on household spending and saving, as well as on business decisions regarding payrolls and investment.

Chart 3: Confidence Has Been Shattered
Indices



Is the House Stimulus Plan the appropriate size?

The \$825 billion, two-year fiscal stimulus plan proposed by House Democrats is large enough to provide a substantive near-term boost to the economy, but not so large as to result in measurably higher interest rates. Global investors remain avid buyers of U.S. Treasury bonds despite fully anticipating the costs to the Treasury of responding to the current financial and economic crisis. Investors have discounted a stimulus plan whose costs are similar to those proposed by the House. This is not say the U.S. government can borrow unlimited amounts without pushing interest rates higher, but with little corporate and household borrowing, the government is able to borrow at very low interest rates.

The costs of the House plan are approximately equal to the estimated direct net cost to the economy of the financial panic. The hit to household wealth is among the most significant costs. Net worth has fallen close to \$12 trillion since peaking a year ago. Of that, \$4 trillion is due to the 20% decline in house prices, while the rest is due to the 40% decline in stock prices (see Chart 4). Every dollar decline in household net worth reduces consumer spending by 5 cents over the next two years.^{viii} If sustained, the wealth lost over the past year could thus cut \$300 billion from consumer spending in 2009 and a like amount in 2010. More than in past recessions, the financial pain of this recession is being felt by all Americans, from lower-income households losing jobs to affluent households with diminished nest eggs.

The financial panic has also significantly impaired the availability of credit and increased its cost. Credit growth was weakening rapidly even before recent events. The Federal Reserve's Flow of Funds shows debt owed by households and nonfinancial corporations actually fell in the second quarter of 2008 after inflation (the most recent data available) for the first time since the savings and loan crisis of the early 1990s. To date, weakening credit growth is largely due to disruptions in the bond and money markets. Lending by banks, S&Ls and credit unions has remained sturdy. But this is probably because nervous borrowers have pulled down available credit lines, and with banks now tightening underwriting standards and cutting lines, this source of credit is drying up. According to the Fed's senior loan officer survey, lenders have tightened credit over the past year as aggressively as ever. The net percent of loan officers

who say they are willing to make a consumer loan is the lowest on record, with the exception of 1980 when the Carter administration briefly imposed credit controls (see Chart 5).^{ix}

Chart 4: Household Nest Eggs Have Been Cracked
Household net worth, \$ tril

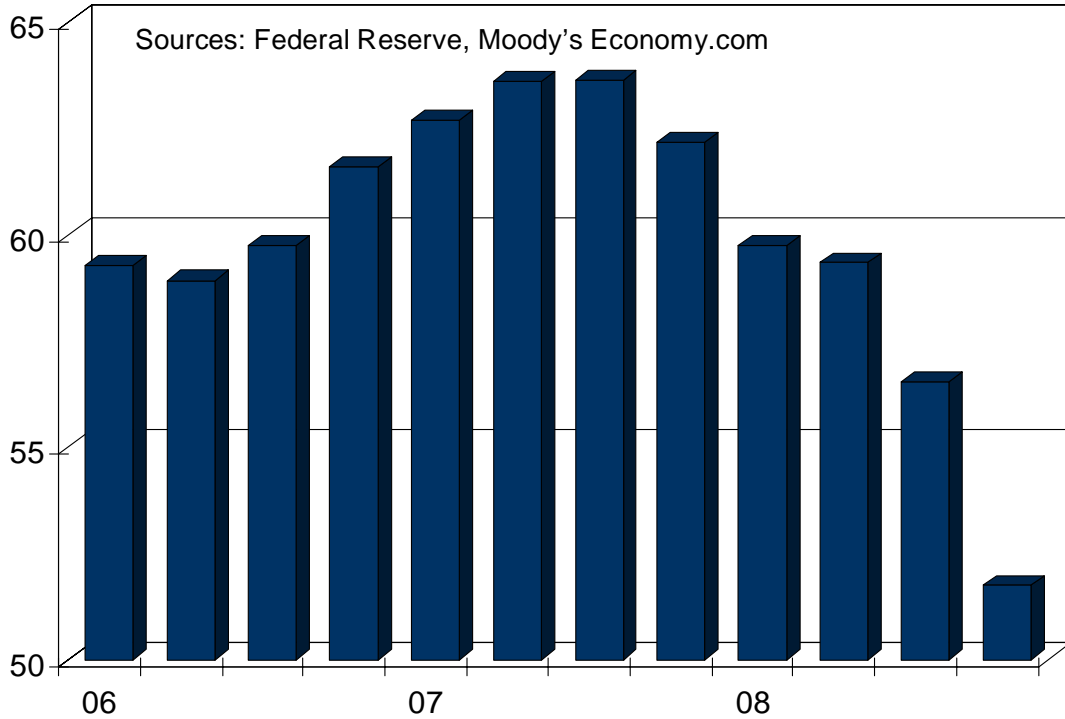
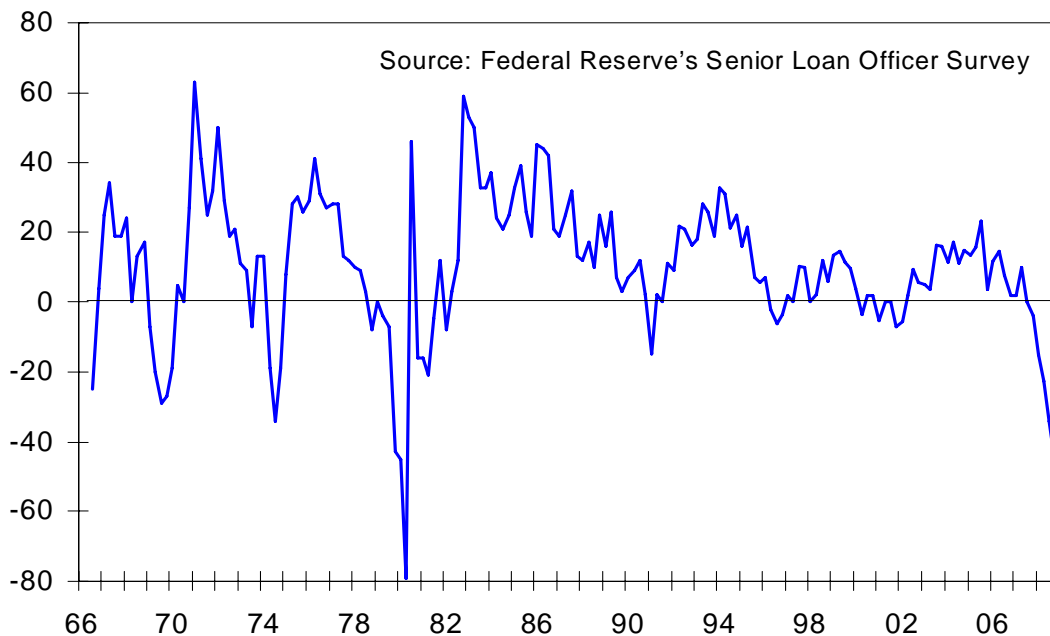


Chart 5: Banks Fight to Survive, Not to Make Loans
Net % of lenders willing to make consumer loans



The impact of a credit crunch is difficult to quantify, but the economy's performance during the early 1980s and early 1990s suggests it can be substantial. The downturn in the 1980s was the most severe in the post-World War II period, and while the downturn in the 1990s was not as bad, the economy struggled long after the recession formally ended. Using these two periods as a guide suggests that for every 1 percentage point decline in real household and nonfinancial corporate debt outstanding, real GDP declines by approximately 35 basis points. Thus, if real debt outstanding declines 12.5% from its early 2008 peak to a trough in late 2010, which seems plausible, this credit effect will cut approximately \$325 billion from GDP this year and a similar amount next year.

The only significant positive for the U.S. economy out of the financial panic is lower energy and commodity prices. With oil now trading near \$50 per barrel, a gallon of regular unleaded gasoline should cost about \$1.75. Gasoline prices peaked last summer above \$4 per gallon and have averaged closer to \$3 last year. Every penny per gallon decline in the cost of gasoline saves U.S. consumers just over \$1 billion a year. Assuming gas remains below \$2 per gallon through the coming year, Americans will save well more than \$100 billion in 2009 compared with fuel costs in 2008. There will also be measurable savings on home heating and food bills as agricultural and transportation costs fall. Total savings in 2009 compared with 2008 will thus approach \$200 billion.

Calculating the costs to the economy from the wealth and credit effects, less the benefits from lower commodity prices, puts the net direct cost of the financial panic this year at \$425 billion in 2009 and a like amount in 2010 (a \$300 billion wealth effect plus a \$325 billion credit crunch effect minus \$200 billion in savings due to lower commodity prices). That is about the cost of the House stimulus plan. This is a simplistic analysis; it does not account for all the indirect costs of the panic to the economy and the multipliers, but it gives a sense of the fallout's magnitude.

What is in the House Stimulus Plan?

Table 1: \$825 Billion House Democratic Economic Stimulus Plan
Sources: BLS, BEA, Moody's Economy.com

	2009Q1	2009Q2	2009Q3	2009Q4	2010Q1	2010Q2	2010Q3	2010Q4	2009	2010	2009-10
Total Stimulus	0	89	118	135	142	132	116	94	341	484	825
Government Spending	0	39	58	79	96	105	98	76	175	375	550
Income Support	0	10	15	19	19	16	13	10	44	58	102
Unemployment Insurance Benefits	0	4	6	8	8	7	6	4	18	25	43
Food Stamps	0	2	3	4	4	3	2	2	9	11	20
COBRA Healthcare	0	4	6	7	7	6	5	4	17	22	39
Infrastructure Spending	0	1	6	16	29	41	41	27	22	136	159
Traditional Infrastructure	0	0	2	9	16	24	24	14	11	78	89
Non-Traditional Infrastructure	0	1	4	7	13	17	17	13	12	58	70
Aid to State Government	0	24	28	32	35	35	31	29	83	128	211
Medicaid Match	0	10	12	13	13	13	13	13	35	52	87
Fiscal Relief	0	10	10	12	14	14	10	9	32	47	79
Local School Districts	0	3	5	6	7	7	7	6	14	27	41
Law Enforcement	0	1	1	1	1	1	1	1	2	2	4
Healthcare/Education/Other	0	5	9	13	14	14	14	11	26	53	79
Tax Cuts	0	50	60	56	46	27	18	18	166	109	275
Business Tax Benefits	0	10	20	40	30	10	0	0	70	40	110
Individual Tax Benefits	0	40	40	16	16	17	18	18	96	69	165

The fiscal stimulus plan proposed by the House Democrats includes a reasonably designed mix of government spending increases and tax cuts. The spending increases total about \$550 billion in 2009-2010, and there are \$275 billion in tax cuts. While the timing has yet to be determined, the tax cuts are expected to occur largely this year and much of the spending would begin in 2010 (see Table 1).

Increased government spending provides a large economic bang for the buck and thus significantly boosts the economy. The benefits begin as soon as the money is disbursed and are less likely than tax cuts to be diluted by an increase in imports. The most effective proposals included in the House stimulus plan are extending unemployment insurance benefits, expanding the food stamp program, and increasing aid to

state and local governments. Increasing infrastructure spending will also greatly boost the economy, particularly as the current downturn is expected to last for an extended period. Most of the infrastructure money will be spent on hiring workers and on materials and equipment produced domestically.

Tax cuts generally provide less of an economic boost, particularly if they are temporary; on the other hand they can be implemented quickly. A particular plus for individual tax cuts included in the House stimulus plan such as the payroll tax and earned income tax credits is that they are targeted to benefit lower- and middle-income households that are more likely to spend the extra cash quickly. Investment and job tax benefits for businesses are less economically effective, but are not very costly and more widely distribute the benefits of the stimulus plan.

Income support

The House stimulus plan includes some \$100 billion over two years in income support for those households under significant financial pressure. This includes extra benefits for workers who exhaust their regular 26 weeks of unemployment insurance benefits; expanded food stamp payments; and help meeting COBRA payments for unemployed workers trying to hold onto their health insurance.

Increased income support has been part of the federal response to most recessions, and for good reason: It is the most efficient way to prime the economy's pump. Simulations of the Moody's Economy.com macroeconomic model show that every dollar spent on UI benefits generates an estimated \$1.63 in near-term GDP.^x Boosting food stamp payments by \$1 increases GDP by \$1.73 (see Table 2). People who receive these benefits are hard pressed and will spend any financial aid they receive very quickly.

	Bang for the Buck
Tax Cuts	
Non-refundable Lump-Sum Tax Rebate	1.01
Refundable Lump-Sum Tax Rebate	1.22
Temporary Tax Cuts	
Payroll Tax Holiday	1.28
Across the Board Tax Cut	1.03
Accelerated Depreciation	0.25
Permanent Tax Cuts	
Extend Alternative Minimum Tax Patch	0.49
Make Bush Income Tax Cuts Permanent	0.31
Make Dividend and Capital Gains Tax Cuts Permanent	0.38
Cut in Corporate Tax Rate	0.30
Spending Increases	
Extending Unemployment Insurance Benefits	1.63
Temporary Increase in Food Stamps	1.73
General Aid to State Governments	1.38
Increased Infrastructure Spending	1.59
Note: The bang for the buck is estimated by the one year \$ change in GDP for a given \$ reduction in federal tax revenue or increase in spending	

Another advantage is that these programs are already operating and can quickly deliver a benefit increase to recipients. The virtue of extending UI benefits goes beyond simply providing aid for the jobless to more broadly shoring up household confidence. Nothing is more psychologically debilitating, even to those still employed, than watching unemployed friends and relatives lose their sources of support.^{xi} Increasing food stamp benefits has the added virtue of helping people ineligible for UI such as part-time workers.

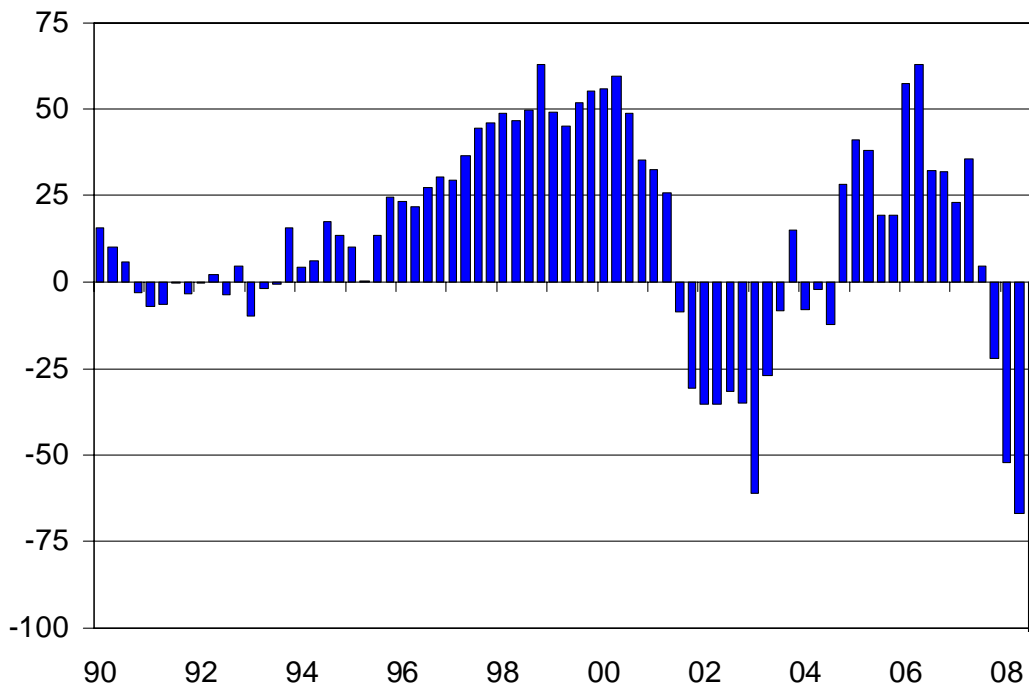
Aid to state and local governments

Another potent tool included in the House stimulus plan consists of some \$200 billion in aid to state and local governments over two years. This takes the form of a temporary increase in the Medicaid matching rate to ease the costs of healthcare coverage; help to local school districts; and broader fiscal relief to states to prevent cuts in key programs.

More than 40 states and a rapidly increasing number of localities are grappling with significant fiscal problems. Tax revenue growth has slowed as home sales, property values, retail sales and corporate profits have all fallen. Personal income tax receipts have begun to suffer as the job market slumps. Big states including California and Florida are under severe financial pressure, and smaller states including Arizona, Minnesota and Maryland are struggling significantly. The gap between state and local government revenues and expenditures ballooned to over \$100 billion—a record—in the third quarter of 2008, according to the Bureau of Economic Analysis (see Chart 6).

Chart 6: State & Local Budget Shortfalls Worsen

State and local govt. expenditures less tax revenues, \$ bil



Because most state constitutions require their governments to eliminate deficits quickly, most have drawn down their reserve funds and have already begun to cut programs from healthcare to education. Cuts in state and local government outlays are sure to be a substantial drag on the economy in 2009 and 2010. Additional federal aid to state governments will fund existing payrolls and programs, providing a relatively quick boost. States that receive checks from the federal government will quickly pass the money to workers, vendors and program beneficiaries.

Arguments that state governments should be forced to cut spending because they have grown bloated and irresponsible are strained, at best. State government spending and employment are no larger today as a share of total economic activity and employment than they were three decades ago. The contention that helping states today will encourage more profligacy in the future also appears overdone. Apportioning federal aid to states based on their size, rather than on the size of their budget shortfalls, would substantially mitigate this concern.

Infrastructure spending

Increased infrastructure spending is also a particularly effective way to stimulate the economy included in the House stimulus plan. The plan includes \$160 billion in such spending over two years, with \$90 billion in more traditional infrastructure such as highway construction, public transit and waterways; and \$70 billion for a variety of energy, science and healthcare projects. The boost to GDP from every dollar spent on public infrastructure is large—an estimated \$1.59—and there is little doubt that the nation has underinvested in infrastructure for some time, to the increasing detriment of the nation's long-term growth prospects.

The argument against including infrastructure spending as a part of any fiscal stimulus plan is that it takes substantial time for the funds to flow into the broader economy.^{xii} Infrastructure projects can take years from planning to completion. Moreover, even if the funds are used to finance only projects that are well along in their planning—so-called shovel-ready projects—it is difficult to know just when projects will get under way and when the money will be spent. These are reasonable concerns in most recessions, but the economy's current problems appear likely to continue for some time. It is also reasonable to be worried that this spending will be used on pork-barrel projects chosen not for political rather than economic reasons. To address this worry, policymakers plan to put in place tight controls to monitor the spending.^{xiii}

Tax cuts

The House stimulus plan includes an estimated \$165 billion in tax cuts for individuals and \$110 billion in business tax cuts over two years. The largest part of the individual tax cut is a permanent payroll tax credit for workers, amounting to as much as \$1,000 for married couples. The earned income tax credit will also be expanded. Business tax provisions include bonus depreciation allowances and a five-year carry-back of net operating losses, which allows firms to convert losses into cash by claiming a refund of taxes paid in previous years.

The payroll tax credit will be particularly effective, as the benefit will go to lower income households that do not necessarily earn enough to pay income tax. These households are much more likely to spend any tax benefit they receive. There has also been concern that the tax benefit will do little to stimulate spending as most of it will be saved or used to meet debt payments. Fueling this concern is the apparently small lift to consumer spending that occurred last spring and early summer, when households received more than \$100 billion in tax rebates as part of last year's stimulus plan. The consumer spending impact of that earlier tax stimulus was larger than generally believed, however, as higher-income households who did not receive that rebate significantly curtailed their spending at the same time lower-income households spent their rebates.^{xiv} Total consumer spending rose only modestly as a result. Households are also more likely to spend the payroll tax benefit in the House stimulus plan, since it is a permanent reduction in their tax liability.

The temporary tax incentives to support business investment and hiring in the House stimulus plan do not provide a particularly large economic benefit. Accelerated depreciation by large businesses and expensing of investment by small businesses lowers the cost of capital only modestly and is not a critical factor in businesses' investment decisions, particularly when sales and pricing are so weak. The carry-back of business losses helps cash-strapped businesses, perhaps forestalling some cuts in investment and jobs, but it is unlikely to prompt much additional business expansion as it does not improve businesses' prospects. However, including business tax cuts in the stimulus plan is not very expensive, and they do distribute the benefits of the stimulus more widely. This is useful if it expands political support for the stimulus plan and thus accelerates its adoption. Moreover, the depreciation benefits included in last year's fiscal stimulus have expired, and extending them through 2010 would forestall a badly timed additional factor (however small) depressing business investment.

The national economic impact

Implementation of the House Democratic fiscal stimulus plan in early 2009 would provide a substantial benefit to the economy. The stimulus will not keep the downturn from becoming the worst since

the Great Depression, but it will ensure that the current episode remains a recession and not a depression.^{xv}

This assessment is based on simulations of the Moody's Economy.com macroeconomic model system. Assuming no added fiscal stimulus except for that provided by the automatic stabilizers already in place, real GDP would decline for eight straight quarters, falling by a stunning 4.2 % in 2009 and another 2.2% in 2010. This would be more severe than the early 1980s recessions, which, combined, were the worst since the Depression. Some 8 million jobs would be lost from the peak in employment at the start of 2008 to the bottom in employment by late 2010, pushing the unemployment rate to well over 11% by early 2011.

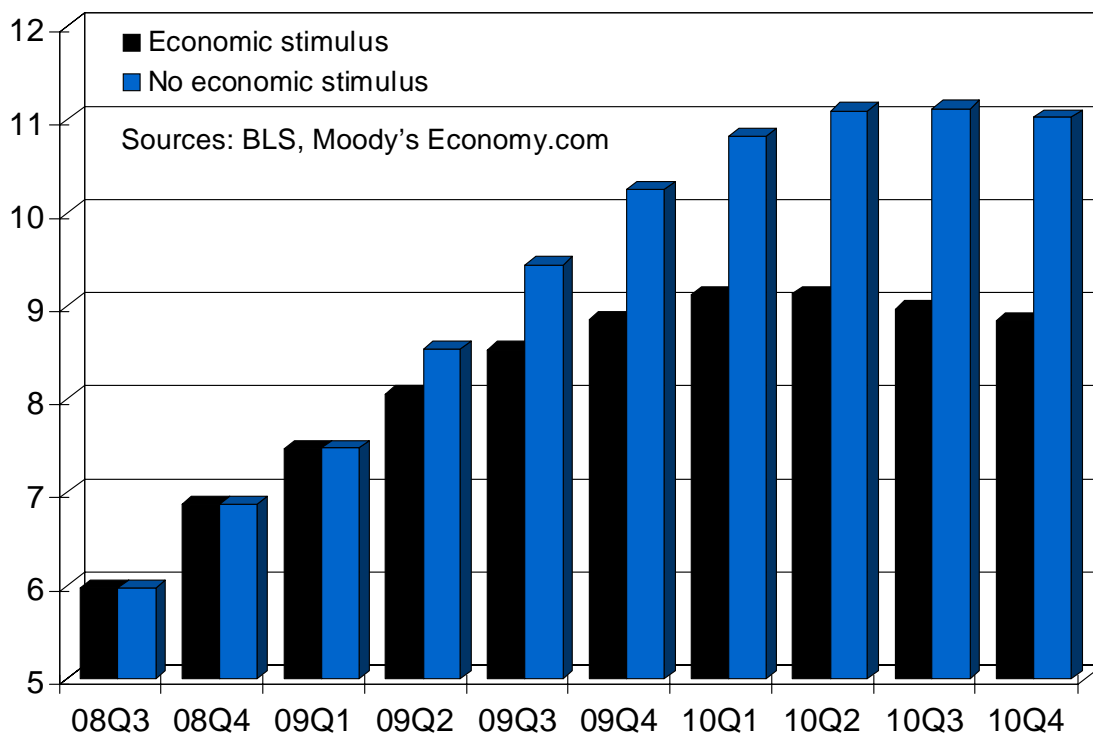
The House stimulus plan would not forestall a sizable decline of 2.3% in real GDP in 2009, but it would ensure that real GDP returns to its previous peak by the end of 2010 (see Table 3). The fiscal stimulus limits the peak-to-trough decline in jobs to some 5 million, and the unemployment rate peaks at nearly 9% in early 2010. With the stimulus, the unemployment rate falls back to its full employment rate of close to 5% by early 2013. Without the stimulus, the unemployment rate rises to well over 11% by mid-2010 and ends 2012 at a still-extraordinarily high near 8% (see Chart 7).

Table 3: The Economic Benefit of \$825 Billion House Democratic Stimulus Plan
Sources: BEA, BLS, Moody's Economy.com

	Real GDP, Billions 2000\$			Real GDP, % Change		
	No Stimulus	Stimulus	Difference	No Stimulus	Stimulus	Difference
2007	11,523.9	11,523.9	-	2.03	2.03	-
2008	11,662.0	11,662.0	-	1.20	1.20	-
2009	11,265.5	11,396.6	131.1	-3.40	-2.28	1.1
2010	11,108.2	11,575.0	466.7	-1.40	1.57	3.0
2011	11,356.6	12,074.5	717.9	2.24	4.32	2.1
2012	11,887.5	12,722.1	834.6	4.67	5.36	0.7

	Unemployment Rate			Payroll Employment, Millions		
	No Stimulus	Stimulus	Difference	No Stimulus	Stimulus	Difference
2007	4.64	4.64	-	137.6	137.6	-
2008	5.78	5.78	-	137.2	137.2	-
2009	9.02	8.23	(0.8)	132.9	133.8	0.9
2010	11.09	9.01	(2.1)	130.8	134.0	3.3
2011	10.53	7.84	(2.7)	132.0	137.1	5.1
2012	8.91	5.85	(3.1)	135.8	141.4	5.6

Chart 7: Fiscal Stimulus Makes a Significant Difference
Unemployment rate



Despite the added federal government borrowing necessary to finance the stimulus, it will not lead to excessively higher long-term interest rates. Considering the current demands on the Treasury, total bond issuance with the stimulus will approach a record \$2 trillion in fiscal 2009 and about the same in fiscal 2010, but private bond issuance will remain extraordinarily depressed during this period. Now moribund, the flow of corporate, emerging market and private-label mortgage and asset-backed debt will eventually revive; however, total credit market needs including the Treasury's issuance will remain modest, so that the 10-year Treasury yield would remain below 4% through 2010. It is currently near 2.5%. Other long-term rates, including corporate bond and mortgage rates, would rise even less as credit spreads narrowed, reflecting the stronger economy and reduced credit concerns.

Industry and regional economic impacts

All major industries benefit from the House Democratic stimulus plan. There are 4 million more jobs with than without the stimulus by the fourth quarter of 2010; equal to 3% of the job base. The largest boost to employment from the stimulus is in the construction trades, with employment in the industry 11% higher with the stimulus by the end of 2010 than without it (see Table 4). Manufacturing employment is also significantly lifted by almost 4%. Construction and manufacturing benefit substantially from the infrastructure spending included in the stimulus plan.

Table 4: Industry Employment Impact of \$825 Billion House Stimulus Plan
Difference in Payroll Employment in Stimulus vs. No Stimulus Scenarios
 Sources: BLS, Moody's Economy.com

	2010q4		2012q4	
	Thousands	%	Thousands	%
Total Nonagricultural	3,994	3.1	5,354	3.9
Natural Resources and Mining	26.1	3.5	7.8	1.0
Construction	669.9	11.1	802.8	11.9
Manufacturing - Total	450.8	3.7	589.7	4.7
Wholesale Trade	184.4	3.2	200.7	3.3
Retail Trade	524.2	3.7	752.0	5.1
Information	79.9	2.8	40.4	1.3
Financial Activities	274.4	3.6	307.9	3.8
Professional and Business Services	450.4	2.7	987.7	5.5
Education and Health Services	265.7	1.4	302.2	1.5
Leisure and Hospitality	435.2	3.4	746.8	5.5
Other Services	166.0	3.1	150.2	2.6
Government - Total	330.4	1.5	332.5	1.5
Utilities	10.7	2.0	4.1	0.7
Transportation and Warehousing	125.5	3.0	129.6	2.9

Employment in the retail and leisure and hospitality industries, including restaurants, is lifted by the stimulus. This comes in part directly from the individual tax cuts; but more importantly from the indirect impact of increased employment and incomes that the stimulus provides in the rest of the economy. It is also important to note that part-time employment is much higher in retailing than in other industries, increasing the measured employment impact of stimulus on the sector.

State and local government and education and health services benefit significantly from the stimulus plan, but the lift to employment is not as pronounced as in other sectors. Employment in these areas is approximately 1.5% higher with stimulus than without it, about half the percentage boost to employment experienced in the broad economy. Some of the aid to state and local governments in the stimulus will go to fund activities and thus jobs in the private sector.

All regions of the country will benefit from fiscal stimulus, but some will benefit more than others. The most significant boost is provided to states currently hit hardest by the housing and foreclosure crisis such as Florida and Nevada; to those that rely heavily on the financial services industry such as New York and New Jersey; and to those that depend on the auto industry such as Michigan and Ohio (see Table 5 and 6). Without fiscal stimulus, the job market would suffer significantly, inducing more foreclosures in those parts of the country where house prices have fallen most sharply, and undermining demand for big-ticket items such as vehicles and discretionary activities such as travel and tourism. Layoffs on Wall Street will also intensify as financial markets and institutions are hammered.

Table 5: State Employment Impact of \$825 Billion House Stimulus Plan*Difference in Payroll Employment in Stimulus vs. No Stimulus Scenarios*

Sources: BLS, Moody's Economy.com

	2010Q4		2012Q4	
	Thousands	%	Thousands	%
United States	3,994	3.05	5,354	3.89
Alaska	3.79	1.21	7.47	2.26
Alabama	37.09	1.88	58.39	2.80
Arkansas	20.33	1.73	30.04	2.44
Arizona	125.47	5.12	125.64	4.77
California	815.99	5.81	870.05	5.88
Colorado	70.47	3.04	98.01	4.00
Connecticut	45.96	2.87	65.50	3.93
District Of Columbia	27.19	3.91	23.54	3.27
Delaware	11.95	2.89	16.91	3.86
Florida	329.55	4.46	512.69	6.51
Georgia	143.11	3.59	188.38	4.44
Hawaii	19.19	3.27	21.90	3.53
Iowa	34.28	2.38	34.17	2.28
Idaho	15.40	2.42	22.31	3.32
Illinois	203.60	3.59	271.14	4.60
Indiana	109.43	3.85	149.33	5.05
Kansas	19.18	1.44	29.27	2.10
Kentucky	43.87	2.47	62.73	3.36
Louisiana	32.18	1.71	57.91	2.92
Massachusetts	94.56	3.05	119.84	3.71
Maryland	99.20	3.90	91.77	3.44
Maine	14.65	2.50	21.64	3.54
Michigan	158.19	4.14	235.79	6.00
Minnesota	91.90	3.46	128.14	4.59
Missouri	71.03	2.66	105.80	3.82
Mississippi	14.63	1.33	26.21	2.29
Montana	9.43	2.18	9.10	2.03
North Carolina	132.35	3.30	156.19	3.68
North Dakota	5.66	1.59	5.37	1.45
Nebraska	19.22	2.01	30.12	3.00
New Hampshire	22.83	3.61	28.35	4.25
New Jersey	171.39	4.50	213.52	5.40
New Mexico	16.38	1.95	29.41	3.28
Nevada	62.58	5.05	65.04	4.86
New York	390.77	4.79	523.23	6.20
Ohio	171.75	3.38	253.54	4.81
Oklahoma	26.94	1.74	32.27	1.99
Oregon	52.89	3.15	61.21	3.46
Pennsylvania	188.74	3.43	216.12	3.78
Rhode Island	15.20	3.37	21.95	4.64
South Carolina	37.20	1.95	55.41	2.77
South Dakota	7.18	1.77	8.43	1.99
Tennessee	63.69	2.38	93.41	3.35
Texas	301.45	2.85	349.13	3.10
Utah	22.49	1.86	28.21	2.22
Virginia	116.58	3.21	156.94	4.12
Vermont	7.17	2.46	10.18	3.37
Washington	94.29	3.24	100.28	3.25
Wisconsin	67.38	2.50	98.65	3.53
West Virginia	14.56	2.02	23.73	3.16
Wyoming	4.05	1.38	5.07	1.65

Table 6: State Unemployment Rate Impact of \$825 Billion House Stimulus Plan
Difference in Unemployment Rate in Stimulus vs. No Stimulus Scenarios
Sources: BLS, Moody's Economy.com

	2010Q4 Percentage Points	2012Q4 Percentage Points
United States	-2.2	-2.9
Alaska	-1.6	-2.8
Alabama	-2.1	-2.8
Arkansas	-2.0	-2.5
Arizona	-2.3	-3.3
California	-2.3	-3.7
Colorado	-1.9	-2.9
Connecticut	-1.9	-2.9
District Of Columbia	-1.9	-3.2
Delaware	-2.1	-2.7
Florida	-2.4	-3.4
Georgia	-1.8	-3.0
Hawaii	-1.8	-2.6
Iowa	-1.5	-2.0
Idaho	-1.9	-2.5
Illinois	-1.9	-3.2
Indiana	-2.0	-3.1
Kansas	-1.7	-2.5
Kentucky	-1.6	-3.0
Louisiana	-2.0	-2.4
Massachusetts	-1.9	-3.0
Maryland	-2.0	-2.7
Maine	-2.0	-3.0
Michigan	-2.5	-4.1
Minnesota	-1.8	-2.8
Missouri	-2.2	-3.2
Mississippi	-1.6	-3.1
Montana	-1.7	-2.5
North Carolina	-1.6	-2.9
North Dakota	-1.3	-1.8
Nebraska	-1.3	-1.9
New Hampshire	-2.0	-2.7
New Jersey	-2.1	-3.2
New Mexico	-1.6	-2.9
Nevada	-2.1	-3.5
New York	-2.3	-3.2
Ohio	-2.4	-3.6
Oklahoma	-1.6	-2.2
Oregon	-1.8	-2.9
Pennsylvania	-1.8	-2.8
Rhode Island	-2.2	-3.6
South Carolina	-1.7	-3.0
South Dakota	-1.3	-1.8
Tennessee	-2.0	-3.0
Texas	-1.6	-2.4
Utah	-1.6	-2.1
Virginia	-1.7	-2.7
Vermont	-1.8	-2.7
Washington	-2.1	-3.1
Wisconsin	-1.9	-2.7
West Virginia	-1.1	-2.3
Wyoming	-1.2	-2.4

The benefits of fiscal stimulus are less pronounced in the nation's agricultural and energy-producing regions. These areas are boosted by more infrastructure spending and the increased federal aid going to their state governments, but agricultural and energy prices will remain low, as they are determined in global markets and not materially impacted by the fiscal stimulus.

Conclusions

A long history of public policy mistakes has contributed to the financial and economic crisis. Although there will surely be more missteps, only through further aggressive and consistent government action will the U.S. avoid the first true depression since the 1930s.

In some respects, this crisis has its genesis in the long-held policy objective of promoting homeownership. Since the 1930s, federal housing policy has been geared toward increasing homeownership by heavily subsidizing home purchases. Although homeownership is a worthy goal, fostering stable and successful communities, it was carried too far, producing a bubble when millions of people became homeowners who probably should not have. These people are now losing their homes in foreclosure, undermining the viability of the financial system and precipitating the recession.

Perhaps even more important has been the lack of effective regulatory oversight. The deregulation that began during the Reagan administration fostered financial innovation and increased the flow of credit to businesses and households. But deregulatory fervor went too far during the housing boom. Mortgage lenders established corporate structures to avoid oversight, while at the Federal Reserve, the nation's most important financial regulator, there was a general distrust of regulation.

Despite all this, the panic that has roiled financial markets might have been avoided had policymakers responded more aggressively to the crisis early. Officials misjudged the severity of the situation and allowed themselves to be hung up by concerns about moral hazard and fairness. Considering the widespread loss of wealth, it is now clear they waited much too long to act, and their response to the financial failures in early September was inconsistent and ad hoc. Nationalizing Fannie Mae and Freddie Mac but letting Lehman Brothers fail confused and scared global investors. The shocking initial failure of Congress to pass the TARP legislation caused credit markets to freeze and sent stock and commodity prices crashing.

Now, a new policy consensus has been forged out of collapse. It is widely held that policymakers must take aggressive and consistent action to quell the panic and mitigate the economic fallout. An unfettered Federal Reserve will pump an unprecedented amount of liquidity into the financial system to unlock money and credit markets. The TARP fund will be deployed more broadly to shore up the still-fragile financial system, and another much larger and comprehensive foreclosure mitigation program is needed to forestall some of the millions of mortgage defaults that will occur otherwise. Finally, another very sizable economic stimulus plan is vitally needed. While there will be much more discussion about the size and mix of government spending increases and tax cuts to include, the House Democratic plan is a very good starting point. This is important, for while such debate is necessary it must be resolved quickly. Unless a stimulus plan is implemented beginning this spring, its effectiveness in lifting the economy will be significantly muted.

Fiscal stimulus does carry substantial costs. The federal budget deficit, which topped \$450 billion in fiscal year 2008, could reach \$2 trillion in fiscal 2009 and remain as high in 2010. Borrowing by the Treasury will top \$2 trillion this year. There will also be substantial long-term costs to extricate the government from the financial system. Unintended consequences of all the actions taken in such a short period will be considerable. These are problems for another day, however. The financial system is in disarray, and the economy's struggles are intensifying. Policymakers are working hard to quell the panic and shore up the economy; but considering the magnitude of the crisis and the continuing risks, policymakers must be aggressive. Whether from a natural disaster, a terrorist attack, or a financial calamity, crises end only with overwhelming government action.

ⁱ The House Democratic stimulus plan can be found at:

<http://appropriations.house.gov/pdf/RecoveryReport01-15-09.pdf>

ⁱⁱ Federal Reserve Chairman Bernanke has recently labeled the central bank's policy, which some would describe as quantitative easing, as "credit easing." For a more complete description of how the Fed is responding to the crisis, see "The Crisis and the Policy Response," a speech at the London School of Economics, January 13, 2009. <http://www.federalreserve.gov/newsevents/speech/bernanke20090113a.htm>

ⁱⁱⁱ A foreclosure mitigation plan that includes mortgage write-downs that I have proposed is the Homeownership Vesting Plan. See "Homeownership Vesting Plan," *Regional Financial Review*, December 2008.

^{iv} The London interbank offered rate is the interest rate at which major banks lend to one another.

^v Currency swings have been wild enough to prompt discussion of coordinated government intervention. This seems unlikely, in part because the currency moves until recently have been largely welcome. A stronger U.S. dollar means global investors still view the U.S. as a haven, which is important as the Treasury ramps up borrowing. Nations whose currencies are falling against the dollar are hopeful that this will reduce pressures on their key export industries.

^{vi} When all the GDP revisions are in, they are expected to show that real GDP also fell in the first quarter of 2008. Second quarter growth was supported by the tax rebate checks as part of the first fiscal stimulus package.

^{vii} State recessions are determined using a methodology similar to that used by the business cycle dating committee of the National Bureau of Economic Research for national recessions.

^{viii} For a more thorough discussion of the wealth effect, see "MEW Matters," Zandi and Pozsar, *Regional Financial Review*, April 2006. In this article, the housing wealth effect is estimated to be closer to 7 cents while the stock wealth effect is nearer to 4 cents.

^{ix} This was part of a failed effort to rein in the double-digit inflation of the period.

^x The model is a large-scale econometric model of the U.S. economy. A detailed description of the model is available upon request.

^{xi} The slump in consumer confidence after the recession in 1990-1991 may have been due in part to the first Bush administration's initial opposition to extending UI benefits for hundreds of thousands of workers. The administration ultimately acceded and benefits were extended, but only after confidence waned and the fledgling recovery sputtered.

^{xii} The economic bang for the buck estimates measure the change in GDP one year after spending actually occurs; they say nothing about how long it may take to cut a check to a builder for a new school.

^{xiii} Spending safeguards proposed in the House stimulus plan include requiring governors and mayors to certify that expenditures under their jurisdiction are appropriate; program managers will be listed online so the public can hold them accountable; and a special board will monitor spending.

^{xiv} This analysis is based on a calculation of personal saving rates by income group using data from the Federal Reserve Board's Flow of Funds and Survey of Consumer Finance. Saving rates for those in the top quintile of the income distribution, most of whom did not receive a rebate check, rose significantly during this period as these households were already responding to their declining net worth. Saving rates for those in the bottom four quintiles did not increase significantly during this period suggesting they spent most of the tax rebate they received.

^{xv} There are no formal definitions of recession and depression, but the current period will likely be considered a depression if the nation's jobless rate rises into the double digits for more than two quarters.