Congressional Budget Office

Testimony

Statement of
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Director

The State of the Economy and Issues in Developing an Effective Policy Response

before the
Committee on the Budget
U.S. House of Representatives

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Notes

The years referred to in describing the economic outlook are calendar years, and the years referred to in describing the budget outlook are federal fiscal years (which run from October 1 to September 30).

Many of the tables in the text use shaded vertical bars to indicate periods of recession. (A recession extends from the peak of a business cycle to its trough.) The shading for the current recession assumes that the trough will occur in the third quarter of 2009.

Chairman Spratt, Ranking Member Ryan, and Members of the Committee, thank you for inviting me to testify this morning on the state of the U.S. economy and measures aimed at improving it.

The economy is currently enduring a recession that started more than a year ago. The Congressional Budget Office (CBO) projects that, in the absence of any changes in fiscal policy, economic activity will contract more sharply in 2009 than it did in 2008 and the economy will grow at only a moderate pace in 2010. Under that projection, the shortfall in the nation's output relative to its potential would be the largest—in terms of both length and depth—since the Depression of the 1930s.[1] Lost output would represent nearly 7 percent of the estimated potential output in both 2009 and 2010—amounting to about $1 trillion in each year—and almost 5 percent of the potential in 2011 (see Figure 1). Payroll employment declined by 2-1/2 million jobs last year, and CBO projects that, without further policy actions, even more jobs will be lost this year. The unemployment rate increased by more than 2 percentage points last year, reaching 7.2 percent, and is projected to peak at above 9 percent early next year.

My testimony discusses the basis for the CBO's forecast released earlier this month and reviews the financial and nonfinancial news since that forecast was finalized. So far, the news has been generally consistent with the agency's expectations and does not alter the bleak outlook.

The expected severity and persistence of economic weakness have led the great majority of economists to think that both large-scale fiscal stimulus and significant new financial and monetary policies are needed to generate a strong recovery in the next few years. Fiscal stimulus policies are most effective if they are timely, are cost-effective, and do not exacerbate the nation's long-run fiscal imbalance. But designing effective stimulus on the scale that the Congress is considering—that is, satisfying all three of these criteria at once—is difficult.

Moreover, the macroeconomic impact of stimulus legislation is not the only consideration in designing it. Policymakers and members of the public clearly care also about who will be helped most directly by the legislation and what goods and services society will receive for the money involved. Constructing a stimulus package that both is effective in spurring economic activity and satisfies those broader objectives is even more challenging.

H.R. 1, the American Recovery and Reinvestment Act of 2009, would provide massive fiscal stimulus that includes a combination of government spending increases and revenue reductions. According to estimates by CBO and the Joint Committee on Taxation (JCT), that legislation would widen the federal budget deficit by $170 billion in fiscal year 2009, $356 billion in fiscal year 2010, $174 billion in fiscal year 2011, and by a total of $816 billion over the 2009–2019 period (excluding additional interest costs).

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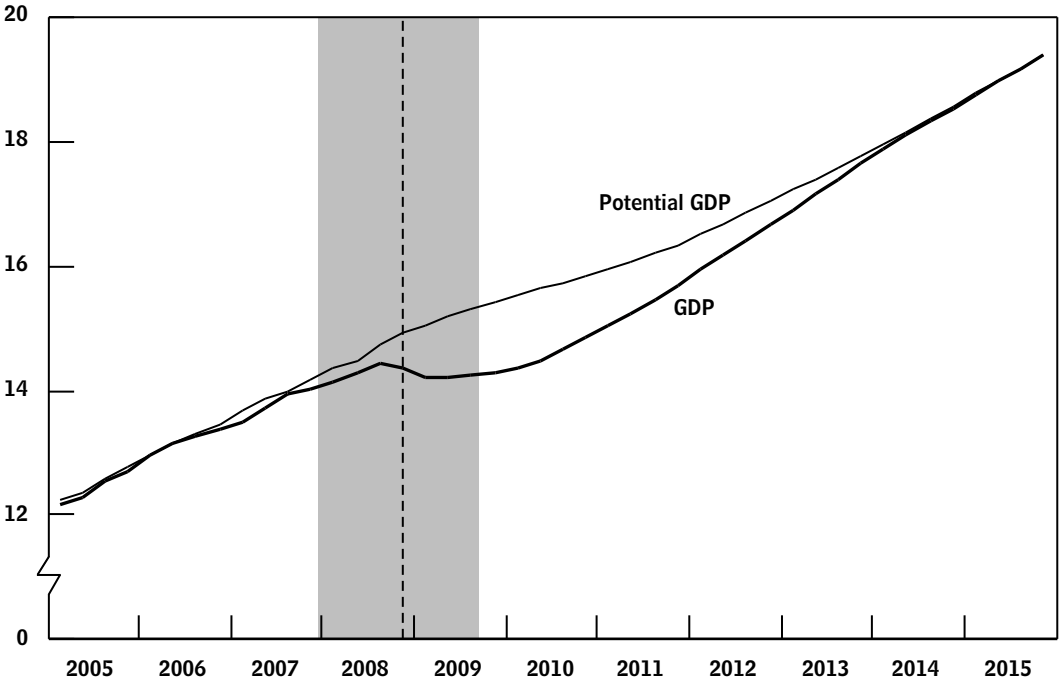
1. Potential output is a measure of the output that would be produced if the economy's productive resources were fully employed.

Figure 1.

Gross Domestic Product, 2005 to 2015

(Trillions of dollars)



Sources: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis.

Notes: Potential GDP is the estimated level of GDP that corresponds to a high level of resource—labor and capital—use.

GDP = gross domestic product.

Data are quarterly and are plotted through the fourth quarter of 2015.

In CBO's judgment, H.R. 1 would provide a substantial boost to economic activity over the next several years relative to what would occur without any legislation. With the legislation, CBO estimates, output would be between 1.3 percent and 3.6 percent higher at the end of this year, higher by a similar amount at the end of next year, and 0.5 percent to 1.4 percent higher at the end of 2011. That additional production would raise the demand for workers, turning some part-time jobs into full-time jobs and boosting the number of people employed. According to CBO's estimates, the number of jobs would be between 0.8 million and 2.1 million higher at the end of this year, 1.2 million to 3.6 million higher at the end of next year, and 0.7 million to 2.1 million higher at the end of 2011.

As I mentioned but will not focus on today, nearly all analysts think that another critical part of the policy response to the current crisis is additional vigorous financial and monetary policies. The broad pullback in risk taking and the failure or closing of a number of leading financial institutions have made credit more difficult and more expensive to obtain for many borrowers. Policy actions taken thus far have noticeably

improved conditions in some parts of the financial system, and a systemic collapse has been avoided. However, stabilizing financial markets and strengthening financial institutions so that they are supporting, rather than hindering, economic recovery remains an important challenge for policymakers.

Update on U.S. Economic Conditions

CBO's *The Budget and Economic Outlook* published at the beginning of this month was based on an economic forecast completed in mid-December.[2] Data released after those projections were finalized have been generally consistent with them. In the financial system, some important measures of the availability of credit have improved since mid-December, but risk spreads on most types of private lending (that is, the difference between the interest rate charged and a nearly risk-free rate) remain very elevated, and the financial support provided to Bank of America on January 16 reinforced widespread concerns about the health of financial institutions. Recent data on the wider economy confirm CBO's assessment that the economy is currently in sharp decline.

Financial Markets

Recent data signal that the improvement in financial market conditions that began in October has continued so far this winter. Risk spreads had jumped after the collapse of Lehman Brothers in September 2008. However, bold and innovative efforts by the Federal Reserve and the Treasury since October have helped to reduce markedly some spreads and to free up some credit markets. Still, for many borrowers, credit remains much more difficult and expensive to obtain today than in early 2007.

One important risk spread is that between the interest rates banks pay to borrow from each other (which can be measured by the three-month Libor, or London interbank offered rate) and market expectations of the federal funds rate (which can be measured by the average of the overnight index swap contract over the next three months). That indicator of the risk that banks will not repay their loans fell to 0.9 percentage points this month, roughly where it was before the failure of Lehman Brothers and well below its peak of 3.6 percentage points reached in October 2008 (see Figure 2). The volume of transactions in the market for interbank borrowing has picked up, and longer terms have been extended, indicating that the crisis of confidence among financial institutions has eased somewhat.

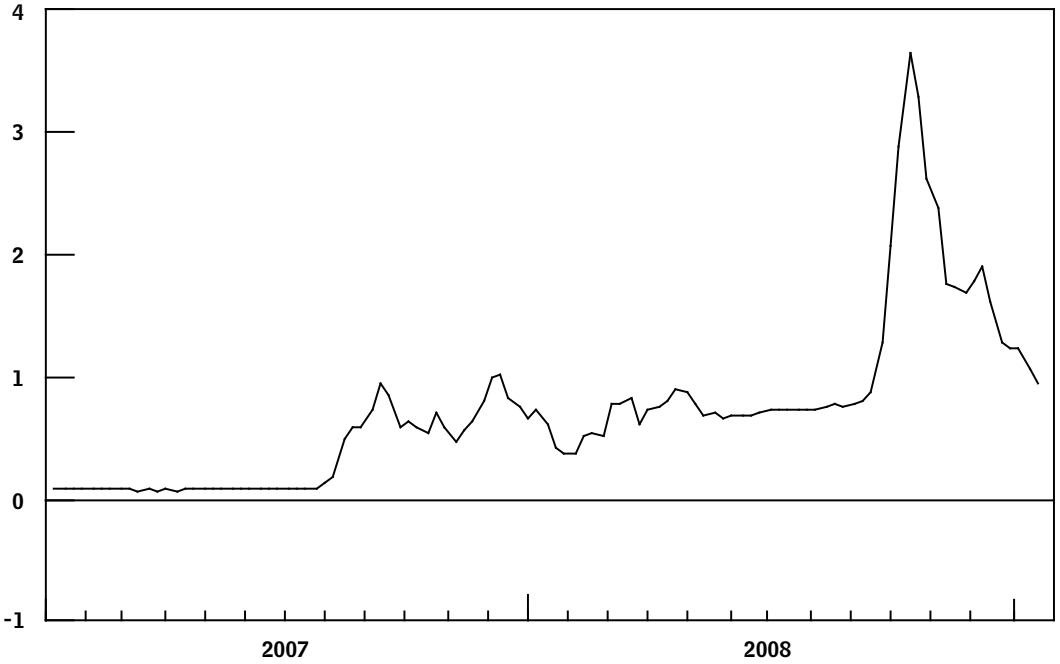
Conditions have also improved in the market for commercial paper (that is, short-term borrowing by financial and nonfinancial firms), as indicated by a lower spread between the interest rates for it and for three-month Treasury bills. The spreads for paper with higher credit quality have fallen substantially, although that improvement does not imply that private lending has returned to normal, because the Federal

2. Congressional Budget Office, *The Budget and Economic Outlook: Fiscal Years 2009 to 2019* (January 2009).

Figure 2.

The Risk Spread on Lending Between Banks, January 2007 to January 2009

(Percentage points)



Sources: Congressional Budget Office; Bloomberg.

Notes: A spread is the difference between two interest rates. One, the three-month Libor (London interbank offered rate), is the interest rate major banks offer to other banks for loans of that duration. The other is the average federal funds rate expected over a three-month period as measured by the overnight index swap contract.

Data are weekly and are plotted through January 16, 2009.

Reserve has provided extensive financial support to that market. The amount of financial commercial paper traded has mostly recovered after a sharp decline last fall (the amount of nonfinancial commercial paper has not changed much during the crisis), but the amount of outstanding asset-backed commercial paper has yet to recover from the sharp drop in September 2007.

In addition, the market for prime conforming home mortgages (ones eligible for purchase by Fannie Mae and Freddie Mac) is stabilizing—again, with substantial government intervention. The Federal Reserve announced in November 2008 that it would buy mortgage-backed securities, which it started doing in January 2009; it has already made purchases of $53 billion of a planned $500 billion. The Treasury is also buying mortgage-backed securities; as of December 31, 2008, it had made purchases of $71 billion. Interest rates on 30-year fixed-rate conforming mortgages have recently fallen to levels not seen in decades. One effect of the drop in rates can be seen in the Mortgage Bankers Association's Volume Index of Mortgage Loan Applications for

Refinancing. After running below 1,500 in October and November, and rising toward 4,000 in early December, that seasonally adjusted index surpassed 7,400 in early January.

Although financial conditions have improved significantly since September and October of last year, they remain strained. In particular, the flow of credit from banks remains constricted. A recent study showed that bank lending to large borrowers apart from preexisting lines of credit dropped sharply during the September to November period.[3] Moreover, the senior loan officer opinion survey conducted by the Federal Reserve in October 2008 shows that banks have continued to tighten lending standards for commercial and industrial loans, residential and commercial mortgages, and consumer loans.[4] Apart from the banking system, the amount of debt that was securitized fell markedly in the fourth quarter of 2008, and a market for lower-quality commercial paper no longer extends beyond a 90-day maturity.

Other Economic Data

The pace of the decline in labor market conditions in December was worse than CBO had anticipated in its forecast. The economy shed 524,000 jobs last month, reflecting declines in many industries. With downward revisions to the figures for previous months, the data now indicate that job losses totaled 1.9 million in the last four months of 2008. The number of hours worked each week, on average, by production and nonsupervisory workers fell to 33.3, an all-time low since the series compiled by the Bureau of Labor Statistics began in 1964.

Unemployment has risen as job losses have increased and job openings have fallen. The unemployment rate jumped to 7.2 percent in December, its highest level since January 1993 (see Figure 3). A year ago, the unemployment rate was 4.9 percent.

Activity in manufacturing and service industries deteriorated further in December, confirming that the economy is entrenched in recession. Industrial production that month was 8 percent lower than its level in December 2007 and 2 percent lower than its level in November 2008. Capacity utilization in manufacturing is at its lowest level (70.2 percent) since 1983.

The demand for housing continues to be feeble, and construction activity remains weak. In November and December, housing starts fell a little more than expected, but the data remain broadly consistent with CBO's forecast of a fourth-quarter fall in real (inflation-adjusted) residential investment at a 21 percent annual rate. According to

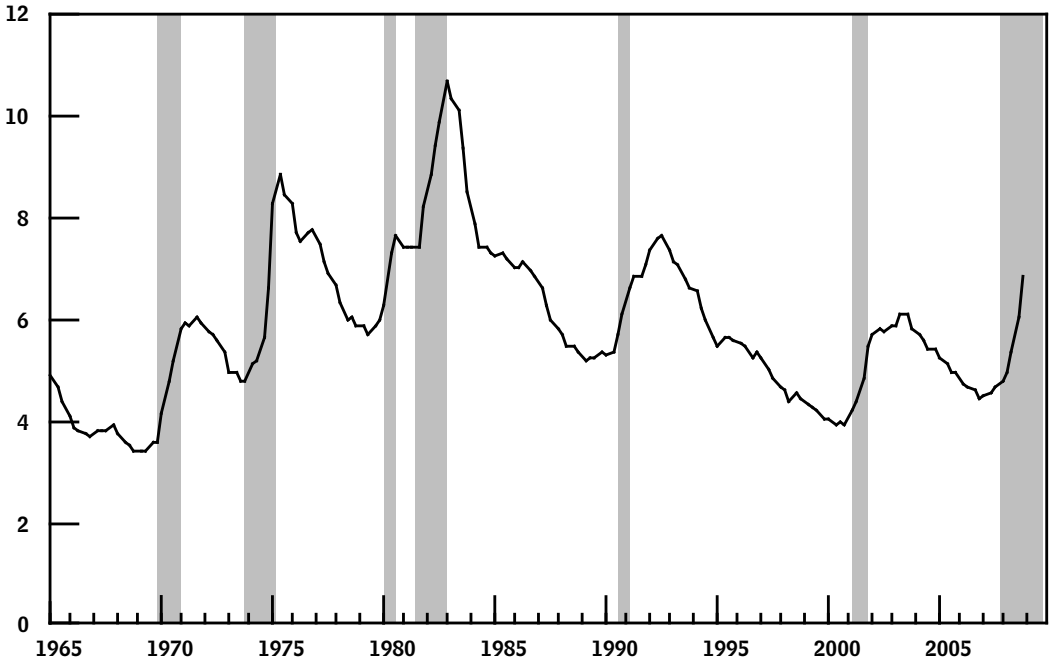
3. Victoria Ivanova and David Scharfstein, "Bank Lending During the Financial Crisis of 2008" (working paper, Harvard Business School, December 15, 2008).

4. Board of Governors of the Federal Reserve System, The October 2008 Senior Loan Officer Opinion Survey on Bank Lending Practices (November 2008).

Figure 3.

Unemployment Rate, 1965 to 2008

(Percent)



Sources: Congressional Budget Office; Department of Labor, Bureau of Labor Statistics.

Note: Data are quarterly and are plotted through the fourth quarter of 2008.

the January release of the Federal Housing Finance Agency's index, home prices were slightly weaker in November than CBO had expected, although sales of existing homes increased by 6.5 percent in December.

Business fixed investment appears to have fallen faster in the fourth quarter of 2008 than CBO projected. Newly released data on shipments of capital goods and vehicle purchases imply that real spending on equipment and software in the fourth quarter might have fallen at more than a 20 percent annual rate, roughly twice the decline in CBO's forecast. Nonresidential construction was reported to have risen faster than expected, driven by a surge in construction spending in the manufacturing and power generation industries. However, lower architectural billings point to an impending reversal in business construction.

The trade deficit fell in November, as imports declined more than exports did. The drop in imports stemmed in part from a drop in oil imports, but the volume of imports other than oil also declined, reflecting a drop in U.S. demand for foreign goods. The fall in U.S. exports reflected a significant slowdown in worldwide economic activity.

Consumer prices, according to recent data, have been weaker than CBO projected. Average consumer prices fell in both November and December, owing primarily to large drops in energy prices and, to a lesser extent, food prices. So-called core prices, which exclude the prices of food and energy items, were flat during the last two months of the year, suggesting that the momentum of inflation may have been stopped by the current economic weakness. In the final quarter of 2008, the core consumer price index for all urban consumers (CPI-U) increased at an annual rate of only 0.4 percent. The leveling of core prices appears to be broad-based and is likely to persist into 2009.

The Near-Term Outlook

CBO's forecast is based on the assumption that current laws and policies governing federal spending and taxes do not change. Thus, the forecast does not reflect the impact of any fiscal stimulus package or other elements of the new Administration's economic program. Instead, the forecast is an assessment of the economic outlook without such a package. However, the forecast does assume that the Federal Reserve and the Treasury, using resources already allocated, continue to act vigorously to stem the turmoil in financial markets. In particular, the forecast assumes that the Federal Reserve will keep the federal funds rate close to zero and will continue to supply very large amounts of credit to financial markets until financial conditions and the availability of credit return to normal. The forecast also assumes that the Federal Reserve will act to address any adverse developments that threaten the liquidity or stability of the financial system.

Under those assumptions, CBO anticipates that the current recession, which started in December 2007, will last until the second half of 2009, making it the longest recession since World War II. (The 1973–1974 and 1981–1982 recessions both lasted 16 months; if the current recession continues beyond midyear, it will have lasted at least 19 months.) It could also be the deepest recession during the postwar period in terms of the difference between actual and potential output. By CBO's estimates, economic output over the next two years will average 6.8 percent below its potential. The unemployment rate will increase to 9.2 percent by early 2010, up from a low of 4.4 percent at the end of 2006. The peak figure would still be below the 10.8 percent unemployment rate seen near the end of the 1981–1982 recession, because the unemployment rate was much lower at the start of this recession than it was before the downturn in the early 1980s. According to CBO's forecast, real gross domestic product (GDP) in 2009 will average 2.2 percent below its level in 2008 and in 2010 will average only 1.5 percent above the 2009 level (see Table 1).

The forecast anticipates low inflation for several reasons. The core rate of inflation tends to ease during and immediately after a recession, and excess capacity during a recession keeps wage and price increases low. In addition, the drop in energy prices since the middle of last year has put further downward pressure on inflation this year. For 2009, CBO anticipates that the CPI-U will be only 0.1 percent above its level in

Table 1.

CBO's Economic Projections for Calendar Years 2009 to 2019

	Estimated/ Actual	Forecast		Projected Annual Average	
	2008	2009	2010	2011-2014	2015-2019
			Year to Year (Percentage change)		
Nominal GDP (Billions of dollars)	14,304	14,241	14,591	18,211 [a]	22,500 [b]
Nominal GDP	3.6	-0.4	2.5	5.7	4.3
Real GDP	1.2	-2.2	1.5	4.0	2.4
GDP Price Index	2.4	1.8	0.9	1.6	1.9
PCE Price Index[c]	3.3	0.6	1.3	1.7	1.9
Core PCE Price Index[d]	2.2	1.5	0.9	1.7	1.9
Consumer Price Index[e]	3.8 [g]	0.1	1.7	2.1	2.2
Core Consumer Price Index[f]	2.3 [g]	1.6	1.3	2.0	2.2
			Calendar Year Average (Percent)		
Unemployment Rate	5.8 [g]	8.3	9.0	6.4	4.8
Three-Month Treasury Bill Rate	1.4 [g]	0.2	0.6	3.8	4.7
Ten-Year Treasury Note Rate	3.7 [g]	3.0	3.2	4.8	5.4
Tax Bases (Billions of dollars)					
Economic profits	1,533	1,384	1,413	1,952 [a]	2,187 [b]
Wages and salaries	6,548	6,551	6,740	8,344 [a]	10,324 [b]
Tax Bases (Percentage of GDP)					
Economic profits	10.7	9.7	9.7	10.5	10.1
Wages and salaries	45.8	46.0	46.2	45.8	45.9
			Fourth Quarter to Fourth Quarter (Percentage change)		
Nominal GDP	2.3	-0.5	3.9	5.7	4.3
Real GDP	-0.4	-1.5	3.0	4.0	2.3
GDP Price Index	2.6	1.1	0.8	1.7	1.9
PCE Price Index[c]	1.8	1.4	1.1	1.8	1.9
Core PCE Price Index[d]	2.1	1.2	0.9	1.8	1.9
Consumer Price Index[e]	1.5 [g]	0.6	1.7	2.1	2.2
Core Consumer Price Index[f]	2.0 [g]	1.5	1.3	2.1	2.2

Sources: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Department of Labor, Bureau of Labor Statistics; Federal Reserve Board.

Notes: GDP = gross domestic product; PCE = personal consumption expenditure.

a. Level in 2014.

b. Level in 2019.

c. The personal consumption expenditure chained price index.

d. The personal consumption expenditure chained price index excluding prices for food and energy.

e. The consumer price index for all urban consumers.

f. The consumer price index for all urban consumers excluding prices for food and energy.

g. Actual values for 2008.

2008; and for 2010, 1.7 percent higher than in 2009. Although core inflation edges down further in 2010 in CBO's forecast, energy prices are not expected to lessen inflation again next year.

The economic recovery is likely to be slow and protracted. Often, sharp contractions in economic activity are followed by rapid rebounds, but CBO's forecast anticipates that recovery will be slow in 2010 for four principal reasons: restrained lending to households and businesses as the damage to the financial system outweighs the sharp easing in monetary policy; a slow rebound in housing construction; the effect of large losses of wealth in weighing down households' spending; and the weakness of foreign demand.

Although financial conditions are expected to improve, the pace of improvement will not be quick. It will take time for financial institutions to recover from losses due to loan defaults, and lenders are likely to be more cautious following a severe financial crisis than following a typical (that is, less severe) recession. As a result, borrowers will continue to find the terms and availability of credit tight, which will hold back the growth of investment and consumption. The excess supply of vacant houses is expected to dampen the rebound in housing construction next year compared with usual cyclical rebounds. Spending also will be reduced as households continue to react to the dramatic declines in wealth of the past few years. Last, foreign economies will not provide an offsetting boost in demand: Although economic growth overseas remained strong during the housing collapse of 2007 and 2008, providing support to U.S. producers, those economies have now weakened considerably and are likely to restrain the U.S. recovery in 2010.

A major source of uncertainty in the outlook is the degree and persistence of turmoil in the financial system and the resulting impact on the future course of the economy. Many financial instruments and practices that have contributed to the financial crisis came into widespread use only in the past decade, and the scale of the problems and the worldwide linkages of financial markets are significantly different from what they were in previous episodes of financial stress in the United States. Furthermore, the scale and novelty of federal intervention, and uncertainty about the degree to which those interventions will affect the economic outlook, make it particularly difficult for analysts to use historical patterns to forecast the future.

The Housing Market

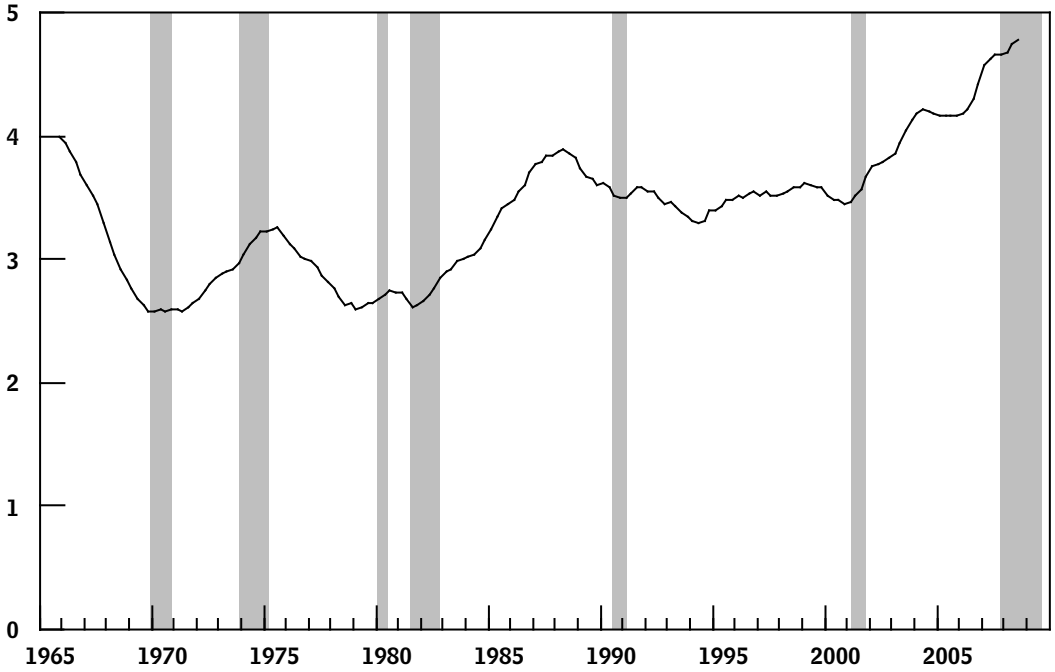
Although housing starts and house prices have fallen substantially, the inventory of unsold homes remains very high. The correction in the housing market will probably continue for some time.

The volume of home construction started to fall early in 2006 when the number of vacant units began to increase and real prices of houses, which had been rapidly increasing, suddenly reached a plateau. In 2007, national average house prices started to fall, and they have continued to drop, with the largest declines seen in California, Florida, Arizona, and Nevada. According to CBO's forecast, the national average price

Figure 4.

Housing Vacancy Rates, 1965 to 2008

(Percent)



Sources: Congressional Budget Office; Department of Commerce; Bureau of the Census.

Notes: Data show a four-quarter moving average of unused vacant units as a percentage of all housing units.

Data are quarterly and are plotted through the third quarter of 2008.

of a house will fall by an additional 14 percent between the third quarter of 2008 and the middle of 2010. The high level of inventories and the slow growth of disposable income will put further downward pressure on prices. Because consumer prices are expected to increase by less than 1 percent over that period, the real price of the average house will fall by a similar amount. Price changes in specific areas may be quite different, however.

The imbalance between the supply of and demand for housing persists, as reflected in unusually high vacancy rates and a low level of housing starts (see Figure 4). The percentage of owned (as opposed to rented) units that were vacant and for sale jumped from a 20-year average of 1.7 percent between 1985 and 2005 to 2.8 percent in the third quarter of 2008. Housing starts dropped from an annual rate of 2.1 million in the summer of 2005—a rate that supplied more than a sustainable number of units, given the underlying demographics—to 0.6 million at the end of 2008—a rate that implies a drawdown of the excess supply. CBO anticipates that the number of housing starts will not begin to turn up until late in 2009.

After rising for much of last year, mortgage rates—both for conforming loans and larger, or jumbo, loans—decreased late last year. Lower mortgage rates have spurred applications for mortgage refinancing, but the number of applications for loans to finance purchases of homes remains low.

Foreclosure rates are unusually high for all types of mortgages, and especially for subprime adjustable-rate mortgages (ARMs). From early 2006 to the first half of 2008, foreclosures of properties with subprime ARMs jumped from the 2 percent average that had prevailed for the previous eight years to 7 percent, although the percentage decreased slightly in the third quarter of 2008. Even though foreclosure rates for prime mortgages are not nearly as high as for subprime mortgages, the much larger number of prime mortgages means that the total number of foreclosures is being boosted considerably by problems in the prime segment of the market as well. Foreclosure rates are likely to remain high while house prices continue to fall and the economy remains in recession. A rising number of homeowners have negative equity in their homes (that is, they owe more on their mortgage than the market value of their house) and will not be able to refinance their mortgage.[5] Rising unemployment and resulting losses of income will also contribute to high foreclosure rates.

Financial Markets

After the turmoil that started in 2007, the financial system remains strained. Although some credit markets have started to improve, numerous signs of trouble remain, and most analysts doubt that the government's actions to date have been sufficient to put the system firmly on a path to recovery.

Financial markets have been under significant stress since August 2007, and the financial crisis deepened in the second half of 2008. In September 2008, in the face of an ongoing decline in house prices, a slowing of real economic activity, and negative news about the state of several large financial institutions, financial markets appeared on the verge of freezing up. For example, the perceived riskiness of short-term interbank loans surged, as indicated by a jump in the spread between the Libor and the three-month average of the expected federal funds rate to a record level of 3.6 percentage points on October 10.

The Federal Reserve has sought to reestablish the flow of funds in the economy, using a variety of mechanisms. First, the Federal Reserve used its usual tools for monetary policy: In successive steps, it cut its target for the federal funds rate from 5.25 percent in August 2007 to between zero and 0.25 percent in December 2008. Over the same period, it also lowered the discount rate on primary credit (which is the rate that

5. Calculations of the number of households with negative equity vary from 7.8 million to 11.7 million, amounting to a total of between $676 billion and $846 billion in outstanding loans. See Christopher Mayer and R. Glenn Hubbard, "House Prices, Interest Rates, and the Mortgage Market Meltdown" (working paper, Columbia Business School and the National Bureau of Economic Research, October 2008).

banks pay for borrowing from the Federal Reserve's discount window) from 5.75 percent to 0.5 percent.

Beyond those moves, the Federal Reserve has provided a great deal of additional support to credit markets using other tools. Some analysts describe the actions as a strategy of "quantitative easing," although Chairman Ben Bernanke has used the term "credit easing" to distinguish the Federal Reserve's policy from ones that have been pursued by some other countries with short-term interest rates close to zero. Specifically, the Federal Reserve has greatly extended its loan facilities, accepting as collateral assets that have been shunned by private lenders because of the heightened uncertainty, expanding the set of institutions that can borrow from the Federal Reserve, and extending the terms of its lending beyond the usual repayment periods. In addition, the Federal Reserve announced in late November plans to purchase, over the next few quarters, up to $100 billion in debt issued by Fannie Mae, Freddie Mac, and the Federal Home Loan Bank System and up to $500 billion in mortgage-backed securities guaranteed by Fannie Mae, Freddie Mac, and Ginnie Mae.[6] As of late January, the Federal Reserve had made purchases of $23 billion under the first program and $53 billion under the second program. Those actions have increased the value of the Federal Reserve's overall balance sheet from $892 billion in December 2007 to $2,121 billion in January 2009.

The Treasury also has intervened in the financial system, mostly to improve the solvency of financial institutions. Under the provisions of the Housing and Economic Recovery Act of 2008, the Federal Housing Finance Agency took control of Fannie Mae and Freddie Mac. In the fall of 2008, the Congress established the Troubled Asset Relief Program (TARP), which the Treasury had used to provide $293 billion to financial institutions and automakers as of January 22, 2009.

The stock market plummeted during late 2008 in reaction to both the dismal news about the financial state of some firms and the downturn in economic activity. The Standard & Poor's 500 index fell by almost 45 percent from its peak in October 2007 to December 2008. The huge decline in equity wealth—of around $6 trillion between the end of 2007 and the end of 2008—is an important factor holding down households' spending.

The financial crisis has spread around the world. The credit squeeze has caused the governments of several industrialized countries to nationalize major banks or provide significant financial support to them. Gloomy economic outlooks have also pummeled equity markets in both industrial and emerging economies. In 2007, there was hope that the vitality of emerging economies (such as those of China, India, and Brazil) would help moderate the effects of the burgeoning financial crisis in the industrial world. That hope was dampened in 2008 as those economies weakened under

6. Ginnie Mae, a government-owned corporation, guarantees securities backed by federally insured or guaranteed loans, mainly loans insured by the Federal Housing Administration or guaranteed by the Department of Veterans Affairs.

Table 2.

Changes in Consensus Forecasts of Growth of Real GDP in Foreign Economies

(Percent)

	Estimates for 2008			Estimates for 2009		
Region/Country	Survey in June 2008	Survey in Jan. 2009	Change	Survey in June 2008	Survey in Jan. 2009	Change
Eurozone	1.7	0.9	-0.8	1.4	-1.4	-2.8
Germany	2.2	1.3	-0.9	1.3	-2.0	-3.3
United Kingdom	1.7	0.8	-0.9	1.3	-2.2	-3.5
Canada	1.2	0.6	-0.6	2.1	-0.7	-2.8
Asia Pacific	4.8	4.0	-0.8	4.8	2.0	-2.8
China	10.1	9.2	-0.9	9.4	7.4	-2.0
India	7.6	6.7	-0.9	8.1	5.6	-2.5
Japan	1.3	0	-1.3	1.5	-1.7	-3.2
Latin America	4.4	4.3	-0.1	3.9	1.0	-2.9
Brazil	4.8	5.5	0.7	4.1	1.7	-2.4
Mexico	2.6	1.6	-1.0	3.0	-0.7	-3.7

Sources: Congressional Budget Office; Consensus Economics, Inc., *Consensus Forecasts.*

Notes: Real GDP = inflation-adjusted gross domestic product.

Consensus Forecasts is the average of about 20 private-sector forecasters for each country.

the weight of falling exports and reversals of capital inflows. Despite bold initiatives announced by policymakers—for example, the large cuts in interest rates by the European Central Bank and the Bank of England and the large fiscal stimulus measure announced by the Chinese government—the outlook for the growth of economic activity worldwide deteriorated rapidly in the second half of last year (see Table 2).

Personal Consumption Spending

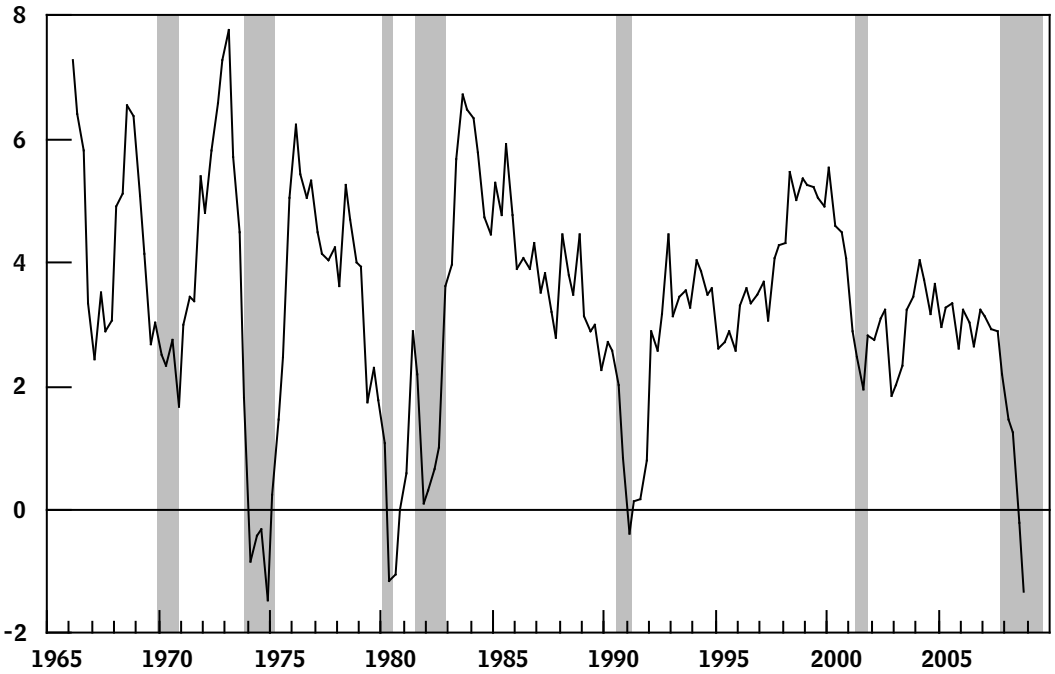
Personal consumption spending sagged during the second half of last year because of three main factors: declining employment, large decreases in wealth, and tighter credit conditions (see Figure 5). Looking ahead, CBO anticipates that a further rise in unemployment, lagged effects of declines in wealth, and tight consumer credit will continue to restrain consumption. Lower expenditures on petroleum imports, however, will make more funds available for other household purchases and will offset those effects somewhat. CBO projects that real consumption will be about 1.2 percent lower in 2009 than last year and will then be about 1.6 percent higher next year.

The looming increase in unemployment and its effect on real disposable income will significantly restrict consumption growth. Employment is projected to fall by more than 2 percent in 2009; and the number of hours worked, by more than 3 percent.

Figure 5.

Real Personal Consumption Expenditures, 1965 to 2008

(Percentage change from previous year)



Sources: Congressional Budget Office; Department of Commerce; Bureau of Economic Analysis.

Note: Data are quarterly and are plotted through the fourth quarter of 2008. The Congressional Budget Office estimated the value for the fourth quarter of 2008 on the basis of the published data for the first two months of the quarter.

Helped in part by falling energy prices, real disposable income is expected to edge up half a percent in 2009.

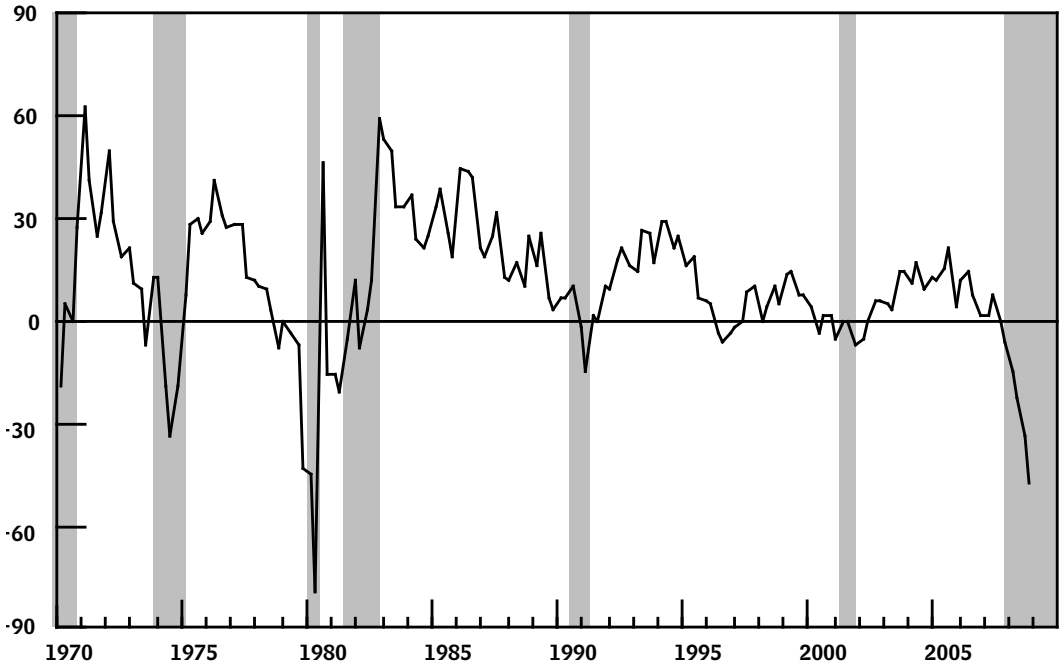
The decline in house prices and the drop in stock prices reduced the net worth of households by roughly 20 percent between the middle of 2007 and the fourth quarter of 2008. That decrease in wealth, in turn, is reducing spending on personal consumption. According to CBO's estimates, that wealth effect will subtract about three-quarters of a percentage point from the growth of average personal consumption spending in 2009, after having reduced the growth of spending by 1-1/4 percentage points in 2008.

The financial turmoil has also played a role in weakening households' spending by reducing the credit available to consumers, especially for those with limited borrowing opportunities or little collateral. The Federal Reserve's October 2008 survey of senior loan officers reports that banks are tightening lending standards on credit cards and other consumer loans. The drop in banks' willingness to make consumer loans is the sharpest since 1980 (see Figure 6). By CBO's calculations, tight credit will subtract about half a percentage point from consumption growth in 2009.

Figure 6.

Change in Banks' Willingness to Lend, 1970 to 2008

(Net percentage)



Sources: Congressional Budget Office; Federal Reserve Board.

Notes: The figure shows the net percentage of respondents reporting a greater willingness to make consumer installment loans over the past three months in the Federal Reserve Board's *Senior Loan Officer Opinion Survey on Bank Lending Practices*.

Data are quarterly and are plotted through the fourth quarter of 2008.

Comparison with Other Forecasts

Unlike CBO's forecast, most others, including most in the *Blue Chip* consensus (the average of about 50 forecasts by private-sector economists), incorporate an assumption of substantial additional fiscal stimulus.[7] CBO's exclusion of fiscal stimulus from its base forecast follows its long-standing practice of including only existing programs in its baseline estimates. Probably for that reason, CBO's forecast for both 2009 and 2010 is among the most pessimistic.

For 2009, CBO projects a greater decline in real GDP than the *Blue Chip* consensus, but not quite as large a decline as the average of the 10 most pessimistic *Blue Chip* forecasts in the January survey (see Table 3). Many forecasts within the *Blue Chip* are expecting slower growth in the CPI-U in 2009—with a consensus estimate of overall inflation of -0.4 percent, slightly lower than CBO's estimate of 0.1 percent. The

7. In the January survey, participants in the *Blue Chip* consensus reported that they expected fiscal stimulus of $778 billion.

Table 3.

Comparison of Economic Forecasts by CBO and the *Blue Chip* Consensus for Calendar Years 2009 and 2010

	Estimated/Actual	Forecast	
	2008	2009	2010
	Year to Year (Percentage change)		
Nominal GDP			
CBO	3.6	-0.4	2.5
Blue Chip Consensus	3.4	-0.2	3.9
Blue Chip High 10	3.7	0.8	5.3
Blue Chip Low 10	3.1	-1.5	2.5
Real GDP			
CBO	1.2	-2.2	1.5
Blue Chip Consensus	1.2	-1.6	2.4
Blue Chip High 10	1.3	-0.8	3.4
Blue Chip Low 10	1.1	-2.3	1.4
GDP Price Index			
CBO	2.4	1.8	0.9
Blue Chip Consensus	2.2	1.3	1.5
Blue Chip High 10	2.4	2.2	2.6
Blue Chip Low 10	2.0	0.1	0.6
Consumer Price Index[a, b]			
CBO	3.8	0.1	1.7
Blue Chip Consensus	3.8	-0.4	2.0
Blue Chip High 10	3.8	1.1	3.0
Blue Chip Low 10	3.8	-1.6	0.8
	Calendar Year Average (Percent)		
Unemployment Rate[b]			
CBO	5.8	8.3	9.0
Blue Chip Consensus	5.8	8.0	8.2
Blue Chip High 10	5.8	8.4	9.0
Blue Chip Low 10	5.8	7.6	7.3
Three-Month Treasury Bill Rate[b]			
CBO	1.4	0.2	0.6
Blue Chip Consensus	1.4	0.3	1.4
Blue Chip High 10	1.4	0.6	2.2
Blue Chip Low 10	1.4	0.1	0.5
Ten-Year Treasury Note Rate[b]			
CBO	3.7	3.0	3.2
Blue Chip Consensus	3.7	2.7	3.6
Blue Chip High 10	3.7	3.4	4.4
Blue Chip Low 10	3.7	2.1	2.7

Sources: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Department of Labor, Bureau of Labor Statistics; Federal Reserve Board; and Aspen Publishers, Inc., *Blue Chip Economic Indicators* (January 10, 2009).

Notes: GDP = gross domestic product.

The *Blue Chip* consensus is the average of about 50 forecasts by private-sector economists.

a. The consumer price index for all urban consumers.

b. Actual values for 2008.

Blue Chip consensus expects an unemployment rate of 8.0 percent this year, which is a quarter of a percentage point lower than CBO's projection. CBO expects slightly lower interest rates for 3-month Treasury bills but slightly higher rates for 10-year Treasury notes than do the survey participants.

For 2010, CBO's forecast of 1.5 percent growth of real GDP is in the lower end of the range of forecasts: The average of the 10 most pessimistic forecasts is 1.4 percent. CBO's projection of the unemployment rate is among the higher estimates, coinciding with the top 10 forecasts' average of 9.0 percent. Those projections by CBO reflect the slower-than-average recovery anticipated in the agency's forecast. CBO's forecast for inflation, however, is close to the consensus, which is 2.0 percent for 2010.

Issues in Designing an Effective Policy Response

Fiscal stimulus aims to boost economic activity primarily by increasing short-term demand for goods and services. Recessions are characterized by a self-reinforcing cycle: Firms cut production and employment because of a falloff in sales; the resulting reduction in income and confidence among workers leads them to reduce purchases; and sales fall further. Stimulative policies may dampen that cycle by increasing spending by households, businesses, or governments.

Even without any stimulus, market forces would eventually bring about a recovery from the recession. In the meantime, however, many workers would become unemployed, and much capacity of equipment and buildings would be unused. Idle workers and factories represent a waste of the economy's ability to produce goods and services that cannot be recaptured. Stimulative policies, if well designed, could hasten the economy's recovery and reduce the overall loss of output during the recession.

In normal economic times, economists tend to emphasize the long-term benefits of saving. The more saving by households and firms, the more that can be invested in productive capital, increasing the economy's capacity to produce in the future. In recessionary times, however, increased consumption is needed to boost the economy and employ unused resources. Some of the most effective policies for providing short-term stimulus may provide little aid to long-term economic growth—and may even slow it—if made permanent. At the same time, many policies that promote long-term growth may provide little short-term stimulus.

Policy Responses Already Under Way

Some policies are already helping to offset the current economic weakness.

Monetary Policy. The Federal Reserve has acted aggressively to mitigate the effects of the financial crisis and, more generally, to boost economy activity. Those goals are related because the financial crisis affects the broader economy through its impact on

the availability of credit, and the performance of the economy affects financial markets through various channels, including borrowers' ability to repay loans.

Most economists believe that, in a normal recession, monetary policy is the best way to stimulate the economy because the Federal Reserve is able to apply and remove monetary stimulus more nimbly than the Congress and the President can alter legislation controlling fiscal policy. However, with the financial sector in such turmoil and short-term risk-free interest rates already so low, the Federal Reserve's ability to provide sufficient support for economic activity may be limited. To be sure, the Federal Reserve is vigorously developing and applying other tools beyond reductions in interest rates to ensure an ample supply of credit in the economy. Those tools will help limit the spread of further damage from the financial sector to the rest of the economy, but they may not be adequate by themselves to generate a strong trajectory of economic recovery. With economic activity faltering so badly, people might not want to borrow without greater confidence that they will earn enough in the future to pay back what they have borrowed, and firms might not want to borrow without greater confidence that they can sell what they make. Moreover, the Federal Reserve has no substantial experience using the new tools, so choosing which tools to use and how aggressively to use them will be challenging.

By the same token, fiscal policy alone is unlikely to put the economy on a strong upward trajectory. Broad-based stimulus will have only a limited effect on the health of the financial system, and in the absence of further monetary and financial policies, the difficulty of borrowing would still weigh on economic activity. Moreover, policymakers in this country have no experience with fiscal stimulus on the scale currently being contemplated. In the Depression, periodic efforts to stimulate the economy with fiscal policy were not consistently pursued owing to worries about the federal budget deficit and were largely offset by fiscal tightening by state and local governments. In addition, the entire apparatus of government was smaller at that time, and there was no tradition of activist fiscal policy, making it more difficult to implement fiscal policies on a large scale.

Automatic Stabilizers. Even in the absence of legislation, fiscal policy provides some offset to economic weakness through so-called automatic stabilizers. Federal tax liabilities fall in recessions, dampening the decline in households' real after-tax spending power. In addition, spending on some programs, such as those providing unemployment insurance and the Supplemental Nutrition Assistance Program (formerly known as the Food Stamp program), automatically increases during recessions.

Those induced changes in the federal budget tend to smooth out economic cycles. Automatic stabilizers have the advantage that they operate precisely when the economy is weak without the need for legislative action. The magnitude of those automatic stabilizers can be only roughly estimated, but in CBO's forecast, roughly

$250 billion of the increase in the deficit (about 2 percent of GDP) between 2007 and 2009 appears to be attributable to them.[8]

In contrast, spending by state and local governments will only mildly ease the downturn in economic activity. In response to lower-than-expected revenues and requirements for balanced budgets, those governments are cutting back their spending on goods and services, and CBO's forecast assumes essentially no real growth in that spending this year. Also, some states and localities are considering higher taxes or fees. Total state and local deficits (including both the operating and capital accounts) will increase, but the change in the total deficits will be small relative to the recession-induced change in the federal deficit.

Discretionary Fiscal Actions to Date. Some legislative action to offset economic weakness has been taken already in this recession. In February 2008, the Congress passed and the President signed the Economic Stimulus Act of 2008, which provided $94 billion in tax rebates to households and reduced taxes on businesses by an estimated $29 billion in 2008. (Additional tax savings of $16 billion by households and $27 billion by firms are projected for 2009.) The length of time that unemployed workers could receive benefits was extended twice, resulting in an estimated $4 billion in additional outlays in 2008 and a projected $18 billion in 2009 (under an assumption that the extensions expire as scheduled in March 2009).

In addition, fiscal action has been taken to alleviate the financial crisis. Legislation in 2008 created the TARP, which authorized the Treasury to spend up to $700 billion in support of financial institutions: $350 billion was initially released, and recently, the Congress allowed the release of the rest of the funds. Included in the TARP's transactions are loans to automakers totaling $17.4 billion. Although those funds do not add directly to aggregate demand, they boost the economy indirectly through their effect on financial markets and the operations of automakers.

Judging the Appropriate Amount of Fiscal Stimulus

As the Congress considers fiscal stimulus legislation, one important issue is the appropriate amount of stimulus. One way to calibrate the amount of stimulus is to attempt, through fiscal policies, to completely close the gap between actual and potential output. Given the size of the gap currently projected by CBO, achieving that goal would require stimulus on an overwhelming scale.

Such a huge package could be undesirable for at least three reasons. First, in addition to fiscal stimulus, monetary and financial policies will probably be used to help bolster the broader economy. Second, increases in near-term budget deficits can have

8. That calculation differs from CBO's estimate of the budgetary effects of all economic factors, primarily because it reflects only the direct effects of the business cycle, as measured by the deviation of GDP and unemployment from their potential levels. It does not include budgetary effects from changes in inflation and interest rates. See Congressional Budget Office, *The Budget and Economic Outlook: Fiscal Years 2008 to 2018* (January 2008), Box C-1.

negative consequences for the long-term fiscal imbalance, especially if some of the stimulative policies become permanent (even if they were initially intended to be temporary). Finally, it may be difficult in practical terms to scale up stimulus spending and tax cuts to an arbitrarily high level.

A related question in considering fiscal stimulus arises from the uncertainty about the economic outlook. CBO sees an extended economic downturn as the most likely scenario, but the economy could turn out to be either considerably stronger or considerably weaker than projected. CBO's forecast is intended to fall roughly in the middle of probable economic outcomes, so outcomes that are better or worse than the forecast are approximately equally likely.

However, the symmetry of possible outcomes around that forecast does not imply symmetry in determining the size of any fiscal stimulus. If the economy performs much better than CBO projects, the Federal Reserve would be able to dampen economic activity by increasing interest rates. However, if the economy experiences a more protracted or deeper recession than currently projected, the previously noted limitations on the Federal Reserve's ability to boost the economy would be especially damaging. Thus, under current conditions, many economists view uncertainty about the economic outlook as an argument in favor of additional fiscal stimulus.

Criteria for Effective Fiscal Stimulus

Three key criteria for judging the macroeconomic impact of fiscal stimulus proposals are their timing, cost-effectiveness, and consistency with long-term fiscal objectives. In addition, policymakers care about who benefits from policies and what types of goods and services are produced. Constructing fiscal proposals that satisfy all of those criteria can be difficult.

Timing. The economic effects of fiscal stimulus should occur during the period of economic weakness, all else being equal. When, as now, a recession is clearly already under way and aggregate demand is declining, it is better if stimulus affects spending quickly in order to mitigate further deterioration in the economy. Different types of policies may differ greatly in how quickly they can be implemented.

Because most periods of economic weakness are fairly short-lived, it is generally preferable that stimulus policies be short-lived. Currently, however, CBO projects that economic output will remain significantly below its potential for several more years, so policies that provide stimulus for an extended period of time may be appropriate. Indeed, a fiscal stimulus that ends before the economy has started to regain its footing runs the risk of exacerbating economic weakness when the stimulus ends.

Cost-Effectiveness. Other things being equal, it is preferable for stimulus to provide the greatest possible economic impact per dollar of budgetary cost. Stimulus may be generated through policies that boost the spending by households, businesses, or government, and the cost-effectiveness of stimulus varies within those categories of policies as well as across them. The same dollar amount of spending increases or tax

reductions can have significantly different effects on overall demand depending on how the money is provided and to whom. Policies that accelerate costs that the government will ultimately incur in any event (for example, delaying tax liabilities or accelerating planned spending) may be particularly cost-effective; they have little net cost but might provide economic benefits.

Households. In general, tax cuts or increases in government transfer payments increase household demand by providing consumers with additional spending power. The bigger the portion of that additional income that consumers choose to spend instead of save, the more stimulus there will be. But households do not predictably spend a fixed proportion of the extra income left in their hands when taxes are reduced or transfers are increased. Rather, a household's propensity to consume appears to vary with its income, with its members' expectations of what will happen to that income over the longer term, and with other factors that are not well understood.

Households are particularly likely to spend a greater share of a temporary reduction in taxes or additional transfer payments if they are "credit constrained" (that is, if they have borrowed as much money as creditors will lend them). Because such households would probably borrow additional money if given the opportunity, they are unlikely to save additional income. Lower-income households are more likely to be in such circumstances and more likely to have a higher propensity to spend. Therefore, policies aimed at lower-income households tend to have greater stimulative effects. For similar reasons, policies that increase current income are likely to have greater effects than those that affect only future income, because the expectation of higher income in the future will not change consumption by credit-constrained households.

Economic theory suggests that households are likely to spend more of a permanent increase in after-tax income than a temporary one. For example, in response to a temporary tax cut, households that are not credit constrained may choose to increase spending by a small amount over many years, but a tax cut that is expected to be permanent enables households to increase spending by the full amount in every year; that greater impact on spending comes at a much higher budgetary cost, though.

Businesses. The fiscal policy mechanism generally used to stimulate business demand is to reduce the costs associated with investment in what is termed new plant and equipment. Reducing taxes on the income from new investment increases the return on investment and, therefore, firms' willingness to make capital outlays. Increasing the after-tax income of businesses without changing the incentive for new investment typically does not induce more hiring or production because production normally depends on the ability to sell output.[9] But increasing business income can stimulate investment or other spending by firms that have difficulty obtaining outside financ-

9. Higher after-tax income for businesses should, in principle, lead to increased spending by households that own stock, either because stock prices go up or because the households get more income in the form of dividends. However, that increase in consumption is likely to be spread over a long time and thus, in any given period, to be small relative to the federal tax cost.

ing. That effect tends to be relatively more important for smaller firms than for larger ones, because smaller firms often have a harder time accessing such financing, and it is likely to be more important in the current financial crisis, when outside financing has become more limited or more expensive for many firms.

Tax cuts for business investment may be more effective in boosting short-term demand if they are temporary than if they are permanent. Firms may view them as one-time opportunities for tax savings, which may induce the firms to accelerate some of their future plans to invest. They might not take that step if they knew that the tax advantage would remain in place and be available to them later.

Government. Another type of stimulus involves government purchases of goods and services (such as infrastructure spending). That type of spending affects demand directly because the government purchases goods and services from the private sector. The effect that such purchases have on the economy is different from the effect of transfer payments, which increase demand only when the people receiving them increase their consumption by purchasing goods and services themselves.

For federal purchases, the primary issue in cost-effectiveness is the speed with which spending can be adjusted. Some kinds of expenditures can be undertaken much more rapidly than others. In general, changes that involve very large increases in outlays for particular programs or particular sectors of the economy—and especially changes that require setting up new programs or that rely on new technologies—will result in slower spending.

Aid to State and Local Governments. A related stimulus policy involves federal grants to state and local governments. As a transfer between governments, such a grant does not in itself increase the demand for goods and services, but it generally affects the spending and taxing decisions of the government receiving it, which in turn could stimulate the economy. The federal subsidy would increase demand if it generated an increase (or prevented a decrease) in state and local spending or if it triggered a tax reduction (or avoided a tax increase) at the state or local level. By contrast, if federal assistance merely provided fiscal relief by paying for spending that would have occurred anyway and did not affect state and local revenues in the short run, then it would provide no economic stimulus. Aid to states and localities is likely to provide more stimulus when those governments are under budgetary pressure to cut spending or raise taxes, as is the case for many jurisdictions now.

Consistency with Long-Run Fiscal Objectives. Because fiscal stimulus boosts aggregate demand through increases in government spending or reductions in taxes, such policies raise budget deficits in the short term. That effect is desirable for fiscal stimulus because it reflects the increased demand being delivered to the economy. Contemporaneous changes elsewhere in the budget—tax increases or cuts in spending—designed to offset those short-term effects on deficits would serve to reduce or eliminate the stimulative effect.

Those higher deficits, however, tend to slow economic growth in the long term if they are allowed to persist, because they tend to reduce capital accumulation and the upward trend in the economy's capacity to produce. Given the large projected shortfall of federal revenues relative to outlays in the medium term and long term, any policy designed to provide short-term fiscal stimulus will have to reckon with long-term consequences. Increases in spending and decreases in taxes that are intended to be temporary may be difficult to reverse later. Moreover, even if taxes and noninterest spending return to their baseline levels, the additional debt service from the period of larger deficits will—unless offset by greater fiscal discipline later—crowd out some amount of future growth.[10]

In addition to their negative long-term effects, policies that substantially worsen the fiscal outlook can have negative short-term effects as well. The nation currently benefits greatly from the fact that investors worldwide tend to flee to U.S. Treasury securities in times of trouble. That tendency provides an important advantage in times of crisis, helping to increase liquidity and decrease interest rates. If investors lost confidence in the government's debt as a safe haven because of deterioration in the long-term fiscal outlook, the U.S. economy would lose that advantage, perhaps permanently.

Other Considerations. Other considerations are also relevant for decisions on fiscal stimulus. One such consideration is who would be helped the most by the policies being considered. Different sorts of spending increases and tax reductions would provide direct benefits to different people and firms receiving the additional outlays or paying less taxes, in addition to the indirect effects of a stronger economy that would benefit many people and firms.

Another consideration is what types of additional goods and services society would produce and enjoy the benefits of. The economist John Maynard Keynes said that hiding money in coal mines and letting private enterprises pay to dig it out would be better than doing nothing in a recession because it would give workers income they could spend on things they needed. But it clearly makes more sense to have something intrinsically desirable at the end of the day. Thus, fiscal policies will be, and should be, judged not just for their effectiveness as stimulus but also for the other goals that they accomplish.

A wide variety of spending and tax provisions have been advocated as part of fiscal stimulus. Several considerations suggest that a combination of provisions would be most advisable. First, the timing of the stimulative effects varies among provisions. Some policy changes, such as temporary tax cuts, may provide stimulus relatively

10. See Congressional Budget Office, *The Long-Term Budget Outlook* (December 2007). Some evidence also suggests that policies that expand the nation's long-term fiscal imbalance could push up interest rates and thereby offset some of the incipient stimulus. See Douglas W. Elmendorf and David Reifschneider, "Short-Run Effects of Fiscal Policy with Forward-Looking Financial Markets," *National Tax Journal*, vol. 55, no. 3 (September 2002), pp. 357–386.

quickly but have effects that fade quickly as well. Other policy shifts, such as increases in infrastructure spending, may affect the economy only slowly but have salutary effects on demand that continue over several years. Therefore, it may be easier to rely on a mix of policies to design a stimulus package that has a relatively steady effect on the economy during the recession and fades slowly as the economy recovers. Second, many stimulus policies offer diminishing returns. For example, there may be a limited number of infrastructure projects that are ready to go in the next year, and aid to states and localities beyond some level may be used to bolster rainy-day funds or reduce borrowing, rather than leading to the increased spending or reduced taxation that feeds demand. Third, the precise stimulative effects of any individual policy changes are highly uncertain. Consequently, a mix of policies carries less uncertainty about the overall effects on the economy. Fourth, aside from their stimulative effect, various policies may have a differential impact on different groups and produce different sorts of additional output. A stimulus plan with a mix of policies may therefore spread benefits more evenly among the population and accomplish a wider variety of goals beyond stimulating the economy.

Stimulus Legislation in the House

H.R. 1, the American Recovery and Reinvestment Act of 2009, would specify appropriations for a wide range of federal programs and would increase or extend certain benefits payable under the Medicaid, unemployment compensation, and nutrition assistance programs. The legislation also would reduce individual and corporate income tax collections and make a variety of other changes to tax laws.

Assuming enactment in mid-February, CBO estimates that the bill would increase outlays by $93 billion during the remaining several months of fiscal year 2009, by $225 billion in fiscal year 2010 (which begins on October 1), by $159 billion in 2011, and by a total of $604 billion over the 2009–2019 period. That spending includes outlays from discretionary appropriations in Division A of the bill and direct spending resulting from Division B.

In addition, CBO and JCT estimate that enacting the provisions in Division B would reduce revenues by $76 billion in fiscal year 2009, by $131 billion in fiscal year 2010, and by a net of $212 billion over the 2009–2019 period.

In combining the spending and revenue effects of H.R. 1, CBO estimates that enacting the bill would increase federal budget deficits by $170 billion over the remaining months of fiscal year 2009, by $356 billion in 2010, by $174 billion in 2011, and by $816 billion over the 2009–2019 period.

The budgetary impact of H.R. 1 stems primarily from three types of transactions:

- Direct payments to individuals (for example, unemployment compensation or refundable tax credits), which would generally occur fairly rapidly—during fiscal years 2009, 2010, and 2011;

- Reductions in federal taxes, which would have most of their effects on revenues in fiscal years 2009 and 2010; and

- Purchases of goods and services, either directly by the federal government or indirectly in the form of grants to state and local governments. Many of those involve construction or investment activity that would take several years to complete.

In estimating outlays for that third category, CBO expects that the rate of spending in 2009 for many programs funded in H.R. 1 would be considerably lower than historical rates of spending for a full year of funding because the bill would be enacted almost halfway into the fiscal year. Therefore, it would not be appropriate in most cases to use the full-year rates that CBO typically employs for appropriations enacted near the start of the fiscal year. Moreover, under H.R. 1, some programs would receive funding significantly above (double, triple, or more) the amounts provided for existing or similar programs in recent years. Time and again, in all types of federal programs, a noticeable lag has occurred between sharp increases in budget authority and increases in outlays. On the basis of such experiences, CBO expects that federal agencies, along with states and other recipients of that funding, would find it difficult to properly manage and oversee a rapid expansion of programs to expend the added funds as quickly as they expend the resources provided for their existing activities.

Lags in spending stem in part from the need to draft plans, solicit bids, enter into contracts, and conduct regulatory or environmental reviews. Spending can be further delayed because some activities are by their nature seasonal. For example, major school repairs are generally scheduled during the summer to avoid disrupting classes, and construction and highway work are difficult to carry out during the winter months in many parts of the country.

Brand new programs pose additional challenges. Developing procedures and criteria, issuing the necessary regulations, and reviewing plans and proposals would make distributing money quickly even more difficult—as can be seen, for example, in the lack of any disbursements to date under the loan programs established for automakers last summer to invest in producing energy-efficient vehicles. Throughout the federal government, spending for new programs has frequently been slower than expected and rarely been faster.

A more detailed discussion of the budgetary impact of H.R. 1 can be found in CBO's cost estimate for that legislation, completed on January 26, 2009.

Macroeconomic Impacts of the House Plan

The macroeconomic impacts of any economic stimulus program are very uncertain. In part, that uncertainty reflects the fact that large fiscal stimulus is rarely attempted, so it is difficult to distinguish among alternative estimates of how large the macroeconomic effects will be. Some economists remain skeptical that there would be any significant effects, while others expect very large ones.

Table 4.

Estimated Macroeconomic Impacts of H.R. 1, the American Recovery and Reinvestment Act, Fourth Quarters of 2009, 2010, and 2011

	2009	2010	2011
GDP (Percentage from baseline)			
Low	1.3	1.2	0.5
High	3.6	3.5	1.4
GDP Gap[a] (Percent)			
Baseline	-7.4	-6.3	-4.1
Low estimate of effect of plan	-6.2	-5.2	-3.6
High estimate of effect of plan	-4.1	-3.1	-2.7
Unemployment Rate (Percent)			
Baseline	9.0	8.7	7.5
Low estimate of effect of plan	8.6	8.1	7.1
High estimate of effect of plan	7.9	6.8	6.4
Employment (Millions of jobs)			
Baseline	141.6	143.3	146.2
Low estimate of effect of plan	142.4	144.6	146.9
High estimate of effect of plan	143.7	147.0	148.3

Source: Congressional Budget Office.

a. The GDP gap is the difference between gross domestic product and CBO's estimate of potential GDP. Potential GDP is the estimated level of GDP that corresponds to a high level of resource—labor and capitol—use. A negative gap indicates a high unemployment rate and low utilization rates for plant and equipment.

CBO has developed a range of estimates of the effects of H.R. 1 on GDP and employment that encompasses a majority of economists' views. According to these estimates, implementing H.R. 1 would increase GDP relative to the agency's baseline forecast by between 1.2 percent and 3.5 percent by the fourth quarter of 2010 and increase employment at that point in time by 1.2 million to 3.6 million jobs (see Table 4). In that quarter, the unemployment rate would be 0.7 percentage points to 1.9 percentage points lower than the baseline forecast of 8.7 percent. The effects of the legislation would diminish rapidly after 2010. By the end of 2011, H.R. 1 would increase GDP by 0.5 percent to 1.4 percent, would raise employment by 0.7 million to 2.1 million jobs, and would lower the unemployment rate by 0.4 percentage points to 1.1 percentage points.

Effects of Various Provisions on GDP

Although H.R. 1 has numerous detailed provisions, the macroeconomic effects can be illustrated by breaking the provisions into six categories. Table 5 shows the range of estimated effects on the economy—the multiplier effects—of a one-time increase of a

Table 5.

The Cumulative Impact on GDP over Several Quarters of Various Policy Options

	High	Low
Purchases of Goods and Services by the Federal Government	2.5	1.0
Transfers to State and Local Governments for Infrastructure	2.5	1.0
Transfers to State and Local Governments Not for Infrastructure	1.9	0.7
Transfers to Persons	2.2	0.8
Temporary (Well-targeted) Tax Cuts for People	1.7	0.5
Tax-Loss Carryback	0.4	0

Source: Congressional Budget Office.

Note: For each option, the figures shown are a range of "multipliers," that is, the cumulative change in gross domestic product over several quarters, measured in dollars, per dollar of additional spending or reduction in taxes.

dollar of additional spending or a dollar reduction in taxes. The numbers indicate the cumulative impact over several quarters. For example, a one-time increase in federal purchases of goods and services of $1.00 in the second quarter of this year would raise GDP after several quarters by $1.00 to $2.50. The effects would not be permanent, however. Over time, they would diminish to zero as resources became more fully employed. In fact, the effects might be mildly negative in the long run because additional national debt would tend to reduce national saving, potential GDP, and the sustainable level of real per capita personal consumption spending.

As shown in the first two categories in the table, direct purchases of goods and services by governments, including infrastructure investment, tend to have relatively large effects on GDP. Because infrastructure spending takes time to occur, that category of spending would not boost outlays or GDP much this year, but it would probably provide significant stimulus from 2010 through 2012.

Grants to state and local governments (such as increased assistance for education) might not increase state spending for the programs designated in the grants but, instead, might free up funds that the states would otherwise spend on those programs. States could use those extra funds in a variety of ways: direct purchases of goods and services (or smaller cuts in such purchases), tax cuts (or smaller tax increases), transfer payments, or reduced borrowing. The impact of grants therefore would depend on how states used them.

Transfers to persons (for example, unemployment insurance and nutrition assistance) would also have a significant impact on GDP. Because a large amount of such spending can occur quickly, transfers would have a significant impact on GDP by early 2010. Transfers also include refundable tax credits, which have an impact similar to that of a temporary tax cut.

A dollar's worth of a temporary tax cut would have a smaller effect on GDP than a dollar's worth of direct purchases or transfers, because a significant share of the tax cut would probably be saved. The nonbusiness tax cuts in H.R. 1 would reduce revenues much more in calendar year 2010 than in calendar year 2009 because much of the reduction in taxes would be realized by households when they filed their returns in 2010.

The provision for a tax-loss carryback results in a large, up-front cost to the government, but the effect of that provision on business spending would probably be small. Therefore, the effect of the provision on revenues would be significantly greater than its effect on the economy.

Estimating the Effects on the Unemployment Rate and Employment

CBO derived its estimates of the effect of H.R. 1 on employment from the estimated effect on GDP. Historical evidence suggests that GDP growth that is 1 percentage point faster over a year (relative to a baseline forecast) will cause the unemployment rate to decline by a little more than half a percentage point (relative to a corresponding baseline forecast). The fall in the unemployment rate leads more people to enter the labor force and seek jobs and fewer to drop out. Therefore, employment rises both from a decline in the number of unemployed workers and a decline in the number of people out of the labor force. In addition, some workers otherwise working part-time move to full-time status.

The change in employment relative to the change in GDP in CBO's estimates is small compared with that in most industry-based studies of stimulus. By the end of 2010, CBO estimates, about $140,000 of additional GDP leads to one additional person employed. This relationship is similar to that indicated by other macroeconomic studies of stimulus proposals.[11] However, a number of other sorts of studies imply more employment per dollar of additional GDP. Because the macroeconomic studies use the historical relationship between changes in economic growth and changes in jobs, they incorporate a number of broad economic effects, including cyclical changes in productivity and the average number of hours worked per employee, as well as other relevant factors.

11. Two recent macroeconomic studies are Christina Romer and Jared Bernstein, "The Job Impact of the American Recovery and Reinvestment Plan" (January 9, 2009), and Macroeconomic Advisers, "Fiscal Stimulus to the Rescue" (January 19, 2009).