

## The Impact of the Financial Crisis on Older Americans<sup>1</sup>

The economic downturn under way is likely to be the worst since World War II. Its impact on many older Americans could be devastating. The federal government must concentrate above all on reviving the economy and the flow of credit. However, its stimulus program should include measures to help older and younger Americans in need, such as a further extension of unemployment insurance, grants to the states to forestall cuts in social programs, and an effective program to reduce mortgage indebtedness.

### Introduction

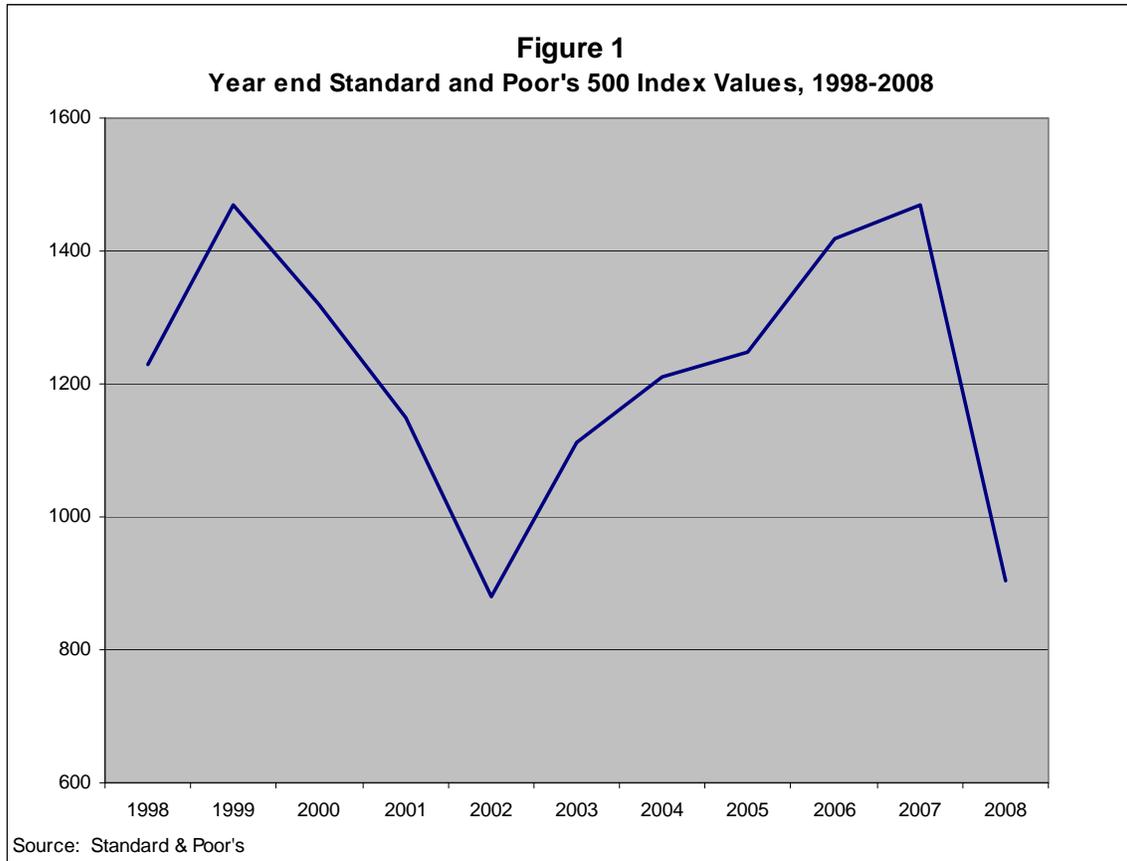
The financial crisis that has engulfed the U.S. economy is the worst since the Great Depression. It threatens the stability not only of the financial system but of the economy as a whole, and the economy and finances of the rest of the world. Americans are fearful of what may happen to their jobs, savings, and investments. The stock market has fallen by about 40 percent since the beginning of 2008, mostly since early September; credit is both more expensive and scarce; and the National Bureau of Economic Research has ruled that the economy has been in a recession since December 2007 (see figure 1).

As the appendix explains, the crisis has its roots in the huge and unsustainable run-up in housing prices in 2000–2006 and in the rapid expansion of the subprime mortgage market that fed the rise.<sup>2</sup> Serious problems with the market for subprime mortgages became evident in the summer of 2006. The crisis in the subprime market has now spread well beyond the mortgage market. It has engulfed not just financial institutions with a heavy exposure to the mortgage market but other commercial and investment banks.

This paper aims to explain the effects of the crisis on the U.S. economy, and most important, on older Americans. It also addresses the question of what government policies should be adopted to mitigate the effects of recession and financial turmoil and to prevent any reoccurrence. The appendix, which is somewhat more technical than the rest of the paper, addresses the origins of the crisis and its impact on the financial system.

### Transmission Channels of the Crisis

The impact of the financial crisis is transmitted to the real economy (i.e., the level of production of goods and services and the level of employment) through five channels: the wealth effect, the confidence effect, the credit channel effect, the effect on the finances of state and local governments, and the multiplier effect. In a typical recession, the wealth and multiplier effects between them are the major transmission channels. The role of the credit channel will magnify the effects of the current crisis.



### The Wealth Effect

The net worth (assets minus liabilities) of American households, including nonprofit institutions, is estimated to have reached \$56.5 trillion—about four times gross domestic product (GDP)—as of the end of the third quarter of 2008 (Federal Reserve Board 2008). Having risen from \$39.2 trillion at end-2002 to \$62.2 trillion at end-2007 mainly on the strength of rising house prices and share values, household net worth was pulled down during the first three quarters of 2008 by declining asset values. The decline in stock market values since end-September is estimated to have wiped a further \$2½ trillion from households' net worth.<sup>3</sup> Falling house prices may have reduced households' net worth by another \$1 trillion. The average household does not have large stock market holdings, either through direct ownership of equities or mutual fund holdings. However, the huge decline in

stock prices has undoubtedly hit many households preparing for retirement hard (see "Consequences for Older Americans" below).

Declines in household wealth reduce consumption because households need to save more to make up for their lost wealth and thereby maintain their standard of living in future years. The combined effect of stock market and house price declines since September might be a contraction in consumption of the order of \$160 billion or 1.2 percent of GDP annually.<sup>4</sup>

### The Confidence Effect

The financial crisis has unnerved financial institutions, but it has also shaken the confidence of the man or woman on the street. Ordinary Americans, particularly those who have lost a great deal on the stock market, whose credit rating is not solid, or whose

employment is not secure—and perhaps one-quarter of the population falls in one or more of these categories—are worried. They will be very cautious about fresh financial commitments. Concerns over the future may also magnify the depressing effect of the loss of wealth on consumption.

#### **The Credit Channel Effect**

Credit is normally harder to obtain during a cyclical downturn than it is in more prosperous times. The financial crisis will magnify this effect manyfold. The terms of commercial and automobile loans have already tightened up, and credit card issuers are tightening their standards, reducing their repayment periods, and increasing the minimum payments they require. Home equity loans will become harder to obtain for borrowers who are less than fully creditworthy. The difficulty of obtaining credit and its increased cost will further depress business activity and consumption.

#### **The Effect on State and Local Governments**

The crisis is already adding to the strain on state and local government finances caused by the economic slowdown that began in late 2007. Fiscal policy at the state level is pro-cyclical, because all the states except Vermont are required to target a balanced budget, usually the current budget, regardless of the state of the economy.<sup>5</sup> In consequence, unless they can tap into rainy-day funds or cash reserves, the states must reduce expenditure (or raise taxes) because tax revenues decline in a recession. Cities and municipalities that depend on property tax revenue will also be affected, albeit with a lag. Even capital expenditure may be affected if the states experience difficulties borrowing.

Many states have already made or announced cuts in social expenditure,

including spending on Medicaid and other programs for the elderly (as well as K–12 education, colleges and universities, and other health care). Many are either cutting or furloughing staff or freezing hiring (Center for Budget and Policy Priorities 2008). From the viewpoint of the economy as a whole, these measures are the opposite of what is needed. The depressed economic environment will actually increase the need for expenditures in a number of areas: law enforcement (crime tends to increase), health care (the coverage provided by private employers will shrink), and unemployment insurance.

#### **The Multiplier Effect**

Declines in spending by businesses and households affected by scarce credit, falling exports in the face of a weakening global economy, sagging confidence, and a huge decline in financial wealth will ripple through the economy. Businesses will reduce their payrolls and investments. Their employees and suppliers will in turn cut their spending, and so on. This multiplier effect might magnify the wealth effect by as much as two over a year's time, leading to a drop in total consumption of 2 to 3 percent of GDP—and the shock caused by the decline in wealth is not the only shock to hit the economy.

#### **Consequences for Older Americans**

The economic consequences of the crisis for older Americans will depend, as they do for younger Americans, on its impact on their net worth, employment prospects, and financial obligations. Every American household has a balance sheet, even if it does not formally draw one up. The assets side includes financial assets such as stock and mutual fund holdings and bank deposits, as well as real assets, with the

only one of consequence typically being a principal residence, or perhaps that and a secondary residence. Economists add a third item to household assets, known as human capital, which is an estimate of a household's future earning power.<sup>6</sup> On the liabilities side, the main items are mortgage and nonmortgage debt.

As a household ages, the relative importance of its financial holdings tends to increase and that of its human capital declines, because in normal times the value of financial assets tends to grow over time, while the number of remaining years of employability declines. Consequently, the impact of the crisis on the value of financial assets and net financial wealth will typically be more important the older a household's members are. A decline in earnings for someone nearing retirement can be a serious matter, but the impact is at least limited by the shortness of his or her remaining career. This said, Americans who lose their jobs in their mid-50s will suffer a painful decline in their standard of living if they do not quickly find another job at comparable pay.

### **Employment and the Labor Market**

Americans aged 55 and older depend on employment for a substantial part of their income. Two-thirds of the population aged 55 to 64 is either working or actively seeking work (Bureau of the Census 2008). The labor force participation rate is about one in six for the 65 and older age group. Compared with their peers in other industrialized countries, older Americans are far more likely to keep working. The unemployment rate for older Americans is lower than the rate for the labor force as a whole, but it has been rising more rapidly. Over the year ending in November, 2008, the unemployment rate for those aged 55 and older has increased from 3.0 to 4.7 percent (a 57 percent increase), while the rate for all

workers has increased from 4.7 to 6.7 percent (a 43 percent increase) (Bureau of Labor Statistics, 2008b, Table A-10). The share of older workers who have become too discouraged to seek employment is less than the share of younger workers, but their number almost tripled over the 12 months ending in November 2008, increasing from 45,000 to 121,000 (BLS, 2008b, Table A-38).

Financial turmoil and its aftermath will affect the employment and earnings of older Americans through several channels: They may be employed disproportionately in industries that are more severely affected than others are; they may be disproportionately represented in vulnerable employment categories like part-time work; and they may be vulnerable to either age discrimination or a belief, well-founded or not, that they can be replaced by less well-paid employees. On the other hand, seniority may work in their favor if it reduces the chances they will be laid off.

To start with the sectoral impact, workers aged 55 and older are overrepresented in public administration, education and health, and other services, and underrepresented in construction, leisure and hospitality, and information technology (IT) (see table 1). Public administration and education are normally relatively recession-proof, although at least 20 state governments are reducing their workforces through hiring freezes and other means (Center on Budget and Policy Priorities 2008). Workers aged 65 and over are overrepresented in retail trade (subsumed in "Trade" in table 1), part of the services sector that has been hit particularly hard by employment losses over the past few months, but this group numbers less than 800,000. On the whole, older workers are not particularly vulnerable by virtue of the industries in which they work.

**Table 1**  
**Employed Persons by Industry, 2007**

	Mining	Construction	Manufacture	Trade	Transport	IT	Finance	Professional & Business	Education & Health	Leisure & Hospitality	Other services	Public Administration	Total
Total (16 and over) in millions	0.7	11.9	16.3	20.9	7.7	3.6	10.5	15.6	30.7	12.4	7.0	6.7	144.0
55 years and over in millions	0.1	1.5	2.8	3.6	1.4	0.5	2.0	2.8	6.2	1.3	1.4	1.4	25.1
Percentage of older workers in total	16.8	12.9	17.4	17.2	18.4	14.2	19.0	17.9	20.2	10.4	20.7	20.5	17.1

Source: Bureau of Labor Statistics (2008a).

Part-time workers account for about 16 percent of the total labor force. Part-time workers aged 55 and over number about 6.0 million and account for 21 percent of all workers in that age group, and so are overrepresented (Bureau of Labor Statistics 2008b), but some 5.1 million of them claim to be working part time because they choose to, leaving about one-half million who work part time only because they cannot find a full-time job, (and 400,000 who are not at work). However, a worsening labor market and declining household assets could push up the numbers of older Americans working fewer hours than they would like.

Older Americans might not lose their jobs in disproportionate numbers as a result of a severe recession, but the consequences of job loss could be more serious than for younger workers. Ages 55 to 65 are the peak earning years for most workers—years during which many need to boost the balances in their individual retirement accounts (IRAs) and 401(k) plans substantially to supplement Social Security. When older

unemployed workers do find a new job, their pay is very often reduced.<sup>7</sup>

In addition to the risk of lower compensation, older workers generally take longer than younger workers to find a job. The average duration of unemployment among job seekers aged 55 years and over was 25.9 weeks in October 2008, up from 22.3 weeks just a month earlier, and more than 4 weeks longer than for job seekers aged 25 to 54 (Rix 2008). Self-employment might be an attractive option to older workers who have lost a job, but scarce credit will make it harder for those so inclined to borrow the capital to start a small business.

The combination of job loss and the impact of the severe stock market decline on IRA and 401(k) plan balances could be devastating for many older Americans, particularly if it entailed the loss of health insurance. Workers who are members of defined benefit (DB) plans have some shelter from the storm, although the loss of a job could mean a substantial cut in the benefit paid at retirement age. In addition, the recent

volatility of the stock market may lead more employers to freeze their DB plans and may make some plans insolvent.

### **Financial Asset Values**

As of December 10, 2008, the vertiginous fall in stock prices has left the S&P 500 less than 10 percent above its trough of the last cycle, reached in September 2002. Assets in defined contribution plans and IRAs lost about 30 percent of their value in real terms, or about \$2.6 trillion, between September 30, 2007, and December 10, 2008.<sup>8</sup> Corporate bond yields have risen because of investors' heightened concerns over corporate solvency, while yields on Treasuries (long-term federal government bonds) have fallen to 50-year lows because they are perceived as a safe haven. In part because of the Federal Reserve's efforts to lower short-term interest rates, rates on three-month Treasury bills fell to zero in early December 2008. Falling stock prices and Treasury bond yields have serious consequences for older Americans.

The average values of the balances of IRA and 401(k) plans vary significantly with both the income and the age of the plan member or account holder. The median holding of working families with either a 401(k) plan or an IRA/Keogh as of 2004 was estimated to be \$34,000. The median holding of working families whose head was age 60 to 64, however, was \$85,400. Average amounts were \$114,900 and \$245,800, respectively (Mackenzie and Wu 2008, table A.9). Data from the 2004 Survey of Consumer Finances imply that while the ratio of riskier stock holdings to less risky interest-bearing assets falls as investors age, older households still remain substantially exposed to the stock market. Holdings of equities by households with a head aged 60 to 69 (\$2.5 trillion) were more than twice as large as holdings of interest-bearing

securities, certificates of deposit, and savings accounts (\$1.2 trillion). For households with a head aged 70 to 79, holdings of equities were \$1.6 trillion and interest-bearing assets \$0.9 trillion. For households with a head aged 80 and up, the corresponding figures were \$0.5 trillion and \$0.7 trillion.

The consequences of the fall in stock market values for older Americans can vary substantially across income classes. Low-income households typically do not have substantial equity holdings in any form and will be relying primarily on Social Security when they retire. Nonetheless, the stock market crash may have greatly reduced their liquid financial wealth.<sup>9</sup>

The most seriously affected group will be those who were planning to supplement Social Security substantially with income from 401(k) plans, IRAs, and other savings or who, having followed this strategy, are already retired. Typically, members of this group have relatively high incomes. Many have not followed the standard advice of moving out of equities into bonds, believing that the generally low interest rates of recent years made bonds an unattractive investment.

Anecdotal evidence suggests that retirees in this position have lost heavily. Unlike younger Americans, whose losses will be comparatively small and who have many years to get their portfolios back on track, older Americans have little prospect of recouping their losses.<sup>10</sup>

Older people are generally advised to hold most of their financial assets in long-term bonds, preferably Treasuries because they are very low risk and their income is fixed over the remaining maturity of the bond. Some investors hold much of their portfolio in short-term bonds, deposits, and Treasury bills. Their principal is secure, but recent

developments are a mixed blessing nonetheless. The current low interest rates on these short-term instruments mean that as their holdings mature, investors will be reinvesting the proceeds in assets with a return not much higher than zero. Even if they invest the proceeds in longer maturity bonds, they will find that interest rates are not much higher.

Lower interest rates have the further consequence of increasing annuity premiums. Specifically, the premium per dollar of regular income from a fixed-income annuity will increase as rates fall. The premiums of the more popular variable annuity, especially when it has a guarantee, have been affected by the increased costs insurance companies incur when they hedge against the uncertain costs that a guarantee entails for them (*Wall Street Journal* 2008).

### **Housing Prices**

Housing prices have fallen across the country, although states with a high proportion of older residents do not appear to have been especially hard hit. The declines have been particularly severe in California, a state that is young demographically, and severe in Florida, which is old demographically. Some observers think that a further nationwide decline of 20 to 30 percent could occur.

The discussion of the housing market's plight initially centered on the market for subprime mortgages, but a more general problem with the housing market has developed: a large number of homeowners with regular mortgages are "under water," with mortgage debt that exceeds the value of their home. By some estimates, as many as 15 to 20 percent of homeowners are in this predicament (Bernanke 2008). This is more of a problem for younger Americans than for Americans aged 65 and older, two-thirds of whom own their homes free and clear. Nonetheless, the

foreclosure rate for Americans aged 50 and up is surprisingly high. This group accounted for about 28 percent of all delinquencies and foreclosures in the latter half of 2007, and more than 684,000 older Americans were delinquent or in foreclosure at the end of 2007 (Shelton 2008). Many Americans of all ages may decide to walk away from their home rather than sell it and use their savings to pay off the excess of the mortgage over the home's value.

Although the decline in house prices may not be an immediate issue for older Americans who have paid off their mortgage, who do not need to refinance their homes, or who can service their mortgage without undue strain, it may cause severe difficulties for those who need to tap the equity in their homes. In particular, the capital gain from the sale of a residence could be substantially reduced, as could the income from a reverse mortgage. There are reports of elderly homeowners who need to move into assisted living but are unable to sell their homes at even a deep discount (*New York Times* 2008c). The crisis is making their lives miserable.

Even if older Americans avoid big losses in the stock market and manage to keep their jobs, their lives and well-being may be affected by the difficulties of their adult children. Younger adults who lose their jobs may need to move back in with their parents or seek financial assistance. The parents of college-age children may be distressed to find that they cannot finance the kind of education they had planned for their children.

Older people have one important advantage over younger people in weathering the crisis: They have a better safety net. Anyone who has worked long enough can draw a retirement benefit from Social Security at age 62, and Medicare kicks in at age 65. For

homeowners with substantial equity, even after recent declines in housing prices, a reverse mortgage, despite its cost, is another potential source of income.

This said, older people who thought that they could start drawing Social Security at a relatively early age and live off that and their savings or the proceeds from the sale of a house may be badly disappointed. Workers who claim benefits at age 62 rather than at the normal retirement age of 66 will have their annual benefits reduced by about 25 percent. Some may need to work additional years—an option that may not be open to all of them—or to reduce their personal budget. For some retirees, that may mean foregoing the ocean cruise they have always wanted to take or the vacation home they have always wanted to buy. For others, it could mean having to move in with their adult children (or others) or enduring a humiliating decline in their standard of living.

In sum, the worst hit among older Americans will be working people who lose their job and cannot find another one, take a beating on the stock market, and lose their health insurance. They will suffer real hardship, including, if worst comes to worst, homelessness. Such a combination of misfortunes could touch a small number of older Americans even in more prosperous times, but in current conditions could afflict thousands. Older Americans who really need to sell their homes but cannot do so will also suffer.

### **What the Federal Government Should Do**

In October 2008, Congress approved a rescue package of \$700 billion—the Troubled Assets Relief Program—to shore up the balance sheets of financial institutions with impaired assets. The

new Congress is likely to approve a stimulus program that might reach \$1 trillion (\$1,000 billion). At the same time, the economic slowdown that the financial crisis has intensified will itself raise the federal deficit by reducing tax collections. Even if the rescue package is not completely spent and part of the stimulus falls in 2010, the increase in the gross debt of the federal government in 2009 could reach \$1.5 trillion. This would increase the debt burden (the ratio of debt to GDP) by about 10 percentage points from its current level of 38 percent.<sup>11</sup> This debt has to be serviced, and the interest costs add one-half percentage point of GDP annually to the deficit.

The new administration's paramount goal should be reviving the economy. At the same time, the administration must be mindful of the need to put the federal government's finances on a more secure footing as the economy recovers and to avoid committing to permanent new programs or tax cuts without offsetting their impact on the budget with expenditure economies.

Reviving the economy requires concentrating on two policy goals: unfreezing the credit channel, and designing and implementing a temporary stimulus package. The planned use of the original \$700 billion rescue package has already been modified several times. In particular, the Treasury decided not to use the funds to purchase distressed assets like mortgage-backed securities (MBS) from the banks, but instead to take steps to recapitalize them directly, with \$250 billion earmarked for that purpose. This measure was intended to give the government greater control over the banks' lending decisions and facilitate a resumption of lending by directly increasing the capital available to banks to provision against loans. Some of the funds are also being used to revive the market for so-called asset-

backed consumer loans. The Federal Reserve has already taken measures to support financial markets and recently announced that it will buy back \$600 billion worth of debt and MBS from Fannie Mae, Freddie Mac, and the Federal Home Loan Banks (Bernanke 2008).

The fiscal stimulus is necessary to offset the depressing effects of the decline in household wealth, the blocking of the credit channel, and the other shocks buffeting the economy. Fiscal stimulus can take the form of a combination of expenditure increases and tax cuts. Provided they can be quickly enacted, expenditure measures usually offer more “bang for the buck” than revenue measures. Some expenditure measures can be reasonably well targeted at those who are most in need of assistance. Other measures, like expenditure on infrastructure, take some time to have their effect, but can still help pull the economy out of a prolonged recession and they have a high social rate of return. Tax reductions, by comparison, can be implemented speedily but are more diffuse in their effect.

The federal government must be concerned above all with the health and functioning of the financial system and the overall economy, both for the sake of the country at large and because reviving the financial system and the economy is the best way to assist Americans who have been hit hardest by the crisis. However, the government also needs to provide relief to those most affected by the crisis, who include both homeowners who have suffered from or are threatened with foreclosure and workers who have lost their jobs, retirement nest eggs, or health insurance.

The federal government has several instruments at its disposal to provide relief to older Americans. One obvious measure is a further extension of

unemployment benefits. Unemployment insurance is normally paid for no more than 26 weeks, and most recipients find work before their benefits expire. The duration of unemployment spells has been increasing as the economy weakens. In October 2008, 32 percent of workers aged 55 and over and 26 percent of younger workers were unemployed for 27 weeks or more.<sup>12</sup> In June, the Supplemental Appropriations Act of 2008 allowed for up to 13 weeks of additional unemployment insurance benefits. In November, the Emergency Extended Unemployment Compensation Act of 2008 extended these additional benefits by another 7 weeks, to 20 additional weeks nationwide. It also provided for another 13 weeks of benefits in states with unemployment rates in excess of 6 percent, a measure that will extend an important safety net to millions of laid-off workers. Nonetheless, with thousands of workers expected to exhaust their benefits in the coming months, another extension is necessary.

Food prices have increased by 6.3 percent over the past year. Even before the economic downturn and increase in prices, an estimated 36.2 million Americans were living in food insecure-households, including 781,000 persons over age 65 living alone.<sup>13</sup> While energy prices fell sharply in October 2008, they are still 11.5 percent higher than a year ago (Bureau of Labor Statistics 2008c). Increased nutrition assistance benefits under the Supplemental Nutrition Assistance Program (SNAP, formerly the Food Stamp Program) would help Americans of all ages who have been hurt by rising food prices and falling incomes. This year Congress expanded eligibility for the Low Income Home Energy Assistance Program and doubled funding levels for 2009, providing a vital lifeline to vulnerable Americans. Additional assistance for weatherization assistance would further enhance energy

efficiency and air quality and offset rising energy costs.

Another measure that would benefit the needy and stimulate the economy is an increase in matching funds to states to forestall cuts in Medicaid, which covers about 50 percent of the country's expenditure on nursing homes, and other social programs. As already noted, many states have had to cut these services.

Measures to provide relief to the needy are also effective in stimulating the economy, because lower income individuals and those who lose their jobs are the most likely to spend any additional income they receive. Zandi (2008) estimates that each dollar spent on SNAP benefits would return \$1.73 to the economy, that increased unemployment insurance benefits would yield \$1.64 per dollar spent, and that aid to states would return \$1.36 per dollar. The Congressional Budget Office (2008) estimates that both extending or expanding unemployment benefits and temporarily increasing SNAP benefits would have large impacts on aggregate demand relative to their costs.

It would not be feasible for the federal government to compensate older Americans for the full extent of the decline in their retirement savings. However, legislation has recently been enacted that provides a measure of support to them by relaxing the rule for mandatory withdrawals from 401(k) plans and IRAs beginning at age 70½. Another possibility is favorable income tax treatment of withdrawals. Unlike the measures on the expenditure side of the budget, however, such tax relief is hard to target to those most in need. Relaxing the rule for mandatory withdrawals would not help those whose circumstances forced them to make withdrawals. Favorable income tax treatment of withdrawals is also poorly targeted, inasmuch as it would give the

greatest relief to those in the highest tax brackets. The excess relief this measure could give to the very well-off could be mitigated by placing a cap on the amount of the tax-free withdrawal.

The initial relief measures targeted financial institutions, not households struggling to service their mortgages. One way of providing relief to Americans threatened with foreclosure would be to revise the bankruptcy laws so that mortgage payments could be renegotiated like other debt. Another would be to lengthen the period before foreclosure proceedings could begin. Yet another is a combination of a write-down in the debt of distressed homeowners and a government guarantee on the reduced debt. Federal housing finance agencies have agreed to implement a streamlined loan modification program along these general lines, which was developed by the Federal Deposit Insurance Corporation. Ideally, this program will provide speedy relief, be targeted to homeowners really in need, and be perceived as fair. The program would have the added benefit of increasing the value of MBS, which would alleviate somewhat the distress of financial institutions with large holdings of these assets.

### **Lessons from the Crisis**

Can lessons be drawn at this stage from events to date? Because so few informed observers foresaw the financial crisis, too categorical a diagnosis of what went wrong and too confident a set of prescriptions for reversing it and avoiding a recurrence would be foolish. Some changes in the regulation of housing market finance are obviously called for, however. The first of these would be to ensure that every institution involved in lending, origination, and appraisal is subject to some degree of oversight. Much of the activity that contributed to the housing boom was not

merely lightly regulated; it was not regulated at all. The risk that mortgage debts will exceed the value of the collateral property could be reduced, if not eliminated, by requiring a reasonable down payment. This practice would reduce the risk of foreclosure and property abandonment and give owners more incentive to keep up with their payments. In addition, mortgage applications have to be taken seriously, and the civil and criminal penalties for material misstatements should be effectively applied. Some commentators are already worrying that the mortgage market debacle will lead to a revival of heavy-handed regulation. But as Rivlin (2008) has pointed out, the issue is really smart regulation, not heavy or light regulation.

Another lesson learned is that the social safety net needs to be strengthened and extended. Workers should not have to worry about losing their health and pension benefits when they lose a job. Looking beyond the immediate crisis, policymakers must take steps to reduce the health care costs that are suppressing wages and increase health insurance coverage, ensure that the Pension Benefit Guarantee Corporation is financially sound, increase retirement savings, help the growing number of workers with defined contribution plans to manage their investment risk, and strengthen Social Security. These measures will improve health and retirement security for all Americans and better position us to weather future economic challenges.

## **Appendix: Origins and Immediate Consequences of the Crisis**

### **Origins**

The origins of the current crisis will be the subject of debate and study for years to come. Without the benefit of an historical perspective, any account, especially a brief one, must be tentative.

This said, three different developments seem to have been behind the housing price bubble and the spread of the crisis from mortgage lenders to other financial institutions: the antirecessionary stance of monetary policy in the early years of the current decade; the permissive stance of regulatory policy in both the mortgage and the derivative markets; and the development and use of certain complex new financial instruments in the derivatives family.

To counter the economic slowdown that emerged in the wake of the terrorist attacks of September 2001, the Federal Reserve pursued a policy of aggressively lowering interest rates, resulting in a substantial relaxation of credit conditions. During the recovery that followed, the margins between lending and borrowing rates declined, and the overall level of interest rates remained low, which contributed to what has come to be known in financial circles as a hunt for yield. The lower the margin, the more institutions had to rely on borrowed funds to maintain the return on their own capital—the more leveraged they had to be.<sup>14</sup> Some financial institutions had ratios of liabilities to net worth as high as 30. Growing leverage left them more vulnerable to problems in the credit market, because comparatively small declines in the rate of return on their asset portfolios would erase their profit margins.

Lower interest rates also contributed to increases in prices for housing and other assets, because they made a dwelling of a given value more affordable and increased the attractiveness of other assets compared with fixed-interest securities. Economists term this phenomenon *asset price inflation* to distinguish it from the garden-variety consumer price inflation. Many economists have criticized the Federal Reserve for being complacent about asset price inflation because consumer

price inflation was low. In fact, there was considerable uncertainty and debate among economists at the time about what to do, and some increase in asset prices and notably an increase in housing prices are predictable results of cheaper credit.

The increase in house prices was fueled by the burgeoning growth in the markets for securitized mortgage debt and subprime mortgages. The market for subprime mortgages was in turn fueled by the permissive stance of financial regulation, which countenanced mortgages with no money down and even negative amortization mortgages.<sup>15</sup> Mortgage securitization also fueled the price boom by contributing to the growth in demand for both subprime and prime mortgages. In the contemporary mortgage market, the originator of the mortgage loan does not hang onto it. Most mortgages are approved by one institution, initially financed by another, and then sold, bundled together and transformed into mortgage-backed securities, which makes them tradable. Neither the mortgage brokers nor the mortgage rating agencies are regulated. The practice of “originate to distribute,” as it is called, means the originator does not have a strong incentive to check the borrower’s creditworthiness as was once the case. Lending standards were relaxed, and regulators turned a blind eye to negligent vetting of applications or outright fraud.

An additional factor in the genesis of crisis was the development of derivative instruments—including credit default swaps—a kind of insurance to holders of risky debt—and structured securities.<sup>16</sup> In both cases, the inherent riskiness of the instrument was underestimated. Some derivatives are so complex that very few people, even financial specialists, understand them well. Nonetheless, their supporters saw these instruments as spreading risk and

facilitating its diversification. Such instruments undoubtedly made the financial system even more interconnected than it was before, meaning that the troubles of one large institution could spread readily to others. The extent of the exposure they entailed could be concealed by placing them off balance sheet.

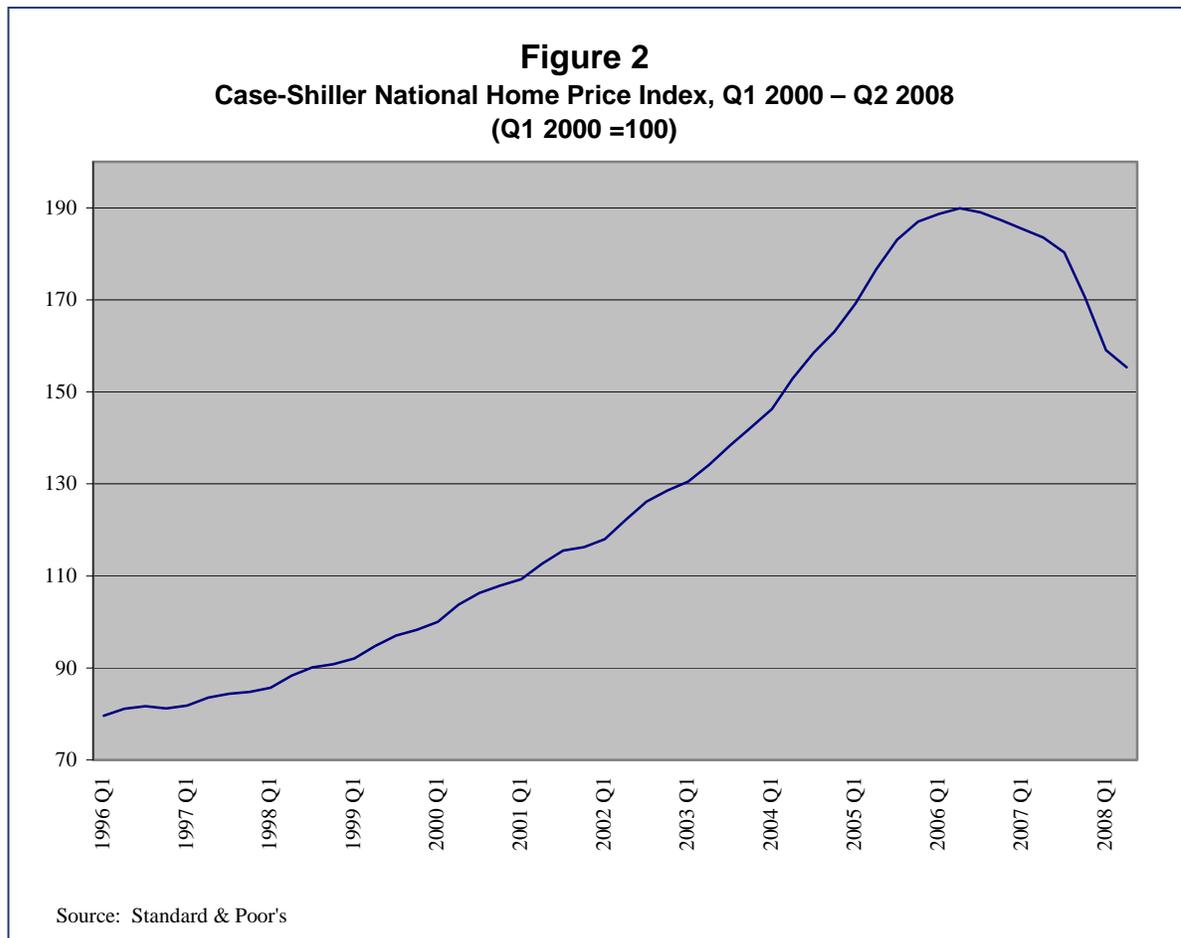
There is nothing wrong with securitization and derivatives per se. When mortgages remained on the books of the original lender, the lender would be exposed to downturns in its local housing market and would not hold a regionally diversified portfolio. Securitization reduces the risk of excessive geographical concentration of asset holdings and increases the ultimate supply of mortgage financing. So-called collateralized debt obligations give asset holders a wider choice of risk-return combinations. However, it now appears that the rating agencies did not fully appreciate the extent of the risk inherent in certain derivatives.

### **Immediate Consequences**

#### **The Housing Market**

After having almost doubled between 2000 and 2006, house prices for the nation as a whole began to decline in mid-2006. As of June 2008, they had fallen by about 20 percent from their peak, but remained 50 percent above their level of early 2000 (see figure 2).<sup>17</sup>

The end of the housing price boom has entailed serious consequences for many home and property buyers. Speculators who bought properties at the wrong time intending to flip them for a quick profit have been badly burned. Regular homeowners (owner-occupiers) have suffered serious losses too, and many have either lost or had to give up their homes. Homeowners who purchased their homes assuming that a continuing boom in prices would allow them to



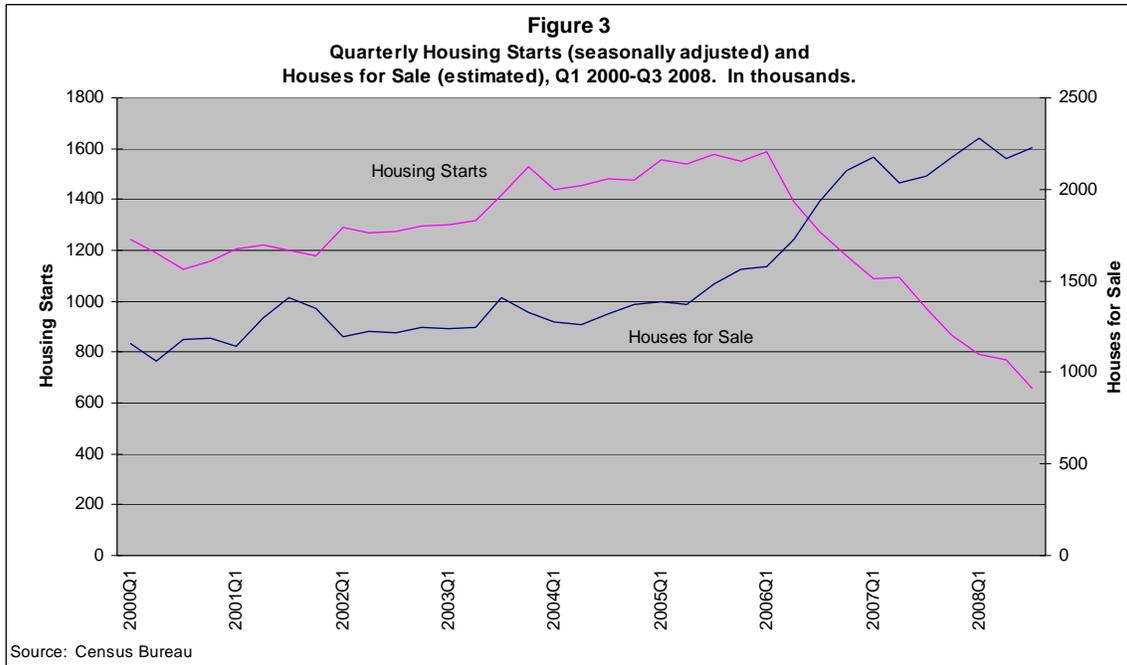
refinance at a higher price found that they could not do so. At same time, both prime and subprime borrowers were confronted with a large increase in their mortgage rates when the “teaser” or introductory rate expired on adjustable-rate mortgages. Many homeowners who previously had been barely able to finance their monthly payments could no longer do so. As of September 2008, of a pool of securitized subprime loans estimated to total 3.3 million, about 55 percent were current on payments and 11 percent were in foreclosure. Of 2.4 million Alt-A mortgages, 80 percent were current and 6 percent were in foreclosure (Federal Reserve Bank of New York 2008).<sup>18</sup>

The slide in housing prices meant that the mortgage debt of many homeowners,

especially those who had purchased their homes with no money down, exceeded the value of their home, making foreclosure a more attractive option than continuing to service the mortgage. However, the loss of equity was not confined to subprime borrowers. The drop in prices and a build-up in unsold inventory made construction of new homes unprofitable, contributing to a decline in activity and employment in one of the country’s major industries (see figure 3).

#### **Financial Markets and Financial Institutions**

The financial institutions most affected by the crisis have been those with large holdings of MBS or large mortgage portfolios. In particular, the forced merger of Bear Sterns resulted from its



heavy exposure to MBS. This was followed by the takeover of Freddie Mac and Fannie Mae, the two giant government-sponsored enterprises (GSEs) established in the 1930s to promote the growth of the mortgage market and home ownership. The GSEs are privately owned, but because of the favorable treatment they receive from the federal government on certain operations and their dominant role in the mortgage market, their debt is treated as if it were guaranteed by the government. Originally, the GSEs either lent directly themselves or held on to mortgages they purchased from the original lender. For some time, however, their main business has been buying mortgages and repackaging them as MBS, which they sold to investors. Fannie and Freddie guaranteed the servicing of the MBS they sold for a fee, and these fees generated most of their income. As of end-2007, the GSEs held \$1.6 trillion in mortgages directly and had securitized and guaranteed another \$3.7 trillion (International Monetary Fund 2008, p. 67). The share of subprime or risky mortgages in their portfolios increased substantially after 2004.

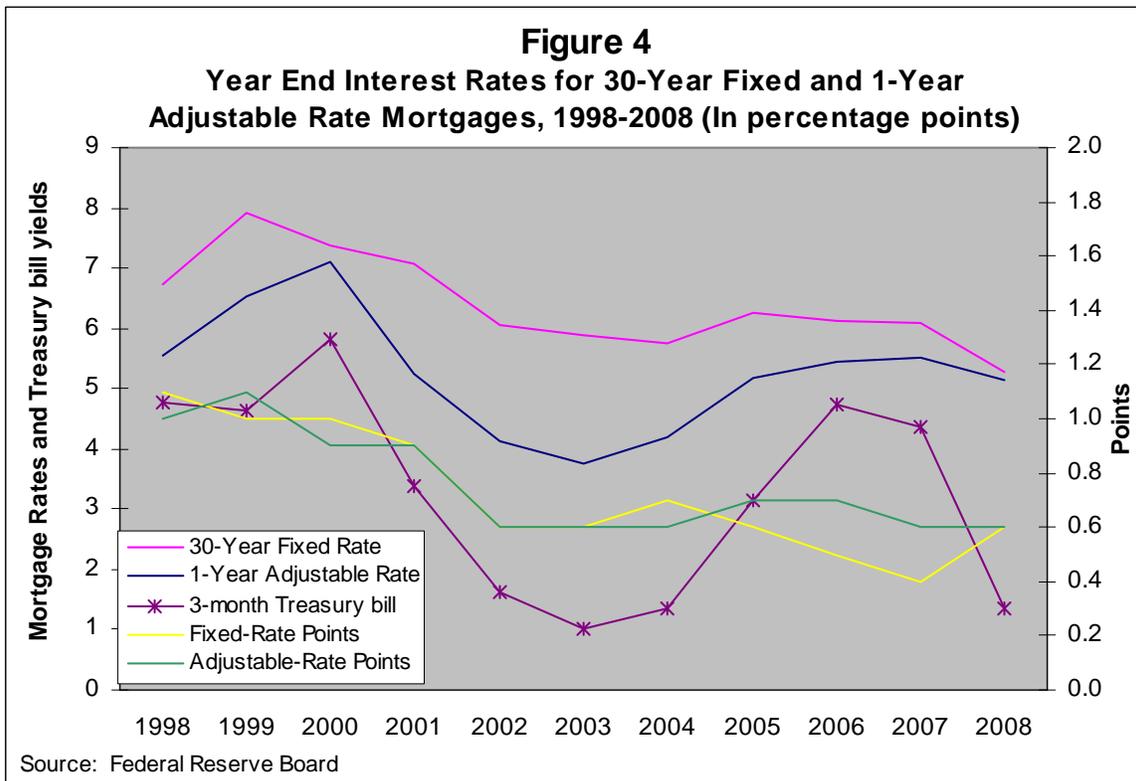
Because the two institutions relied heavily on borrowing for their own operations—they were heavily leveraged, in other words—they were vulnerable to a downturn in the housing market. As homeowners experienced increasing difficulty paying their mortgages, the holders of MBS began to call the guarantees issued by the GSEs. The cost of meeting these guarantees rose into the billions.

In light of the GSEs' dominant role in the mortgage market and their worsening financial condition, the federal government decided that neither bankruptcy nor a merger with another financial institution was an option, and acquired control of both. Washington Mutual, the country's largest savings and loan, which had a huge exposure to risky mortgages and the distressed housing market, was the object of a forced sale in September. Countrywide, the country's largest mortgage lender, had been acquired by Bank of America earlier in the year. The insolvency of the country's major mortgage lenders is probably the

main reason why a substantial spread has opened up between conventional (prime) mortgage interest rates and short-term rates (see figure 4). Loan terms have tightened, and the subprime market has essentially dried up. The intensification of credit market problems in the fall of 2008 may have been related to the collapse of Lehman Brothers, an investment bank and a venerable Wall St. institution.

There are two main reasons for the financial contagion the crisis has spawned. The first is that financial institutions are much more interconnected and interdependent than they used to be, both within and across national borders. The degree and consequences of this interdependence are not yet well understood. The second is that financial institutions are by nature in the business of borrowing short term, in the form of deposits and short-term

borrowing from other financial institutions, and lending or investing long term. They depend on being able to roll over their short-term loans and maintain their deposits. In a severe crisis of confidence, financial institutions cease lending to one another. This puts the most vulnerable among them in a very difficult position and makes all of them much more cautious about lending. The effects of this caution are already apparent in the markets for short-term commercial loans (loans contracted for such purposes as financing inventories and payrolls) and car loans, where many applicants who would formerly have been judged creditworthy are unable to obtain loans. The terms and availability of credit card debt have also tightened, as lenders raise the standard for new applicants and reduce existing credit lines (*New York Times* 2008a).



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funds in which household members participate, on the grounds that the investment risk entailed by defined benefit plans is borne by their sponsors.

<sup>4</sup> Estimates of the impact of a decline in wealth on consumption vary from 1 to 7 percent of the decline. If we assume that the true size of the effect is 4 percent, a decline in wealth of \$4 trillion that is not quickly reversed would cause annual consumption to drop by \$160 billion. There is considerable uncertainty over the size of the wealth effect, in part because households might still be adjusting their spending to previous increases in wealth. Falling house prices reduce consumption because the collateral value that backs mortgages and home equity loans is diminished.

<sup>5</sup> Typically, a state must present a budget to the legislature that balances expenditure on current operations (wages and salaries, interest payments, transfers, and other current expenditure) with current revenue (tax revenue and revenue from such sources as fees and property income, but not the proceeds of capital asset sales). Capital expenditure (mainly expenditure on capital equipment and structures) may be financed by borrowing.

<sup>6</sup> Economists would also add the value of a household member's Social Security benefit and the benefits from a defined benefit pension if the household member is entitled to one.

<sup>7</sup> Johnson and Kawachi (2007) note that the median wage of older workers has been estimated to fall by 26 percent when they return to work after losing a job they have held 10 years or more.

<sup>8</sup> Author's estimate based on the calculations and methodology of Soto (2008).

<sup>9</sup> Wealth at retirement is normally estimated by adding the value of a retiree's assets to the capitalized value of Social Security benefits and pension and other income in annuity form. For low-income Americans, financial assets like IRA and 401(k) holdings and cash represent only a moderate share of total wealth thus derived. Nonetheless, the decline in the value of liquid assets reduces a household's ability to respond to unexpected expenditures.

<sup>10</sup> An article in the *New York Times* (2008b) addresses the impact of the crash on older retirees who retired with a substantial nest egg.

<sup>11</sup> The proceeds from the sale of distressed assets will reduce the impact of these operations on net

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<sup>2</sup> That the housing price bubble had to burst eventually is obvious in retrospect, even if many Americans on both sides of the market were counting on further price increases. As Federal Reserve Chairman Bernanke put it in a recent speech, "...providers of mortgage credit came to view their loans as well secured by the rising values of their collateral" (Bernanke 2008). During the run-up of prices, influential commentators expressing concern about the price bubble included Robert Shiller, whose book (Shiller 2007) is a comprehensive and remarkably thoughtful analysis of the origins and consequences of the housing bubble. Alice Rivlin, former vice-chairman of the Federal Reserve, refers to the belief that prices could keep on rising as a collective delusion (Rivlin 2008).

<sup>3</sup> This estimate excludes the impact of the crash on the reserves of the defined benefit pension

debt to a greater or lesser extent depending on the prices realized by the sales.

<sup>12</sup> Calculated from data in Bureau of Labor Statistics, *Employment and Earnings*, November 2008, table A-36.

<sup>13</sup> Nord et al. 2007, table 5. Data are for 2007.

<sup>14</sup> An example may illustrate the risk involved in increasing leverage. Suppose that an institution with assets of \$500 billion, deposits and other liabilities of \$400 billion, and net worth of \$100 billion paid 5 percent on its liabilities and earned 10 percent on its assets. The institution would have net earnings of \$30 billion, or 30 percent of capital. With more leverage, specifically with liabilities of \$900 billion and assets of \$1 trillion and the same capital base, it would earn \$55 billion, or 55 percent of capital. If the rate of earnings on assets dropped to 3 percent, the institution would incur losses. Losses with less leverage are \$5 billion, but with increased leverage they rise to \$15 billion. This example also illustrates why investing in a house with a very small down payment and a high loan-to-value ratio can entail huge losses for the homeowner in a declining market.

<sup>15</sup> Negative amortization mortgages are usually adjustable-rate mortgages that for a time have a monthly payment less than interest due, entailing an increase in indebtedness.

<sup>16</sup> Structured finance entails pooling financial instruments and their cash flows (bonds, MBS, loans) and dividing their cash flows into different slices or tranches (from the French for slice), which are paid to different holders. Payouts from the pool are paid to the different slices in order of seniority—the most senior are paid first (International Monetary Fund 2008, p. 56). The most junior tranches enjoy the highest average return because they are subject to the most risk.

<sup>17</sup> The Case-Shiller national home price index shown in figure 2 is considered one of the better measures of house prices, although it is by no means perfect.

<sup>18</sup> Alt-A borrowers have an impaired credit rating but are rated as higher quality than subprime borrowers.

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