Forum

The 2002–2007 US Economic Expansion and the Limits of Finance-Led Capitalism

Trevor Evans

The US economic expansion that began in 2002 was unusually dependent on the growth of consumer spending, which, in turn, was financed largely by borrowing against rising house prices. But house prices began to fall at the end of 2006, and since August 2007 the US financial system has been embroiled in its most serious crisis since the 1930s. Following a dramatic deepening of the crisis in September 2008, the US government announced a $700 billion programme to buy up bad assets, but even this did not stem the downward spiral in financial markets. The government was eventually obliged to partly nationalize some of the country's largest banks. At the time of writing, the danger of a financial collapse appears to have been averted but, exacerbated by an acute contraction in the provision of credit, the economy is faced with a major recession.

The crisis marks the culmination of a phase of US capitalism that began in the early 1980s. It has been driven predominantly by big corporations seeking a profitable way out of the economic malaise they faced in the 1970s, but it has also been shaped by the policies of deregulation introduced under the Reagan government in the 1980s and deepened by the Clinton government in the 1990s. The main features of this phase of US capitalism are well known and include the following:

- The financial sector greatly strengthened its position. Banks and other financial institutions appropriated a larger share of profits; they obliged nonfinancial companies to focus on raising short-term financial returns; nonfinancial companies themselves became more involved in generating profits from financial activities.

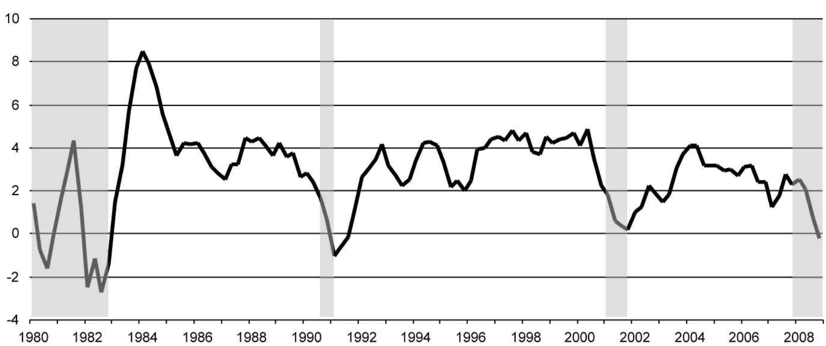
- Major corporations have planned their activities globally. US companies had, of course, invested extensively in Canada in the 1950s and Europe in the 1960s, but they have since extended their foreign investments to include developing countries, and production and sales are conceived in terms of global networks. Significantly, US investments abroad continue to be more profitable than foreign investments in the United States.
- The bargaining position of both working- and middle-class employees has been seriously weakened, and there has been a major shift in the distribution of income in favour of the top 20 percent, and even moreso in favour of the very top 1 percent.
- Aggregate spending in the United States has exceeded national output. This has expressed itself in a current account deficit and has been possible only because of the large net inflows of financial capital from abroad, which have, in effect, financed borrowing by the government, business, and households.

Despite the neoliberal commitment to deregulation, the state has been very active in macroeconomic management and this has had an important effect on the pattern of the business cycle. Since the 1980s, there have been three periods of economic expansion and each has been accompanied by an overextension of the financial system. Once the expansion could no longer be sustained, the state intervened with expansionary monetary and fiscal policies to counter a downturn. The result has been that recessions in which output actually falls have been relatively short, but there have been longer, more drawn-out periods of slow growth, often accompanied by rising unemployment. State intervention has, in this way, ameliorated the impact of the downturn, but the underlying problems have been carried over and accumulated. These tensions burst out in August 2007 when the banking crisis first erupted. They also explain why problems arising from subprime mortgages, which constitute a relatively small part of the US financial system, triggered a major financial crisis.

The Contours of Growth The broad contours of the periods of expansion and recession since 1980 are shown in Figure 1. From 1980 to 1982, the economy underwent what was then the deepest and most prolonged recession since the Second World War.[1] This was a result of the exceptionally restrictive monetary policy introduced in October 1979 by the Federal Reserve in response to ever-higher inflation and a dangerous weakening of the dollar. The recession did reduce inflation, inaugurating a period of high real interest rates. But by bankrupting many industries, it led to a large increase in unemployment and a serious weakening of workers' bargaining position.

The first phase of expansion, from 1983 to 1989, depended on a highly expansionary fiscal policy as the Reagan government increased military spending and cut business taxes. Unusually, this was combined with a restrictive monetary policy that kept interest rates high, attracting foreign capital, and this financed an important part of the government's deficit. However, fixed investment by the business sector remained low. Instead, nonfinancial corporations embarked on a major round of mergers and takeovers, made possible by greater financial deregulation that enabled firms to raise finance by issuing so-called junk bonds.[2] Takeovers were followed by a process of rationalization and plant closures, which left many workers willing to accept real wage cuts to keep their jobs. The expansion came to an end in 1989 when, after several years of overlending, the banking system abruptly curtailed the expansion of credit, leading to a short recession in 1990.

Figure 1. US Economic Growth (Change in Real GDP Over Four Quarters, %)



Source: National Income and Product Accounts, Table 1.1.6. Shaded areas show recessions.

The next expansion covered the period 1992–2000. The Federal Reserve had responded to the credit crunch and recession by reducing its main interest rate, which remained low until 1994. As dollar assets became less attractive for international investors, the dollar weakened and US exports began to rise. Because of the large government debt inherited from the Reagan era, the governments of both Bush (senior) and Clinton felt they could not use fiscal policy to boost the economy, but the automatic effect of increased welfare and unemployment payments, together with a decline in the tax take, did help stimulate the economy. Following a period of weak "jobless" growth in the early 1990s, the United States experienced its strongest sustained growth since the 1960s because of the boom in information technology. During this period, tax payments were so strong that the government, unusually, had a budget surplus. Furthermore, as unemployment fell, real wages began to rise for the first time since the 1970s. But the expansion was highly dependent on borrowing by nonfinancial corporations. This was partly to finance fixed investment, but it was also used by companies to buy back their own shares. Share "buybacks" helped push up share prices to the benefit of institutional investors and top managers, who had themselves acquired substantial holdings in the 1990s through the exercise of share option. In the late 1990s, the stock market developed all the signs of a classic bubble, as share prices soared way beyond the increase in company earnings. When the bubble burst in early 2000, companies slashed their fixed investment. In 2001, the economy entered a recession.

The most recent expansion, which began in 2002, was also weak at first. The Federal Reserve reacted to the recession especially strongly, repeatedly cutting the lead interest rate between 2001 and 2003. In addition, on taking office in 2001 the Bush (junior) government introduced a big package of tax cuts. These had been proposed, in fact, before the recession broke and were heavily skewed in favour of the top 20 percent of earners, but served to strengthen demand in the economy. The low interest rate helped promote a new wave of mergers and takeovers, in many cases initiated by private equity firms, which took advantage of so-called leveraged loans to raise much of the capital required. As is well known, mortgage lending also increased strongly and, despite a boom in construction, a bubble in house prices developed in many parts of the country. With incomes for most people stagnant in real terms, many households borrowed against the rising value of their homes in order to finance additional consumption. Nevertheless, although economic growth increased from 2004, by US standards it was not especially strong.

Table 1. Contributions to Growth of US Gross Domestic Product

	1983-1989	1992-2000	2002-2007
GDP, average annual % change	4.33	3.68	2.57
Contributions to change in GDP			
Personal consumption	2.82	2.62	2.10
Fixed investment	0.86	1.22	0.28
Change in private inventories	0.19	0.11	0.06
Net exports of goods and services	-0.31	-0.49	-0.24
Government consumption & investment	0.78	0.21	0.39

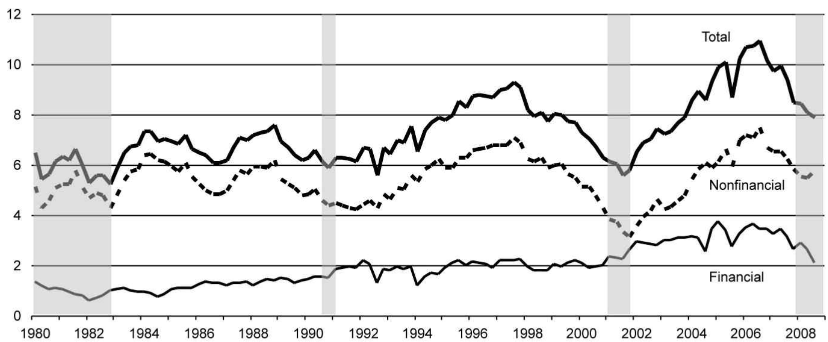
Source: National Income and Product Accounts, Table 1.1.2.

As seen in Table 1, average growth over the period from 2002 to 2007 was weaker than in the two previous expansions. The table also shows that, unlike the two previous expansions, growth was almost entirely dependent on a rise in consumer spending. The remainder of the growth is largely explained by an increase in government spending, in particular military spending, which increased significantly from 2002 to 2004. By contrast, the growth of fixed investment was very weak compared with the previous two expansions while net exports, as in the two previous periods, made a negative contribution to growth.

Following the onset of the financial crisis in August 2007, the Federal Reserve repeatedly reduced the lead interest rate. Furthermore, as concern about the prospect of a recession mounted in early 2008, the Bush government announced a $168 billion expansionary fiscal programme, of which about $100 billion involved a tax refund to households in June and July; the remainder involved additional incentives for business. However, employment declined substantially throughout 2008 and, although there was weak growth in the early part of 2008 (mainly due to a fall in the trade deficit as the dollar weakened), output, too, fell sharply in the final quarter of the year.[3]

Soaring Profitability While growth during the most recent expansion was not particularly strong, corporate profitability registered an exceptionally large increase. Between 2002 and 2006, pretax corporate profits virtually doubled, rising from $730 billion to $1,400 billion. As can be seen in Figure 2, pretax profits also increased very strongly when measured as a share of GDP, and in 2006 they reached a level last seen in the mid-1960s, when the United States was at the crest of the postwar boom.

Figure 2. US Corporate Profitability (Pretax Profits as % GDP)



Source: National Income and Product Accounts, Table 1.14. Shaded areas show recessions.

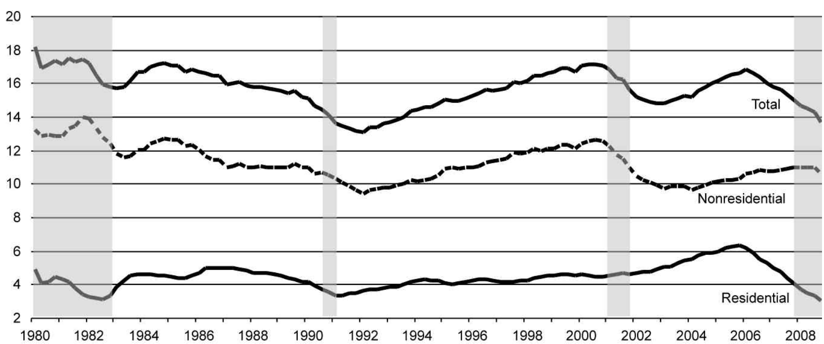
Figure 2 also shows how the financial sector's profitability has been rising steadily since the 1980s. Strikingly, this growth wasn't, at least until now, susceptible to the business cycle, and profitability continued to rise during the recession in 2001. By contrast, nonfinancial corporations' profitability has been highly cyclical, increasing significantly between 2002 and 2006.[4]

Several factors contributed to the increase in profitability. One obvious factor is that real wages were stagnant while labour productivity continued to rise, albeit at a lower rate in the later part of the expansion.[5] This was reflected in the share of wages in the corporate sector's value added, which fell from 75 percent in 2002 to 68 percent in 2006.[6]

A second factor, highlighted by William Milberg, concerns the cost savings resulting from outsourcing key stages of the manufacturing process to low-wage countries.[7] Milberg estimates that, given imports from low-income countries equal to 7 percent of GDP in 2006 and assuming a 40 percent cost saving from outsourcing (the figure is from McKinsey International Institute), the total cost saving amounts to some 2.8 percent — quite large in relation to corporate profits, which were around 11 percent of GDP.[8]

A third factor that contributed to higher profitability was the depreciation of the dollar, which raised the dollar value of profits generated by US corporations in other countries. Around 20 percent of US corporate profits are generated abroad and about half of this is from Europe.[9] Most of the European contribution came from countries that use, or were closely tied to, the euro, which increased in value from $0.94 in 2002 to $1.25 in 2006, a rise of 33 percent.

Figure 3. US Private Fixed Investment (% GDP)



Source: National Income and Product Accounts, Table 1.1.5. Shaded areas show recession.

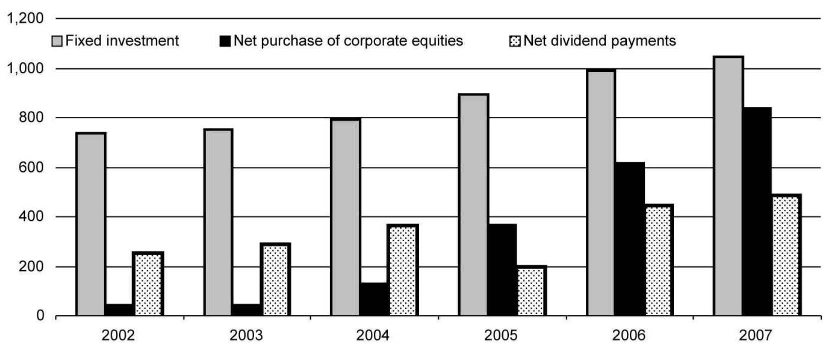
Although profitability increased strongly during the most recent expansion, the same was not true of fixed investment. As seen in Figure 3, total investment increased as a share of GDP from 2003 to 2005, but this was largely the result of the boom in residential investment, which began to collapse in 2006. Nonresidential investment, by contrast, registered only a modest rise.

Investment in fixed capital is principally undertaken by nonfinancial corporations and, reflecting the increased strength of the financial sector, nonfinancial corporations have been devoting a larger part of their funds to various forms of financial expenditure.

Firstly, there has been a significant increase in the share of profits paid out as dividends. In the 1980s, dividends accounted for about 30 percent of pretax profits; in the 1990s this increased to around 40 percent, and in the most recent expansion dividends averaged 50 percent of pretax profits.[10] Significantly, in 2001 when profits fell sharply due to the recession, nonfinancial corporations sustained their dividend payments and absorbed the decline themselves, as a result of which undistributed profits for the year were close to zero.

Secondly, nonfinancial corporations have spent huge sums on buying back their own shares. The practice of share buybacks began in a serious way in the 1980s and rose to unprecedented levels in the course of the most recent expansion.[11] As can be seen in Figure 4, by 2007 the net purchase of shares by nonfinancial corporations stood at $836 billion and was not far behind the figure for investment in fixed capital, which amounted to $1,045 billion.

Figure 4. Nonfinancial Corporations Spending on Fixed Capital, Share Buybacks, and Dividends ($ billions)

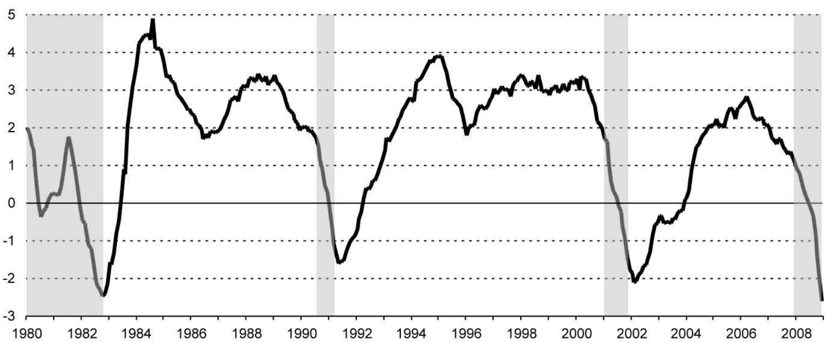


Source: Federal Reserve, Flow of Funds Accounts, Table F102.

Figure 4 also shows nonfinancial corporations' dividend payments. It can be seen that, in 2006 and 2007, the total paid out to shareholders through dividends and share buybacks combined actually exceeded investment in fixed capital. This was shareholder value with a vengeance.

In order to sustain both fixed investment and large share buybacks, nonfinancial corporations had to borrow, which they did mainly by issuing bonds. In fact, internal funds (profits after tax and dividends plus depreciation allowances for fixed capital) were sufficient to cover fixed investment from 2002 to 2005, and even when fixed investment increased in 2006 and 2007, only a small amount of borrowing would have been necessary. Nevertheless, borrowing by nonfinancial corporations increased strongly during the most recent expansion.[12] In addition to fixed capital, the two main items of spending were the share buybacks and a category listed as "other financial assets." Unfortunately, this is a statistical residual and even the Federal Reserve's statisticians are not sure what it includes.[13] However, it is indicative of the way in which nonfinancial corporations have themselves become increasingly involved in financial activities as a source of profit.

Figure 5. Change in US Employment Over 12 Months (Millions)



Source: Bureau of Labor Statistics, Current Employment Statistics survey, seasonally adjusted. Shaded areas show recessions.

The relatively weak growth of fixed investment in the most recent expansion was accompanied by a rather moderate growth of employment. As shown in Figure 5, employment actually fell in 2002 and 2003, the first two years of the expansion, and total employment did not return to its 2000 level until 2005. The number of jobs increased from 2005 to 2007, but then began to fall again in 2008. This is reflected in the rate of unemployment, which declined from a peak of 6.3 percent in 2003 to a low of 4.4

percent in March 2007, but then began to rise again and stood at 7.2 percent by December 2008.[14]

The Dazzling Rise in Top Incomes In the 1980s, real incomes for workers declined, while those for middle-income groups stagnated. In the second half of the 1990s, a period of sustained rising employment, real income increased for both working- and middle-class employees. Between 2000 and 2007, however, incomes for both groups again stagnated.[15] By contrast, the income of those in the top 20 percent has risen steadily since the early 1980s, with the largest increases going to those at the very top.

According to detailed research by Thomas Pickerty and Emmanual Saez, the real income of the top 1 percent increased at an annual rate of 10.9 percent a year between 2002 and 2006 (the last year for which data is available). As can be seen in Table 2, this accounted for an extraordinary 73 percent of the increase in national income during the period.[16]

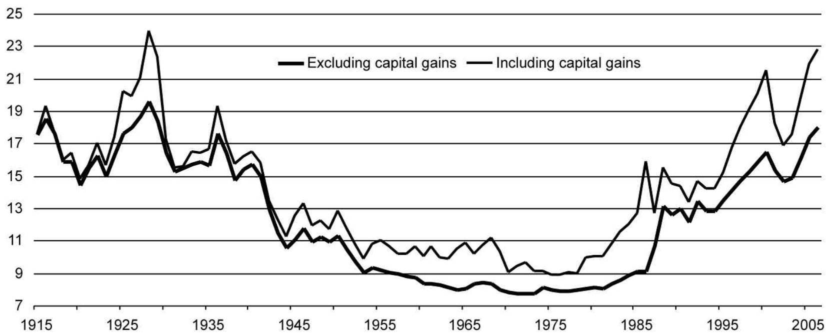
Table 2. Real Annual Income Growth by Groups

	Average Annual Increase			Fraction of Total Growth Captured by Top 1%
	Average Income	Top 1%	Bottom 99%	
Clinton Expansion 1993–2000	4.0%	10.3%	2.7%	45%
Bush Expansion 2002–2006	2.9%	10.9%	1.0%	73%

Source: Thomas Pickerty and Emmanual Saez, "Income Inequality in the US," Updated data (July 2008), <http://elsa.berkeley.edu/~saez/>.

This rise in the share of income going to the very top earners is part of a long-term shift and marks a major reversal of postwar trends. As can be seen in Figure 6, the share of the top 1 percent fell in the 1930 and 1940s, and was around 10 percent in the 1950s and 1960s. Since the mid-1970s, however, it has risen sharply and, despite a dip after the 2000 stock market crash, it has returned to around 20 percent — a level last seen in the 1920s. There has been, however, a shift in the source of top earners' income. Whereas dividends were the largest component of top incomes in the 1920s, it is now salaries, reflecting the huge increases in top executives' remuneration since the 1980s.[17]

Figure 6. Share of Top 1% in National Income, 1915–2006 (%)



Source: Thomas Pickerty and Emmanual Saez, "Income Inequality in the US," Updated data (July 2008), Tables A1 & A3, <http://elsa.berkeley.edu/~saez/>.

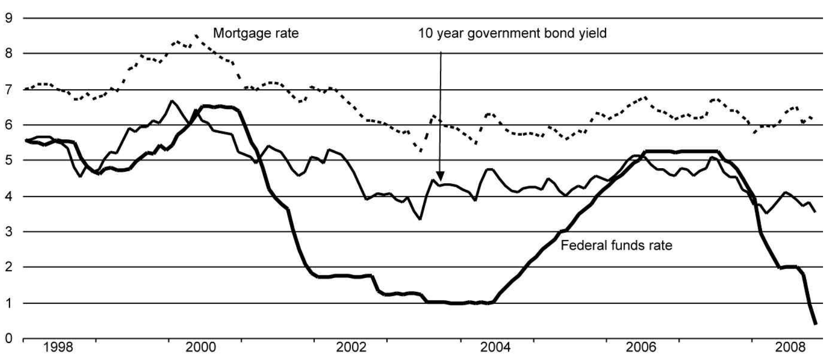
As noted above, many households responded to stagnant incomes during the most recent expansion by borrowing against the rising value of their homes. According to the Case-Shiller index of house prices, average house prices in the United States almost doubled between 2002 and 2006.[18] Some households took advantage of lower interest rates to refinance their mortgages and borrowed more than required to pay off the old mortgage; others simply took out a new loan against the increased value of their home.[19] This borrowing explains a large part of the rise in consumption during the recent expansion. As a result of the scale of the borrowing, however, household indebtedness has increased as never before, rising from $7.0 trillion in 2000 (72 percent of GDP) to $13.8 trillion in 2007 (100 percent of GDP).[20]

It will be difficult to continue compensating for weak income growth in this way. Personal saving in the United States is close to zero.[21] In addition, according to the Case-Shiller index, average house prices peaked in June 2006, and, by July 2008, they had fallen by 21 percent. According to one estimate, some 20 percent of mortgage holders have mortgages that exceed the value of their homes.[22] Meanwhile, the number of households having difficulty meeting their mortgage repayments is rising and, as houses are repossessed and sold off, house prices are expected to fall further.

Monetary Expansion The Federal Reserve reacted to the stock market crash in 2000 and the onset of recession in 2001 by repeatedly lowering the lead interest rate, which was cut from 6.5 percent in January 2001 to a low of 1.0 percent in 2003 and 2004. When the then Chairman of the Federal Reserve, Alan Greenspan, announced the first cut in January 2001, he stated that this was to relieve pressure on the overstretched financial system. Certainly, a major crisis was avoided and the recession was relatively short lived, but the Federal Reserve System's (Fed's) response played an important role in creating the conditions in which the crisis in 2007–2008 developed.

When the Fed lowered the lead interest rate in 2001, the banks in turn lowered their lending rates and interest rates on long-term bonds, which are determined in the capital markets and which also declined. As shown in Figure 7, between 2002 and 2004 the rate on long-term government bonds fell to around 4 percent, the lowest since the mid-1960s. Even when the Fed raised short-term interest rates between 2004 and 2006, the long-term government bond rate increased only to around 5 percent.

Figure 7. US Short- and Long-term Interest Rates (%)



Source: International Monetary Fund, International Financial Statistics, CD-ROM.

These very low, long-term interest rates reflected the unusually liquid conditions in US capital markets during the most recent expansion. As noted above, US nonfinancial corporations were enjoying high profits at a time when fixed investment was relatively low and investment in financial assets increased. At the same time, institutional investors (i.e., insurance companies, pension funds, and investment funds) had large sums that they were anxious to invest, while the huge rise in the income of the very top earners provided another important source of money capital available for financial investment. There was, in addition, a significant inflow of capital from abroad. The largest inflow was from the Asian manufacturing countries, led initially by Japan and more recently by China, which invested much of their trade surplus in US financial assets, in particular government bonds. There was also a smaller, but still significant net inflow of capital from Europe, whose financial system has become deeply intertwined with US financial institutions, with large flows of capital moving in both directions.

A second factor that contributed to the low, long-term interest rates was that inflation was initially very low by US standards — between 2002 and 2004 it was below 2 percent, a level that, with the exception of brief periods, had not been achieved since the 1960s. Primary commodity prices had fallen sharply from the 1980s until 2002, as many developing countries were obliged by the World Bank and the International Monetary Fund (IMF) to adopt policies that gave priority to promoting the production of primary commodities for export. Furthermore, the expansion of exports from China, especially after it joined the World Trade Organisation in 2002, led to a huge increase in the supply of cheap manufactured goods; for a short time, there was even concern that the United States might be faced with a problem of deflation as a result.

The decline in government bond rates was reflected in other long-term interest rates, which are priced as a mark-up on the government bond rate. This was the case for the interest rate that the corporate sector had to pay when it issued bonds — the main way the US corporate sector raises external finance. As can be seen in Figure 7, the same was also true of the interest rate on standard 30-year mortgages, which followed the government bond rate downwards.

The Expansion of Credit The unusually low short- and long-term interest rates during the early stages of the expansion that began in 2002 were accompanied by a major growth of borrowing. One important area of borrowing was in what are termed leveraged loans, mainly to private equity funds, which were used to finance takeovers. The other area that has received the most attention was a major growth of mortgage lending, including so-called subprime mortgages to low-income households with poor credit records.[23] Subprime mortgages charged interest rates around five percentage points higher than the prime 30-year mortgages, and by 2006 accounted for some 15 percent of new mortgages.

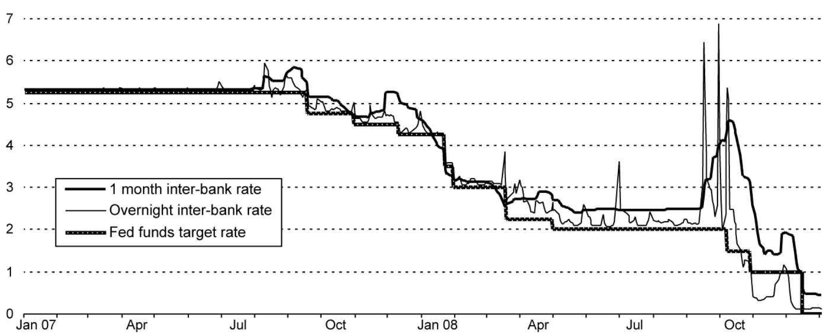
The expansion of credit was characterized by two significant features. The first was the process of securitization. The banks bundled a large number of mortgages, or other forms of loans, to create a bond that they could sell on the securities market. In this way, the banks could earn a fee while avoiding having to hold capital against such loans as they would if they had kept the loans on their own books. This process of securitization was taken a step further by some of the big investment banks, which took bonds with a relatively low rating — such as those backed by subprime mortgages — and created a set of highly complex new bonds, known as collateral debt obligations, many of which obtained the highest possible ratings.[24] Because these appeared to pay a higher return than other bonds with a similar rating, they were purchased eagerly by a wide range of financial investors.

The other significant feature was the rapid growth of what has been termed the shadow banking system. This included investment banks,[25] off-balance sheet "structured investment vehicles" set up by commercial banks, and hedge funds, all of which engaged in highly risky financial activities, but, unlike commercial banks, were not regulated by the Federal Reserve. These institutions all employed leverage; that is, they employed large amounts of borrowed money for every dollar of their own. This enabled them to magnify the returns on successful investments, but, by the same token, it will also magnify any losses. The big New York investment bank Lehman Brothers, for example, operated with 33 borrowed dollars for every one dollar of its own.

The most recent expansion proved especially profitable for banks and the shadow-banking system, especially during the peak years of the housing boom between 2004 and 2006.[26] However, in 2006 the house-price bubble burst, and as house prices fell in 2007, the value of mortgage-backed securities began to decline.[27] Because of the uncertainty about the extent of banks' exposure to losses on such securities, trust between the banks broke down, setting off the banking crisis.

The Onset of the Banking Crisis At the time of writing, this crisis had registered four main phases. The first phase began on 9 August 2007 when the breakdown in trust between banks led the interbank money market to dry up.[28] Banks do not have to put up any security when they borrow from each other in the money market and, faced with uncertainty about whether loans would be repaid, banks preferred to hoard any idle liquidity and forego the interest they could have earned. The Fed responded immediately by injecting large amounts of liquidity into the bank system, and in early September it began to reduce the lead interest rate. The Fed was able to bring the overnight money-market rate back down to around its target rate but, as can be seen in Figure 8, the one-month rate remained elevated for some time (the same was also true of the three-month rate, to which the interest rate in many debt contracts are indexed).

Figure 8. US Overnight and One-Month Interbank Interest Rate (%)



Source: Federal Reserve Board.

The crisis deepened in December 2007 when the banks' third-quarter results revealed that many of them had made large losses. The Fed, in a programme coordinated with other major Central Banks, once again pumped large amounts of liquidity into the banking system. It also created a new lending facility, the Term Auction Facility, to ensure that the liquidity would get to the banks that needed it most.[29] The Fed had previously provided liquidity through open market operations that were conducted with 19 so-called "prime dealers," but once the crisis broke and banks began to hoard reserves, the reserves no longer reached many banks. The new facility therefore directly auctioned reserves to any commercial bank that wished to bid. The total amounts involved were large (initially \$30 billion, later raised to \$75 billion, and subsequently \$150 billion), and were lent for relatively long periods (28 or 35 days).[30] Furthermore, while banks had to provide collateral for these loans, the Fed accepted a far wider range of securities than it had in the past. In addition to creating the new lending facility, the Fed also introduced further cuts in the lead interest rate. At this stage, a number of banks began to seek new sources of capital, turning to sources they probably would not have welcomed in the past, including sovereign wealth funds from China and the Middle East.

The third phase of the crisis developed in March 2008. Banks were calling in loans from hedge funds because the securities posted as collateral had lost value; as hedge funds sold securities to repay loans, prices were pushed down further. This vicious circle created particular problems for investment banks, which are required to "mark-to-market" — that is, to adjust the value of assets on their books to current market values — at the end of each month. Amidst this, Bear Stearns, one of the major New York investment banks involved in creating and marketing subprime backed securities, found itself unable to raise funds in the market. In order to avoid setting off a chain of bank failures, the Fed provided JPMorgan with a \$29 billion loan to take over Bear Stearns. Bear Stearns was not eligible for a Fed loan because, as an investment bank, it was supervised by the Securities and Exchange Commission and not the Fed. This stage of the crisis was marked by further injections of liquidity, several emergency cuts in the lead interest rate, and the creation of two additional new facilities.

The Term Securities Lending Facility, introduced by the Fed in early March, enabled prime brokers — that is, investment banks and securities brokers — to borrow government securities from the Fed, for which it accepted a very wide range of collateral. In effect, for a small fee, it enabled them to swap illiquid securities, including even mortgage-backed bonds, for highly liquid government bonds. The Primary Dealer Credit Facility was introduced in mid March 2008. Whereas the Fed had previously provided loans only to commercial banks, which it is responsible for supervising, under this new facility it extended credit for the first time to prime brokers — even though it was not responsible for their regulation.

Table 3. Estimates of US Financial Sector Losses, October 2008 ($ billions)

Loans	**Outstanding**	**Estimated Loss**
Subprime residential	300	50
Alt-A residential	600	35
Prime residential	3,800	85
Commercial real estate	2,400	90
Consumer loans	1,400	45
Corporate loans	3,700	110
Leveraged loans	170	10
Total loans	**12,370**	**425**
Securities	**Outstanding**	**Estimated Loss**
ABS	1,100	210
ABS CDOs	400	290
Prime MBS	3,800	80
CMBS	940	160
Consumer ABS	650	0
High grade corporate debt	3,000	130
High yield corporate debt	600	80
CLOs	350	30
Total Securities	**10,840**	**980**
Total Loans & Securities	**23,210**	**1,405**

Source: IMF, "Global Financial Stability Report" (October 2008), Table 1.9, p. 56.
ABS = asset backed securities; CDO = collateralized debt obligation; CLO = collateralized loan obligation; CMBS = commercial mortgage-backed securities; MBS = mortgage-backed securities.

The new facilities, in particular the Term Auction Facility, played an important part in the Fed's response to the crisis.[31] However, the measures did not address the underlying problem, namely that banks and other financial institutions held assets, in particular mortgage-backed assets, which had lost a significant part of their value. (IMF estimates of losses from loans and securitized loans are shown in Table 3.) Furthermore, in contrast to the period after 2001, conditions had changed completely in the capital market. As can be seen in Figure 7, mortgage rates, instead of following the Fed's target rate down, actually increased. As a result, despite the highly expansive monetary policy, the Fed was unable to contribute to putting a floor under falling house prices.

The fourth phase of the crisis began in September 2008. At the start of the month, the government in effect nationalized the United States's two main mortgage finance institutions. The Federal National Mortgage Association ("Fannie Mae") had been set up in 1938 under the Roosevelt government to provide long-term finance for households to buy a home. In 1968, the Johnston government privatized Fannie Mae to help raise finance for the Vietnam War, and a second institution, the Federal Home Loan Mortgage Corporation ("Freddie Mac") was set up in 1970 to provide some competition. Although privately owned, these two so-called "government-sponsored agencies" were assumed to have an implicit government guarantee. They could therefore raise capital on the bond market at preferential rates, and this provided the main source of financing for standard or prime mortgages in the United States. By 2008, the two institutions held \$5.2 trillion of mortgage debt, almost half the \$12 trillion US total. However, the fallout from the housing crisis led to doubts about the value of their assets, and this was exacerbated by concern over their small capital base and the way they had been managed. By the summer of 2008, the two institutions were facing difficulties raising new capital, and in July the government tried to prop them up without large-scale intervention. But with their share prices falling, and a mounting risk that they might fail and jeopardize other financial institutions, the Treasury Secretary Hank Paulson put them into what he termed government-controlled "conservatorship," having secured emergency authorization from Congress to support each with up to \$100 billion — the then largest financial bailout in US history.

The Failure of Lehman Brothers The decisive event during the fourth phase of the crisis occurred on 15 September 2008 when Lehman Brothers, New York's fifth largest investment bank, was forced into bankruptcy after failing to raise additional capital. Last-minute attempts to find a buyer fell through, and the government and the Fed refused to step in.[32] The decision of the US authorities to allow Lehman Brothers to collapse proved to be a major policy error as it set off a chain of events that brought both the United States and the international financial system close to a complete breakdown.

Firstly, it set off a chain of failures at other financial institutions that were directly or indirectly linked to Lehmans. This began with the United States's biggest insurance company, American International Group (AIG). Unable to raise further private finance and faced with bankruptcy, the government, in effect, took it over. The Fed provided an $85 billion loan — the first time it had ever lent to an insurance company — at a punitive 12 percent interest rate, secured with 80 percent of the company's shares. Many of this sprawling giant's insurance operations were profitable but, since the 1990s, it had developed a large financial products subsidiary that was operating, effectively, as an investment bank. It had massive holdings of derivatives and, because of its complex links with virtually all major US financial institutions, allowing it to fail was considered too risky. Other major failures included Washington Mutual, the largest mortgage bank in the country, which went bankrupt with assets of $400 billion — the largest bank failure in US history. Shortly after, Wachovia, one of the country's major commercial banks, also failed.[33]

Secondly, the crisis in the money market reached unprecedented levels. The overnight interest rate, which the Fed had had some success in controlling until then, jumped to 6.44 percent — more than three times the Fed's 2 percent target. In reality, most banks stopped lending to each other altogether. Any idle liquidity was, instead, put into US Treasury Bills, the demand for which was so great that the yield was driven down to 0.03 percent, the lowest since the early 1940s. With the money market effectively frozen, bank lending was sharply curtailed, even to well-known companies.

Thirdly, in the second week of October 2008, the crisis spread to the stock market, both in the United States and in other major capitalist states.

Until then, falls in share prices had involved mainly banks, but amidst mounting fear about the course of the crisis, many individuals began to withdraw their savings from investment funds, and these in turn were obliged to sell shares to meet the withdrawals. As stock markets in Europe and Asia also began to fall, the Fed together with the other major central banks cut their lead interest rates by half a percentage point, the first ever such coordinated international action. However, the fall in share prices accelerated and by the end of the week prices had sunk by around 20 percent in each of the major markets.

There were, in addition, two other potentially enormous dangers casting a shadow over the whole situation. One was the perennial problem that a large withdrawal of capital from the United States might precipitate a crisis of the dollar. This was, apparently, a significant concern when the government decided to rescue the two mortgage giants, Fannie Mae and Freddie Mac, since foreign central banks, including China, have invested large amounts of their foreign reserves in both.[34]

The other potential danger involves the market in credit default swaps, a form of derivative used to insure bonds against a default.[35] This market has expanded in a massive, uncontrolled way since the turn of the century, and by 2008 had a nominal value of $62 trillion — five times the US annual GDP. It represents a danger for the financial system because many of the institutions that have issued these instruments do not have the resources to meet the claims that could arise if bonds should fail. It seems that this was a key factor in the decision to rescue AIG, which had issued an estimated $513 billion of these potentially lethal instruments.[36] If AIG had collapsed, many institutions would have been left holding bonds that were not insured and, facing greater risk, their credit ratings would have been downgraded and could have set off a further chain of financial failures.

The Government's Response As the situation in US financial markets deteriorated in the days following the collapse of Lehman Brothers, Hank Paulson met with the leaders of Congress and, after warning them of the danger of a financial catastrophe, they agreed to support a $700 billion initiative to relieve financial institutions by buying up bad assets.[37] The initial proposal for what was called the Troubled Assets Relief Program was a mere three pages long and gave the Treasury Secretary sole discretion over how the funds would be deployed, with no legal or other right of review. Despite the gravity of the situation, this proposal was initially rejected by Congress, mainly because of Republican members' opposition to state intervention, but also because some Republican and Democrat members responded to widespread opposition among constituents to bailing out bankers who had previously reaped such massive rewards. Some Democrat members also insisted that any bailout for financial institutions should be accompanied by measures to relieve homeowners threatened with eviction, together with a broader fiscal package to boost the economy.

The problem of gaining political support for the proposed bailout was exacerbated by the extreme unpopularity of President Bush. It also did not help that, until becoming Treasury Secretary in 2006, Paulson had been the chief executive of Goldman Sachs, one of the New York investment banks that stood to gain from the initiative, and was estimated to have accumulated a personal fortune of $700 million. The Treasury proposal was also widely criticized by many mainstream economists. Banks would presumably wish to sell bad assets only if the state would pay them more than their current market value. There was, moreover, a major issue of how to value the assets, since most of them had never been traded on markets. More seriously, the Treasury proposal did not directly address the central problem that, because banks had made large losses, their capital was depleted and there was therefore a heightened risk that they could fail. For some, a model was provided by the Roosevelt government in the 1930s, which had successfully used the Reconstruction Finance Corporation to inject capital and take a shareholding in banks that had a prospect of surviving, and then pressed the banks to lend to small farmers and businesses, with the shares eventually being sold in the 1940s and 1950s at a profit.

The Troubled Assets Relief Program was eventually approved by Congress after intensive negotiations had expanded it to 451 detailed pages and added a further $150 billion to support Members of Congress' pet projects. However, contrary to the government's desperate hopes, this still did not stem the crisis; at this point, it spread to stock markets. On Friday 10 October

2008, after a week in which share prices had been collapsing in the United States and all the other major capitalist states, the IMF's managing director, Dominique Strauss Kahn, informed the press that the world was facing the danger of a financial collapse. That evening, the Finance Ministers of the G7 countries, who were all in Washington for the Annual Meeting of the IMF and the World Bank, held an emergency meeting and agreed on the need for coordinated action to stem the collapse.

Over the weekend, the Treasury let it be known that it was working on proposals to use part of the $700 billion Troubled Assets Relief Program for capital injections into banks. The revised, longer version of the text approved by Congress included a provision for such intervention — something that had not been highlighted in negotiations with Congress, presumably to avoid antagonizing Republican diehards. The heads of eight of the largest US banks were subsequently summoned to a meeting at the US Treasury where they were requested to sign a one-sheet document giving their approval for the government to take shares in their institutions (see Table 4).[38] Intervention in the eight banks would amount to $125 billion, and it was announced that a further $125 billion would be used to intervene in a large number of smaller banks. At the same time, the government announced that it would guarantee up to $1.5 trillion of banks' senior debt for a period of three years — a move designed to encourage the resumption of interbank lending in the money market. It also announced that it would extend the Federal Deposit Insurance Corporation's guarantee to all non-interest-bearing accounts — a measure designed to safeguard company deposits. These initiatives followed similar lines to measures launched by the British government the previous week, and subsequently adopted by Eurozone heads of government who had met in Paris over the weekend. In contrast to European proposals, however, the US government did not impose strict conditions on the banks regarding salaries or the payment of dividends to shareholders.[39]

Table 4. US Government Intervention in Major Banks, $ billions

	Government investment	Total Assets	Shareholder equity	Write downs & losses
Citigroup	25	2,100.4	136.4	60.8
Bank of America	25	1,831.2	161.0	21.2
JPMorgan Chase	25	1,775.7	133.2	18.8
Goldman Sachs	10	1,081.8	49.2	4.9
Morgan Stanley	10	987.4	35.4	15.7
Wells Fargo	25	609.1	48.0	10
Bank of New York	2-3	201.2	28.6	n.a.
State Street	2-3	146.2	14.0	n.a.

Source: "US Investing $250 Billion in Banks," *The New York Times* (14 October 2008).

On Monday 13 October 2008, when financial markets opened for the first time since the collapse of Lehman Brothers, the crisis in the financial markets did not deepen. The decision to partly nationalize the banking system appeared to have broken the spiral of financial collapse. The acute levels of interest in the money market began to decline and share prices even recovered somewhat. However, attention then shifted to the economy and indications that it was facing a serious recession. With the prospect of sharply reduced profits, the stock market began to decline again, this time in response to the deteriorating economic outlook.

Conclusion The economic model pursued in the United States since the 1980s has resulted in a massive reconcentration of income to the benefit of those at the very top, and this process strengthened during the economic expansion from 2002 to 2007 when the Bush government was in office. In broad terms, real wages at best stagnated; corporate profitability increased to levels last seen in the 1960s; the incomes of chief executives soared while huge sums were paid out though dividends and share buybacks to the owners of money capital.

A key component of this new model was the process of financial deregulation and the expansion in the scale and influence of the financial sector. The pressure exerted by financial institutions on nonfinancial companies to sustain short-term profitability, coupled with the perpetual threat of being taken over, served to seriously weaken the bargaining power of workers. In a context where the growth of real wages lagged far behind productivity growth, aggregate demand became dependent on a massive expansion of credit and the process of asset price inflation (shares in the 1990s and homes in the 2000s). Whenever the process stalled, as in the recessions of 1990–1991 and 2001, the Fed responded with a further relaxation of monetary policy. But this financial regime has now collapsed.

The financial crisis that began in August 2007 and deepened sharply after the collapse of Lehman Brothers in September 2008 marks the end of the era of financial deregulation that began in the early 1980s. However, while the era of deregulation has come to an end, it is not yet clear how stringent new financial regulation will be, and to what extent other features of the US economic regime will be challenged — in particular the enormous shift in income from working- and middle-class employees to those at the top.

At the time of writing, the state's intervention in the banking system appears to have stemmed the chain of failures set off by the collapse of Lehman Brothers. However, there are still suspicions that financial institutions have not revealed the full extent of their losses; house prices appear set to continue falling for some time; and the mountain of precarious financial instruments, most notably credit default swaps, could yet set off a further deepening of the crisis. In addition, with indications that the US economy is set for a deep recession, there is the prospect that the financial sector and the nonfinancial sector will each exacerbate the problems the other is facing.

Notes

1. Official US sources characterize this as a double recession with a short upturn in 1981.
2. Junk, or high-yield bonds, are bonds that have a higher risk of default, but also pay a significantly higher return than industrial-grade bonds issued by large, well-known companies with a very low risk of default.
3. Because the decline in employment was so strong, the National Bureau of Economic Research has set the official date for the onset of recession as December 2007. See <http://www.nber.org/cycles/dec2008.html>.
4. Nonfinancial corporations' profitability in 2006 was slightly higher than in 1997 when measured as a share of GDP, but slightly lower when measured as the return on capital employed. See Paul Lally, Andrew Hodge, and Robert Corea, "Returns of Domestic Nonfinancial Business," *Survey of Current Business,* US Department of Commerce (May 2008).

5. According to Department of Labor figures, productivity increased by an average of 2.5 percent from 1996–2000, by 3.5 percent from 2002–2004, and by 1.4 percent from 2005–2007. Details are available at <http://www.bls.gov>.
6. National Income and Product Accounts, Table 1.14. Compensation of employees (including welfare contributions) as percentage of net value added (i.e., after depreciation of fixed capital). This probably understates the extent of the decline in the share of wages since the figure for compensation includes the very large salaries of senior executives, which would be more appropriate to include in profits.
7. William Milberg, "Shifting Sources and Uses of Profits: Sustaining US Financialization with Global Value Chains," Schwartz Center for Economic Policy Analysis, The New School, Working Paper 2007–9.
8. Since imports from low-income countries increased from about 5 to 7 percent of GDP during the most recent expansion, Milberg's approach would suggest that the additional cost savings during the period amounted to around 1 percent of GDP.
9. In 2002, profits from abroad were equal to $145 billion or 19.9 percent of total profits ($65 billion was from Europe, of which $11 billion was from Britain); by 2006, profits from abroad had risen to $328 billion or 23.4 percent of the total ($156 billion was from Europe, of which $27 billion from Britain). See Department of Commerce, US International Transactions, Table 1 and Table 12, available at <http://www.bea.gov>.
10. National Income and Product Accounts, Table 1.14. Excluding 2005, the average for 2002–2007 was 56 percent.
11. Share repurchases have certain tax advantages over paying higher dividends; they also do not establish expectations that they will be paid out at the same level every year, as with dividends. For a fuller discussion, see William Lazonick, "The Quest for Share-Holder Value: Stock Repurchases in the US Economy," University of Massachusetts Lowell (September 2008).
12. Nonfinancial corporations borrowing increased from $80 billion in 2003 to $624 billion in 2007; in the previous expansion it had peaked at $380 billion in 1998 (Federal Reserve, *Flow of Funds Accounts*, Table F.102).
13. This amounted to $448 billion in 2007. Federal Reserve statisticians believe it includes shareholdings in subsidiaries.
14. Bureau of Labor Statistics, Current Population Survey <http://www.bls.gov>.
15. See Lawrence Mishel, Jared Bernstein, and Heidi Shierholz, *The State of Working America* 2008/2009, *Economic Policy Institute Book*, 2009, Table 3.5. Available from <http://www.workinamerica.org>.
16. The research was originally published in Thomas Pickerty & Emmanual Saez, "Income Inequality in the US, 1913-1999," *Quarterly Journal of Economics* 118/1 (2003). Updated data to 2006 is available from <http://elsa.berkeley.edu/~saez/>.
17. Similar results to those of Pickerty and Saez are also presented in Carola Frydman and Raven Saks, "Executive Compensation: A New View from a Long-Term Perspective," NBER Working Paper no. 14145 (June 2008).
18. See the link on Robert Shiller's home page <http://www.econ.yale.edu/~shiller/>. Between January 2002 and June 2006, the composite index rose by 83 percent; after allowing for consumer price inflation, it rose by 69 percent.
19. See Alan Greenspan and James Kennedy, "Estimates of Home Mortgage Originations, Repayments and Debt on One-to-Four Family Residences," FEDS Working Paper 2005-41, Federal Reserve Board (2005), and for updated figures kindly provided by James Kennedy, Trevor Evans, "Das Ende der Immobilienblase in den USA," *Prokla* 146 (March 2007).
20. Federal Reserve, *Flow of Funds Accounts,* Table D3.
21. According to the National Income and Product Accounts, Table 2.1, personal saving has been less than 1 percent of disposable income since 2005. But, as the Bureau of Economic Affairs notes in its press release of 28 August 2008, once credit card and other factors are taken into account it could now even be negative.
22. See Martin Feldstein, "How to Shore Up America's Crumbling Housing Market," *Financial Times* (27 August 2008).

23. For a more detailed account, see Trevor Evans, "Die internationalen finanziellen Turbulenzen" in Miren Etxezarreta et al, *Euromemo 2007,* VSA Verlag, 2008, pp. 143–162.
24. For a discussion of this process and the associated risks, see Jan Kregel, "Minsky's Cushion of Safety: Systemic Risk and the Crisis in the US Subprime Market," *Public Policy Brief No. 93* The Levy Economics Institute (2008).
25. The primary business of investment banks is trading securities, whereas commercial banks, which are regulated by the Federal Reserve, accept deposits and make loans. In the 1990s, a number of the largest New York investment banks transformed themselves from partnerships into share-owned firms with limited liability, and this was followed by a huge expansion in speculative financial investments on their own account.
26. For details, see "Profits and Balance Sheet Developments at US Commercial Banks in 2007," *Federal Reserve Bulletin* (June 2008). For a discussion of how banks have been able to sustain a much higher rate of profit than nonfinancial corporations, see James Crotty, "If Financial Market Competition is so Intense, Why are Financial Firms' Profits so High? Reflections on the Current 'Golden Age' of Finance," Political Economy Research Institute, University of Massachusetts Amhurst, Working Paper 134 (April 2007).
27. Defaults on subprime mortgages also began to rise strongly in 2007 as "teaser rates" (initial periods of one or two years in which repayments did not even cover interest charges) came to an end.
28. As a result of European banks' investments in risky US mortgage-backed securities, the money markets in the Eurozone and Britain dried up at the same time.
29. Banks that were short of reserves could borrow from the Fed's discount window but, despite cuts in the rate of interest, they were reluctant to do so because names are published and it was thought it would signal that they were having problems.
30. See Stephen Cecchetti, "Crisis and Responses: The Federal Reserve and the Financial Crisis of 2007–2008," NBER Working Paper No. W14134 (June 2008).
31. When the TAF was first introduced, the Fed reduced its outright holdings of securities so that the total supply of reserves did not increase. However, following the collapse of Lehman Brothers, there was a massive increase in TAF and primary dealer lending, and between 10 September and 22 October 2008 the total supply of reserves almost doubled, from $0.9 trillion to $1.8 trillion. By the end of 2008, the total supply of reserves stood at $2.2 trillion, of which TAF lending accounted for $420 billion, while repurchase agreements, previously the main instrument of Fed policy, amounted to only $80 billion (Federal Reserve Statistical Release H.4.1, Table 1, 29 December 2008).
32. In order to avoid a similar fate, Merrill Lynch, the fourth biggest investment bank, announced that it would sell itself to the Bank of America for $50 billion, a measure that was undertaken, apparently, at the instigation of the US authorities. A week later, the two remaining independent investment banks, Goldman Sachs and Morgan Stanley, announced that the Fed had agreed to them becoming bank-holding companies. This involves much more stringent regulation by the Fed and higher capital requirements, but gives them access to the Fed's lending facilities. It will allow them to acquire commercial banks and gain access to larger financial resources, and so avoid the fate of Bear Stearns, Lehman Brothers, and Merrill Lynch. This development marked the end of the era in which large independent investment banks had been the leading players on Wall Street.
33. The collapse of Lehman Brothers was also followed by numerous failures in Europe, including Bradford & Bingley, a British mortgage bank, Fortis, the Belgian-Dutch bank, Hypo Real Estate, a large German mortgage lender, and virtually the whole of the Icelandic banking system.
34. According to *Die Zeit* ("China: Die neue Geldmacht," 25 September 2008) China, which held $328 billion in Fannie Mae and Freddie Mac, used President Bush's presence in Beijing in August for the opening of the Olympic games to make it clear to him that they expected the US government to intervene and ensure that the two institutions would not fail — otherwise they would shift more of their reserves into euro-denominated assets.

35. In fact, it is not necessary to own the bond that is ostensibly being insured, and these instruments are widely held for purely speculative purposes.
36. See *The New York Times* (28 September 2008).
37. The Treasury Secretary also announced an extensive six-month ban on the short selling of shares in financial institutions (something that had driven down the share price of Bear Stearns, then Lehman Brothers, and now threatened other institutions), and a $50 billion programme to guarantee money market mutual fund deposits which, unlike bank deposits, are not insured.
38. See Mark Landler and Eric Dash, "Drama Behind a $250 Billion Banking Deal," *The New York Times* (15 October 2008).
39. Salaries over $500,000 would lose certain tax benefits, but this was not seen as a serious constraint.