

Contradictions of Economic Growth in the Neoliberal Era:

Accumulation and Crisis in the Contemporary U.S. Economy

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Revised Version, May, 2007

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Abstract: In the neoliberal form of capitalism, economic expansion tends to be accompanied by rising profits and stagnant wages, creating a potential problem of overproduction. This obstacle to expansion has been overcome in the U.S. economy in the neoliberal era through rising household debt and the emergence of asset bubbles. However, certain trends in the U.S. economy suggest that the past methods of promoting expansion and averting severe crises in the neoliberal era may be becoming nonviable.

Research assistance was provided by Jacqueline Morse and Helen Scharber. A revised version of this paper was published in *Review of Radical Political Economics*, vol. 40 no. 2, Spring 2008, 174-188.

1. Introduction¹

Since its inception capitalism has gone through successive stages, each characterized by a particular institutional structure. In the quarter-century following World War II, a highly regulated form of capitalism arose in the industrialized capitalist world. That form of capitalism entailed a high degree of state regulation of the economy, a welfare state, strong trade unions, and in some countries a significant state-owned enterprise sector. Since around 1980 a neoliberal institutional structure has been dominant in much of the capitalist world.² The neoliberal institutional structure involves limited state regulation of the economy, privatization of state enterprises and responsibilities, a greatly reduced welfare state, and weak trade unions.

Each stage of capitalism appears to have a particular main contradiction in the capital accumulation process. Marx, and later Marxist analysts, have pointed out various contradictions in the capital accumulation process. The particular institutional structure that capitalism takes appears to mute some potential contradictions while accentuating others.³

In the stage of regulated capitalism, strong trade unions and generous welfare state programs tended to make overproduction an unlikely problem of accumulation. However, those same institutions created a tendency for a profit squeeze to develop from rising real wages and slowing productivity growth whenever rapid expansion depleted the reserve army of labor.⁴ An economic crisis caused by such a profit squeeze tends to resolve the contradiction that caused the crisis, as the crisis brings rising unemployment which undermines workers' bargaining power.

However, as welfare state programs became more generous over time during the era of regulated capitalism, this tended to insulate workers' bargaining power from the effects of unemployment to some extent. Furthermore, as the state began to intervene more effectively to moderate and shorten crises, this also limited the effect of crises on workers' bargaining power. Some analysts believe that such factors underlay the prolonged decline in the rate of profit in the

U.S. economy after the mid 1960s, as well as the worsening inflationary spiral that developed in the 1970s. These problems ultimately led to the dismantling of the regulationist institutional structure and its replacement by a neoliberal institutional structure.⁵

The neoliberal era appears to have a different main contradiction of economic growth. A profit squeeze from rising wages is not a likely problem in this era. With labor weak, state social programs limited, and state actions directed mainly at raising the after-tax profits of capital, the result tends to be a high profit/stagnant wage expansion that faces a contradiction between the conditions for creation of surplus value and those necessary for its realization. That is, a high rate of profit plus stagnating wages creates a potential problem of overproduction relative to demand.⁶

However, that does not mean that economic expansion is impossible in a neoliberal capitalist structure. Rather, it means that some forces must provide growing demand despite stagnating wages. History has shown that a neoliberal expansion tends to be accompanied by an atmosphere of euphoria among capitalists, the emergence of asset bubbles, and the rapid expansion of various forms of debt. Those developments can promote growing investment demand and consumer demand for a time, despite the stagnation of wages. However, a neoliberal expansion brings growing imbalances that eventually lead to a crash.⁷

Kotz (2003, 2002) examined the long US economic expansion of the 1990s and identified the means by which the problem of overproduction was temporarily forestalled in that expansion. This paper examines the US economic expansion since the recession of 2001 to find further evidence of how expansion occurs in a neoliberal institutional structure. The paper finds some similarities to the 1990s expansion, including a rising rate of profit due to the weakness of labor; consumer spending that rises faster than consumer income, made possible by rising household debt, which averts overproduction for a time; and an asset bubble playing an

important role in the expansion.

While this paper focuses on the economic expansion since 2002, it finds a longer pattern in the neoliberal era which transcends individual business cycle expansions. That is, the means by which an overproduction crisis is postponed leads to rising debt which, as long as the eventual crisis is then moderated by state actions, continues to build from one expansion to the next. This finding suggests that the means necessary for promoting economic expansion within the neoliberal institutional structure may soon become unavailable, because further debt expansion may not be possible. This may lead to a severe crisis and to conditions, somewhat analogous to those of the 1970s, which can give rise to a shift to a different institutional structure.

Section 2 briefly reviews some key features of the 1990s expansion in the U.S. economy. Section 3 examines the recession of 2001, as background for our analysis of the current expansion. Section 4 analyses the expansion during 2002 to 2005.⁸ Section 5 draws lessons about accumulation and crisis in a neoliberal institutional structure.⁹

2. The Expansion of the 1990s¹⁰

In the U.S. economic expansion lasting from 1992-2000, the second half of the expansion was significantly more robust than the first. Real gross domestic product (GDP) grew relatively slowly, at 3.1% per year, from 1991 to 1995 but then grew much faster, at 4.1% per year, from 1995-2000. During the slow first half of the expansion, growth was driven by rapidly rising nonresidential fixed investment, which appeared to be responding to a sharply rising after-tax rate of profit. The acceleration of growth after 1995 was driven at first by the emergence of a double-digit growth rate in nonresidential fixed investment, as the rate of profit continued to rise to a level not seen since the 1960s.¹¹ After 1997 the investment boom was supplemented by accelerating growth in consumer spending. The latter grew more rapidly than disposable

personal income for the expansion as a whole, with the gap between the two growing over time. In the rapid phase of the expansion after 1995, both investment and consumer spending were driven by the stock market bubble and, in the case of consumer spending, was financed by growing household debt.¹²

The government component of GDP grew much more slowly than GDP as a whole throughout the 1990s expansion. By the end of the decade, as is well known, slow growth in federal spending plus a rapid rise in tax revenues moved the federal budget into surplus. Both short and long-term interest rates remained relatively high throughout the expansion, although not as high as they had been at times in the 1980s.¹³ This expansion was the longest in US history, and at its end the unemployment rate reached the relatively low level of 4.0% while inflation remained low.¹⁴

3. The Recession of 2001

In the recession of 2001, GDP stagnated rather than significantly declining. Starting in the third quarter of 2000, it underwent a series of quarterly declines and then recoveries, a pattern that lasted through the third quarter of 2001, after which GDP rose consistently again. The recession is more distinct for the output of the nonfinancial corporate business sector, with a peak in the third quarter of 2000 and a trough in the fourth quarter of 2001. However, the decline in nonfinancial business sector output was mild, at 2.7% over those 5 quarters (U.S. Bureau of Economic Analysis, 2006, National Income and Product Account tables 1.1.6 and 1.14).

Figure 1 shows the after-tax rate of profit of the nonfinancial corporate business sector from 1996 to 2005.¹⁵ From its 1990s peak in 1997, the rate of profit fell nearly in half (by 46 per cent) by 2000. However, the precipitating cause of the economic downturn was not the falling profit rate but the bursting of the stock market bubble in the late summer of 2000.¹⁶ The collapse of the bubble broke the euphoria of corporate investors. Capacity utilization in industry had been

falling steadily since 1997, from 83.9% in 1997 to 81.8% in 2000 (Federal Reserve, 2006, table G.17), as the investment boom of those years created productive capacity in excess of what was needed.¹⁷ Once the bubble-induced euphoria suddenly evaporated, corporate decision-makers may have noticed the build-up of unused capacity.¹⁸

[Place figure 1 about here]

There followed a drop in nonresidential fixed investment and a large swing in inventory accumulation from a positive to a negative value (indicating disaccumulation of inventories). As table 1 shows, nonresidential fixed investment fell by 4.2% in 2001 and by another 9.2% in 2002, indicating a sharp decline in the incentive to invest. As table 2 shows, inventory disaccumulation in 2001 contributed -0.88 percentage points to GDP growth, an even larger downward impetus than the -0.52 percentage points coming from nonresidential fixed investment that year.¹⁹

[Place tables 1 and 2 about here]

A severe recession was avoided in 2001 by an unusual continuation of growth in consumer spending. In the U.S. economy, consumer spending is approximately two-thirds of GDP, so that its movements have a large impact on GDP. Economists have traditionally portrayed consumer spending as a relatively passive factor in economic growth, rising when GDP rises, falling or rising little when GDP declines. As table 3 shows, in the preceding four recessions, consumer spending fell in two, rose by 0.2% in one, and rose by 1.4% in the fourth. Consumer durable goods spending, which is considered the part of consumer spending that is easiest to postpone in hard times, declined in each of the previous four recessions. By comparison, in the recession year of 2001, consumer spending grew by 2.5%, and spending on consumer durables by 4.3%, despite the fact that disposable personal income grew that year by only 1.9%.

[Place table 3 about here]

Consumer spending can rise faster than household income by means of households incurring debt to finance the spending. Figure 2 shows three different measures of household debt: 1) household debt as a percentage of disposable personal income; 2) household debt as a percentage of household assets; and 3) the household debt service ratio, which is household debt servicing payments as a percentage of disposable income. The third measure indicates how burdensome the debt is for households. The first shows the potential burden of the debt without regard to the current interest rate and repayment terms, which can change over time. The second shows the extent to which households are leveraging their assets by adding debt.

[Place figure 2 about here]

In figure 2 we see that, in the three-year long depressed period 1980-82, all three measures of household debt fell.²⁰ In the next recession in 1991, all three measures declined either in 1991 or the following year. That is, the previous two recessions of the neoliberal era resulted in a reduction in household debt by all three measures. Such declines help to prepare the way for future increases that are needed to promote another expansion. However, in 2001 all three measures of household debt jumped significantly, reaching their highest levels in the neoliberal era to date.

Why did households go deeper into debt to increase their spending amidst a recession in 2001? The Fed engineered rapidly falling interest rates that year. As figure 3 shows, the short-term federal funds rate fell from 6.24% to 3.88% during 2001. The prime rate, which affects credit card rates, fell from 9.23% to 6.91%. The rate on 30-year conventional mortgages fell from 8.06% to 6.97%. While the fall in interest rates did nothing to stem the accelerating decline in business investment, it apparently encouraged households to take on additional debt to raise their spending. As a result of falling interest rates, the debt service ratio rose by much less in

2001 than the other two measures of household debt (figure 2). That is, the rise in the burden of repayment was moderated by the decline in rates.

[Place figure 3 about here]

Both the federal government and state and local governments contributed to moderating the 2001 recession, as rising federal purchases added about one-fourth of a percentage point of GDP growth while rising state and local spending added about one-third of a percentage point (table 2). However, rising consumer spending, dependent on increased household debt, did the heavy lifting, adding 1.74 percentage points of GDP growth that year. As a result, the next expansion began with a higher, rather than a lower, level of household debt than at the end of the previous expansion. Indeed, the expansion began in 2002 with the highest levels of household debt since 1980.

4. The Expansion of 2002-2005

As table 1 shows, the U.S. economy grew slowly for the first two years of the expansion that started in 2002, growing at 1.6% in 2002 and 2.7% in 2003. In 2004 and 2005 the economy expanded more rapidly, at 4.2% and 3.5% respectively. In addition, the factors promoting growth differed in those two periods. This expansion can be divided into two phases to capture the different growth rates and the different forces bringing expansion, with phase 1 comprising the years 2002-03 and phase 2 the years 2004-05.

In every previous business cycle expansion since 1962, the expansion began with a rapid increase in nonresidential fixed investment. However, that was not the case in this expansion. In phase 1 nonresidential fixed investment was declining or barely growing, as table 1 shows. It fell by 9.2% in 2002 and rose by only 1.3% in 2003. This suggests that the overcapacity created during the previous expansion took some time to work off. The capacity utilization rate in industry fell from 81.8% at the peak in 2000 to 75.1% in 2002 and 75.7% in 2003, the lowest

levels since the severely depressed conditions of the early 1980s, when the unemployment rate rose above 10% (Federal Reserve System, 2006, table G.17).

During phase 1 the expansion was led by growth in consumer spending. In 2002 consumer spending grew by 2.7%, much faster than the 1.6% growth in GDP. Consumer spending contributed 1.9 percentage points of output growth by itself, greater than the actual growth of output (table 2). In 2003 consumer spending grew by 2.9%, slightly faster than the 2.7% growth of output. It contributed 2.05 percentage points of output growth, or 76% of the total output growth.

How can we account for the leading role of consumer spending in phase 1? In 2002 personal income, which is the income from all sources received by households before taxes, rose by only 0.4%, as both wage and salary disbursements and property incomes declined, as table 4 shows. However, personal taxes fell by 16.2% that year, as the Bush Administration's tax cuts took hold. As a result of the large tax cuts, disposable personal income rose by 3.1% in 2002. This was 0.4 percentage points greater than the 2.7% increase in consumer spending, and the personal saving rate actually rose in 2002, the only year of increase since 1998 (table 4).

[Place table 4 about here]

The Bush tax cuts benefitted primarily the very rich, who normally save a high proportion of their income and may not increase their consumption at all in response to a tax cut. However, some of the tax cuts affected upper middle and even middle income households, and this probably contributed to the increase in consumer spending. While the tax cuts can account for some of the increase in consumer spending, the data on household debt show that much of the credit for rising consumer spending is due to increased consumer borrowing. As figure 2 shows, in 2002 the first two measures of household debt rose substantially, while the third, the debt service ratio, rose slightly, as the decline in interest rates in 2002 reduced the burden of any

given amount of debt. It appears that rapidly falling interest rates again promoted growing consumer spending (see figure 3).

In 2003 personal income rose slowly, by 1.3%, but again personal taxes fell, by 6.7%, and disposable personal income rose by 2.4%. However, consumer spending rose by 2.9% that year, and again debt financing was the means by which households were able to continue increasing their spending.

Government purchases contributed modestly to phase 1 of the expansion. As table 2 shows, growing government purchases contributed 0.80 percentage points of output growth in 2002 and 0.53 percentage points of output growth in 2003, in each year counterbalancing the drag on growth from the rising deficit on net exports. In 2003 federal military spending became the main factor in the government share of output growth, as state and local purchases and federal non-military purchases made little contribution to growth (table 2). Finally, residential investment began to grow rapidly in 2003, responding to very low interest rates, and in that year contributed 0.41 percentage points of output growth.

In phase 2 of the expansion, output growth was significantly faster, at 4.2% in 2004 and 3.5% in 2005. While consumer spending growth accelerated in this phase, it ceased to be the leading factor in GDP growth. The leading role in GDP growth shifted to nonresidential fixed investment, and secondarily residential investment. Nonresidential fixed investment finally began to grow rapidly (table 1), rising by 9.4% in 2004 and 8.6% in 2005. Residential investment rose by 10.3% in 2004 and 7.1% in 2005. Total fixed investment contributed 1.47 percentage points of growth in 2004 and 1.29 percentage points in 2005 (table 2).²¹

Why did nonresidential fixed investment grow rapidly starting in 2004? While capacity utilization in industry recovered a bit to 78.6% that year, it was well below the levels of 80-84% recorded during the 1990s expansion (Federal Reserve System, 2006, table G.17). The likely

reason is a marked recovery of the after-tax rate of profit after 2001 (figure 1). From a low of 2.6% in 2001, it rose to 4.6% in 2004 and 2005, a rise of 77%. This rise in the rate of profit was primarily due to a large disparity between the growth in real wages and output per worker. From 2001-05 real compensation per worker in the nonfinancial corporate business sector rose at an annual rate of only 0.6% per year, while output per worker in that sector rose at 3.1% per year (U.S. Bureau of Economic Analysis 2006, National Income and Product Accounts tables 1.14, 6.5C, 6.5D; U.S. Bureau of Labor Statistics 2006).²² The rapid rise in the rate of profit during 2001-2005 was a result of the operation of the neoliberal model, which tends to repress real wage growth.²³

Yet despite the repressed wage growth, consumer spending rose rapidly during phase 2 of the expansion. Although consumer spending rose slightly more slowly than GDP growth in 2004 and at the same rate as GDP growth in 2005, the large size of consumer spending resulted in that component of GDP contributing 65% of output growth in 2004 and 71% of output growth in 2005. Here we arrive at the nub of the contradiction of accumulation in a neoliberal institutional structure. How can consumer spending continue to rise rapidly while real wages are repressed? As table 4 shows, disposable personal income in 2004 and 2005 rose significantly more slowly than GDP, yet consumer spending rose as rapidly, or almost as rapidly, as GDP. In 2004 consumer spending rose by 3.9% while disposable personal income rose by only 3.4%. In 2005 the gap rose dramatically, as consumer spending rose by 3.5% while disposable personal income rose by only 1.4%. In 2005 the personal saving rate turned negative, at -0.4% of disposable personal income.

The explanation of the paradox of rising consumer spending in the face of stagnating real wages is found in rising household debt.²⁴ The entire expansion from 2002-2005 has been supported by growing household debt that has reached its highest level in recent history. From

the previous business cycle peak of 2000, household debt over disposable income rose from 91.0% to 120.0%, household debt over assets rose from 13.3% to 16.9%, and the debt service ratio rose from 12.6% to 13.7% (figure 2). The first measure of household debt has risen steadily over the period. The second measure rose from 2000 to 2002, then stabilized through 2004 before rising again in 2005. The third rose significantly in the recession year of 2001, then stabilized through 2004 and rose again in 2005. The different patterns of growth of the three measures of household debt suggest the sources of rising debt.

The behavior of the third measure, the debt service ratio, is explained by changes in interest rates. Interest rates and repayment terms that fell and remained low through 2004 allowed households to rapidly increase their debt, relative to disposable income, without increasing the repayment burden. Thus, the Fed's very easy monetary policy allowed households to expand their debt without immediate cost. However, rising interest rates in 2005 sent the debt service ratio rising again. If interest rates continue to rise, the burden of this debt will rise further.

How have households been able to borrow so much? The two-year-long stabilization of the second measure, the ratio of debt to assets, after 2002 suggests the answer to that question. The development of a bubble in the housing sector produced a rapid rise in the value of household assets, enabling households to borrow against their appreciating homes.

Figure 4 shows the housing price index (HPI) divided by the homeowner's equivalent rent (OER). This ratio is a standard indicator of whether the price of homes reflects an asset bubble in housing (McCarthy and Peach, 2004). By an asset bubble is meant a rising price of an asset that cannot be explained by its economic value but is due to self-reinforcing speculative purchases, aimed at gaining trading profits from an expected further rise in the price of the asset. The OER is taken to indicate the economic value of owning a house, so a large rise in the ratio of

HPI to OER may indicate an increase in housing prices beyond what is justifiable by changes in economic value.

[Place figure 4 about here]

The ratio HPI/OER rose during the economic expansion years 1985 through 1989, although only by 5.1% over those 4 years. The ratio then declined through the recession of 1991 and the sluggish expansion of 1992-95, then slowly rose to just below the 1989 level by 2000. However, rather than falling in the 2001 recession, the ratio rose sharply in 2001 and continued rising for the next four years, increasing by 34% during 2000-2005. In 2005 the ratio was 32% above its highest level during 1980-1999 (reached in 1989). This suggests that an accelerating housing bubble emerged during this expansion, particularly since 2003.

The housing bubble enabled households to gain access to growing credit. It explains why the ratio of debt to assets stopped rising for two years after 2002, despite the continuing rise in debt relative to disposable personal income. However, in 2005 the debt to assets ratio rose again, as households borrowed even faster than home values were rising.

5. Lessons of the Expansion

We now have all the pieces needed to assess the expansion of 2002-2005 and to draw some implications from it about the contradictions of accumulation in a neoliberal institutional structure. The key factors driving the expansion have been the following, in order of importance: 1) growing consumer spending driven by growing debt, which in turn has been driven by easy monetary policy and a housing bubble; 2) growing nonresidential fixed investment driven by a rising profit rate which, in turn, has been due primarily to real wages growing more slowly than output per worker; 3) growing residential investment driven by easy monetary policy and probably also by the housing bubble; and 4) growing federal spending, mainly made up of rising military purchases, that directly contributed to GDP growth, and tax reductions that indirectly

contributed to GDP growth, financed by a rapid increase in the federal budget deficit, which went from a surplus of \$189 billion in 2000 to a deficit of \$428 billion in 2004 before falling to a deficit of \$361 billion in 2005 (U.S. Bureau of Economic Analysis, 2006, National Income and Product Accounts table 3.1).

Thus, the contradiction of economic growth in a neoliberal structure, between the favorable conditions for creation of surplus value, indicated by a rising profit rate driven by stagnating real wages, and the resulting problematic conditions for realization of surplus value, has been temporarily resolved during 2002-05 by growing household and government debt, large reductions in interest rates, and a housing bubble. There is some similarity to the 1990s expansion, when the factors that forestalled overproduction were an investment boom prolonged by a stock market bubble and a consumer boom set off by that same bubble. Asset bubbles tend to emerge in a neoliberal structure, because the shift in income toward profits and toward wealthy households creates a rapidly growing volume of funds seeking investment while potential final demand growth is limited by that same process. Hence, the surplus funds tend to find their way into speculation in some asset, setting off a bubble. Economic expansions within a neoliberal structure appear to depend on the emergence of such bubbles as well as the expansion of debt.²⁵

When a crisis emerged in 2001 following the bursting of the stock market bubble, the conditions for limiting the severity and duration of that crisis, within the neoliberal structure, were favorable. There were two reasons for this: 1) interest rates were relatively high, leaving ample room for lowering them; and 2) the federal budget was in surplus, leaving ample room for expansionary fiscal policy. However, the means for moderating the recession of 2001 and for stimulating the subsequent expansion pushed household debt to previously unseen levels, drove government debt to very high levels, and brought interest rates to historically low levels. These

developments have implications for the future trajectory of the U.S. economy within the neoliberal structure.

The housing bubble stopped growing in 2006 and showed signs of bursting in the second half of 2006.²⁶ When the housing bubble deflates, as all bubbles must, households will find it difficult to obtain further credit based on home values.²⁷ Interest rates, which reached very low levels by 2004, have been rising since then, which raises the burden of the record level of household debt. This suggests that the process of increases in consumer spending beyond increases in disposable personal income may have reached its limit. If that is the case, then a crisis of overproduction is likely to break out.

When the next crisis emerges, because of the trends noted above, it will be more difficult for the government to take effective steps to moderate the crisis than it was in 2001. Several factors would present obstacles to the Fed sharply lowering interest rates in the near future, including the high energy prices that seem likely to persist and the huge US trade and current account deficits that put downward pressure on the value of the dollar -- a pressure which is normally countered by keeping interest rates high. The very large federal budget deficit will make it difficult, although not impossible, for the federal government to pursue further expansionary fiscal measures. As a result, when the next crisis of overproduction emerges, it may become a severe one, as consumer spending stagnates or declines and business fixed investment declines. A stagflation could possibly emerge under these conditions, in which declining consumer and investment demand reduce GDP, while the huge current account deficit requires high interest rates yet still causes a falling dollar, bringing rising inflation.

It is not possible to predict the exact course of events for the US economy. However, the foregoing analysis suggests that the U.S. economy's neoliberal structure may be reaching a limit in its ability to promote economic expansion and avert severe economic crises. If the means to

temporarily resolve the main contradiction of capital accumulation within that structure have now become unavailable, then we may be entering a period of crisis of the neoliberal model itself, analogous to the crisis of regulated capitalism that emerged in the early 1970s. If this occurs, the neoliberal institutional structure may not survive such a crisis.

Appendix

1. The Rate of Profit

The rate of profit in figure 1 is the after-tax profit of the nonfinancial corporate business sector, as a percentage of the net worth (at market value) of that sector at the beginning of the year. Other studies have used, for the denominator of the profit rate, nonresidential fixed capital, in some cases with an estimate of inventories added in.²⁸ To analyze the accumulation behavior of enterprises, there is a strong case for using net worth, which is total assets less debt. Net worth is the part of the total capital that is owned by those who own the enterprise. Regarding the profit rate as an incentive to accumulate, and assuming that enterprise owners directly or indirectly make the accumulation decision, then it would seem that they would consider the profits they receive in relation to the capital they have advanced. The owners of capital lent to enterprises receive interest, while profits are the return to those who advanced the equity capital measured by net worth. Of course, other factors influence accumulation, including the terms on which borrowed funds are available.

The profit rate is measured for the nonfinancial corporate business sector primarily because there are conceptual problems with combining the financial and nonfinancial sectors for both the measure of capital invested and profit. In addition, the nonfinancial corporate business sector is the only broad private sector category for which data are available for net worth, from the Federal Reserve. On the other hand, the financial sector has been growing relative to the nonfinancial sector. By 2005 the gross value added of the financial sector was 13% of the total gross value added of the corporate business sector. A significant part of nonresidential fixed investment is done by the financial sector. Thus, the decision to use the nonfinancial sector for the profit rate does cause some disjuncture between the profit rate and investment variables used in this study, since the latter is for the entire private sector. In addition, we do not include the

non-corporate business sector in the profit rate calculation, which causes a further disjuncture between profit rate and business investment.

The nonfinancial corporate business sector includes retail and wholesale trade, which are not considered to be productive of value and surplus value in Marxist theory. However, it was not possible to separate them from the rest of the nonfinancial corporate business sector, and in any event our definition of the rate of profit is not intended to have surplus value in the numerator but rather the flow that appears as profit for capitalist firms that may use such profits for investment.

Our data for net worth exclude the farm part of the nonfinancial corporate business sector, since the Fed data exclude the farm sector, while the flow of profit is for the entire nonfinancial corporate business sector. This introduces an error, but a very small one: in 2000 the value added in agriculture was 2.0% of nonfinancial corporate business sector output (Economic Report of the President, 2003, table B-12, p. 292).

The reference to real wages in the text refers to total employee compensation, which includes the compensation of all wage and salary employees in the nonfinancial corporate business sector. Thus, even corporate managers are included. In the neoliberal era, this variable rises faster than the wages of production workers. It would be desirable to break down our wage variable into the compensation of production workers and that of other employees, but data for that breakdown were not available.

2. Contributions to the Growth Rate of Gross Domestic Product

Table 1 on the growth rate of real GDP shows all the components of GDP except changes in inventories and net exports. Those two are omitted from the Bureau of Economic Analysis table on growth rates because of conceptual problems with calculating a growth rate for a variable which can be negative or zero. However, in table 2, on the contributions to GDP growth,

those two components are included. The reason is that the contribution of any component of GDP to GDP growth is the product of the growth rate of that component multiplied by the share of that component in GDP. Thus, the value of a component, such as changes in inventories, is in the denominator of the first factor and the numerator of the second, and so it cancels out. Thus, the contribution of any component is equal to the absolute change in the component from the previous year divided by the value of GDP in the preceding year, and the possibility that a component may have a negative or zero value does not matter for calculating its contribution to GDP growth.

3. Data Sources

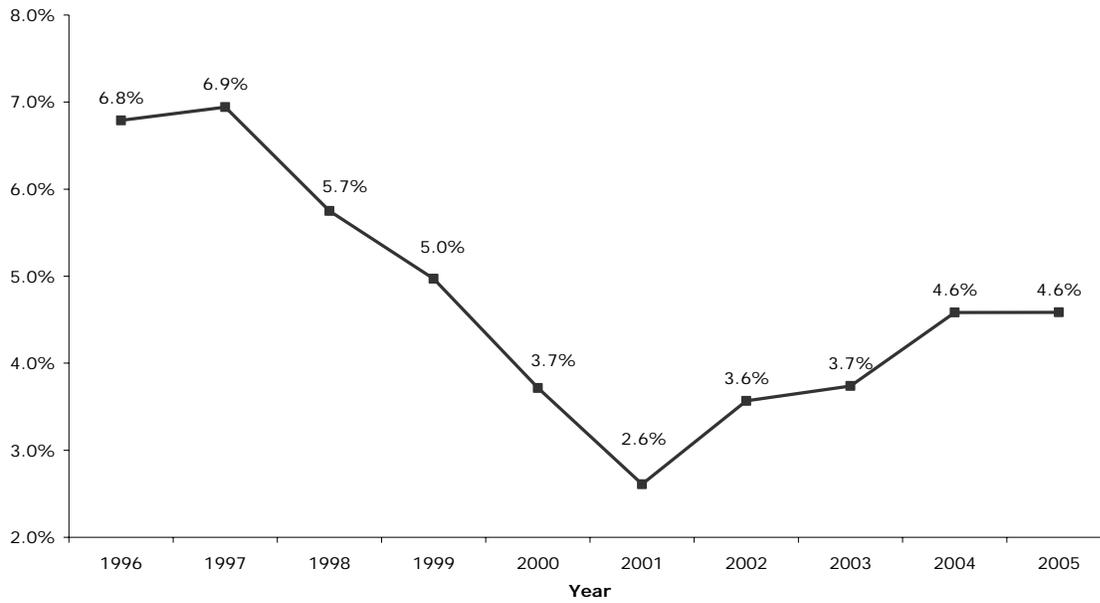
Data sources are given with each table and figure. All data were downloaded during May through September 2006. The data for net worth come from the Federal Reserve website: <http://www.federalreserve.gov/>, release date June 8, 2006. The data on the housing price index come from the Office of Federal Housing Enterprise Oversight website: <http://www.ofheo.gov/>. The consumer price index and the homeowner's equivalent rent index come from the U.S. Bureau of Labor Statistics website: <http://www.bls.gov/>. All other data come from the U.S. National Income and Product Accounts, versions updated on July 28, 2006, available at the Bureau of Economic Analysis website: <http://www.bea.gov/>.

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Figure 1. After-Tax Rate of Profit of the U.S. Nonfinancial Corporate Business Sector, 1996-2005



After-tax profit as a percentage of net worth.

Source: U.S Bureau of Economic Analysis, 2006, National Income and Product Accounts table

1.14, and Federal Reserve System, 2006, Flow of Funds Accounts, Table B.102.

Figure 2(a). Ratio of Household Debt to Disposable Personal Income, 1980-2005

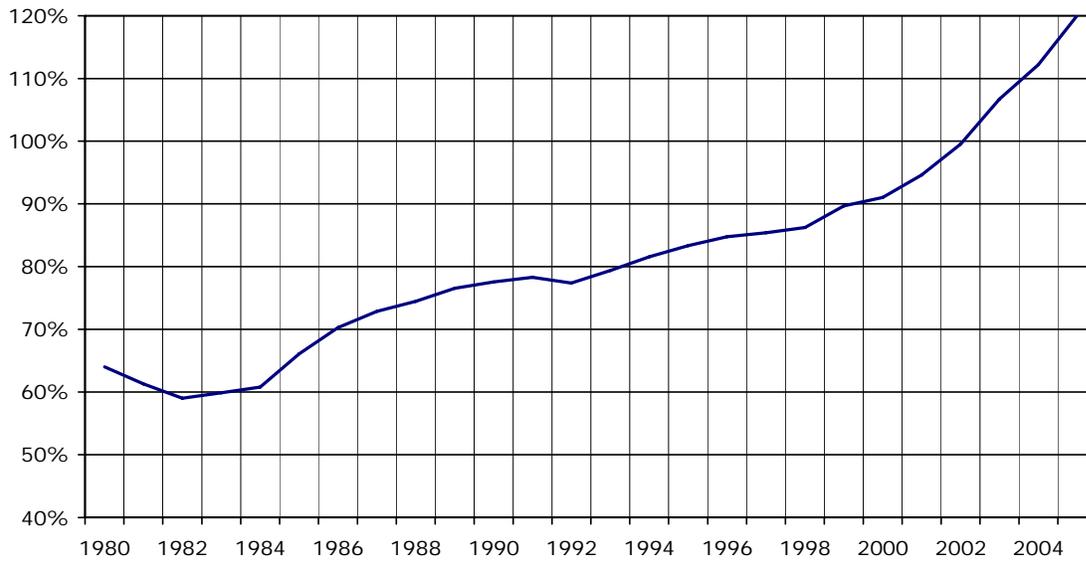
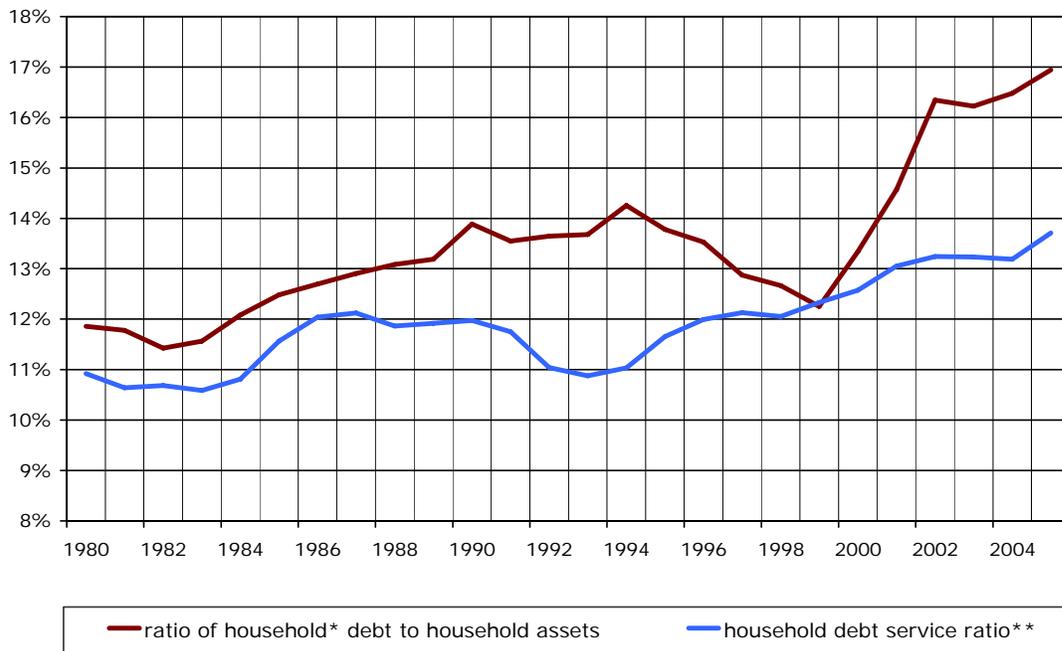


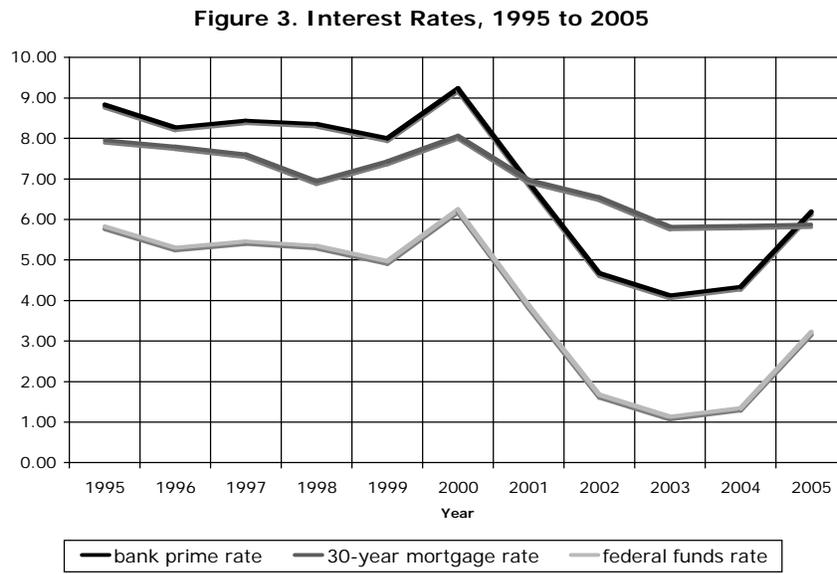
Figure 2(b). Two Measures of Household Debt, 1980-2005



* Household debt is the sum of home mortgages and consumer credit liability

** The household debt service ratio is the Federal Reserve’s estimate of the ratio of debt payments to disposable personal income. Debt payments consist of the estimated required payments on outstanding mortgage and consumer debt.

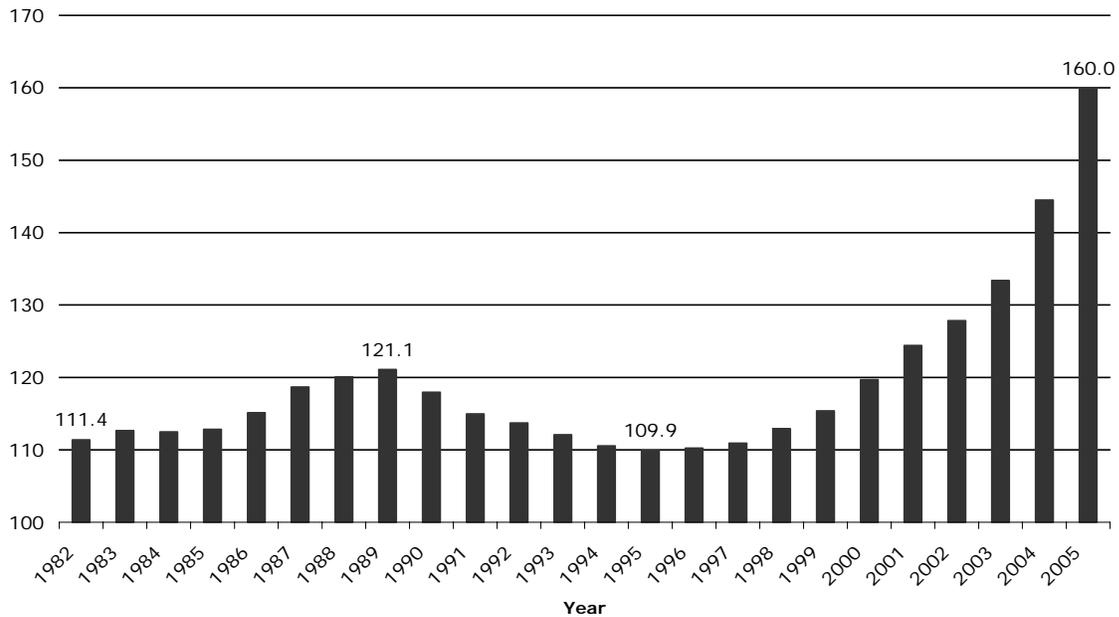
Source: Federal Reserve System, 2006, Flow of Funds Accounts table B.100 and household debt data; U.S. Bureau of Economic Analysis, 2006, National Income and Product Accounts table 2.1.



Interest rates are for the end of December of each year.

Source: Federal Reserve System, 2006, Statistical Release H.15.

Figure 4. Housing Price Index Relative to Homeowner's Equivalent Rent



The housing price index divided by the homeowner's equivalent rent, expressed as an index. The housing price index is calculated by the Office of Federal Housing Enterprise Oversight, base year 1980 = 100. Owner's equivalent rent of primary residence is calculated using base year 1982 = 100

Source: Office of Federal Housing Enterprise Oversight, 2006; U.S. Bureau of Labor Statistics, 2006.

Table 1. Growth Rates of Real Gross Domestic Product and its Components, 2000-2005

	2000	2001	2002	2003	2004	2005
Gross Domestic Product	3.7	0.8	1.6	2.7	4.2	3.5
Consumption	4.7	2.5	2.7	2.9	3.9	3.5
Nonresidential fixed investment	8.7	-4.2	-9.2	1.3	9.4	8.6
Residential investment	0.8	0.4	4.8	8.4	10.3	7.1
Exports	8.7	-5.4	-2.3	1.8	8.4	6.9
Imports	13.1	-2.7	3.4	4.6	10.7	6.3
Government purchases	2.1	3.4	4.4	2.8	2.2	1.8
Federal government	0.9	3.9	7.0	6.9	5.2	2.3
National defense	-0.5	3.9	7.4	8.8	7.0	2.6
Nondefense	3.5	3.9	6.3	3.4	1.8	1.8
State and local	2.7	3.2	3.1	0.6	0.4	1.5

Changes in inventories are not included – see appendix.

Source: U.S Bureau of Economic Analysis, 2006, National Income and Product Accounts table

1.1.1.

Table 2. Contributions to the Growth Rate of Real Gross Domestic Product, 2000-2005

	2000	2001	2002	2003	2004	2005
Gross Domestic Product	3.7	0.8	1.6	2.7	4.2	3.5
Consumption	3.17	1.74	1.90	2.05	2.71	2.48
Nonresidential fixed investment	1.06	-0.52	-1.06	0.13	0.92	0.88
Residential investment	0.03	0.02	0.22	0.41	0.55	0.41
Change in private inventories	-0.10	-0.88	0.43	0.05	0.35	-0.29
Net exports	-0.86	-0.20	-0.69	-0.46	-0.73	-0.29
Government purchases	0.36	0.60	0.80	0.53	0.41	0.34
Federal	0.05	0.23	0.43	0.45	0.36	0.16
National defense	-0.02	0.15	0.29	0.37	0.32	0.12
Nondefense	0.07	0.08	0.14	0.08	0.04	0.04
State and local	0.31	0.37	0.37	0.08	0.05	0.17

Contributions to GDP growth from change in the components of GDP (see Appendix).

Note: The sum of the contributions of the components of GDP equals the growth rate of GDP as a whole, apart from rounding errors.

Source: U.S Bureau of Economic Analysis, 2006, National Income and Product Accounts table 1.1.2.

Table 3. Consumer Spending in Recessions, 1974-2001

	1974	1980	1982	1991	2001
<i>Annual percentage change in:</i>					
Gross Domestic Product	-0.7	-0.2	-1.9	-0.2	0.8
Consumption	-0.8	-0.3	1.4	0.2	2.5
Durable goods consumption	-6.9	-7.8	-0.1	-5.6	4.3

Source: U.S Bureau of Economic Analysis, 2006, National Income and Product Accounts table

1.1.1.

Table 4. Personal Income, Spending, and Saving, 2000-2005

	2000	2001	2002	2003	2004	2005
<i>Growth Rates of:</i>						
Personal income	5.4%	1.4%	0.4%	1.3%	3.3%	2.6%
Wage and salary disbursements	5.5%	0.3%	-0.6%	0.7%	2.8%	3.3%
Supplements to wages and salaries	5.0%	2.7%	9.6%	6.9%	4.6%	5.0%
Property income ⁺	5.8%	0.3%	-4.1%	-0.7%	3.5%	-0.8%
Personal current transfer receipts	3.5%	7.9%	6.2%	2.5%	3.5%	3.9%
Less: Contributions for government social insurance	3.7%	1.9%	1.2%	1.6%	3.2%	3.0%
Less: Personal current taxes	8.9%	-1.9%	-16.2%	-6.7%	2.3%	12.1%
Disposable personal income	4.8%	1.9%	3.1%	2.4%	3.4%	1.4%
Consumption	4.7%	2.5%	2.7%	2.9%	3.9%	3.5%
Gross Domestic Product	3.7%	0.8%	1.6%	2.7%	4.2%	3.5%
Personal saving as a percentage of disposable personal income ^a	2.3%	1.8%	2.4%	2.1%	1.8%	-0.4%

+ Includes rent, interest, dividends, and proprietors' income.

a. This variable is not a growth rate.

Note: The GDP price index for consumer spending is used to deflate the income variables in this table, except for GDP.

Source: U.S Bureau of Economic Analysis, 2006, National Income and Product Accounts tables

2.1, 1.1.1, 1.1.4.

Notes

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1. I am grateful for comments on the manuscript from three reviewers for *RRPE*.
 2. The neoliberal transformation was far-reaching in the U.S. and the U.K. starting around 1980, although there is some debate about the date by which neoliberal institutions became fully established in those two countries. In some other countries neoliberal transformation came later, such as the former Communist Party ruled states of Eastern and Central Europe. In some European social democracies there has been only a marginal shift toward neoliberalism, while China has followed a model quite different from the neoliberal one.
 3. Wright (1979, ch. 3) was an early advocate of this view.
 4. Marx (1967) introduced this source of economic crisis in chapter 25 of volume I of *Capital*. Weisskopf (1979) found that a profit squeeze from labor's bargaining power was the principal cause of declines in the rate of profit in the U.S. economy in the decades following World War II.
 5. Such analyses appeared in a number of works about the U.S. economy in the 1960s and 1970s, such as Bowles et. al. (1984). As noted in note 2 above, the regulationist structure was not dismantled in all of the developed capitalist countries.
 6. Formal models of the two crisis tendencies considered in this article, overproduction and a profit squeeze due to a declining reserve army, can be found in Sweezy (1942, ch. 5-6, 8-9), Wright (1979), and Weisskopf (1979).
 7. Global factors play various roles in this process. In the U.S. case, which is the focus of this article, the readiness of foreign wealth holders and central banks to accumulate U.S. debt securities -- particularly the central banks of Japan, China, and Russia -- has facilitated the

increase of debt in the U.S., which prolongs economic expansions. China's rapid growth, with the accompanying voracious appetite for imports of raw materials and other inputs, appears to have propelled lengthy expansions in a number of countries. However, in the neoliberal era the U.S. has generally run a large trade deficit, which has widened as expansions have continued, which suggests that demand from outside the U.S. has not directly helped to solve the demand problem for U.S. capitalism in this era.

8. At the time this article was written, macroeconomic data on the U.S. economy were available through 2005.

9. This article analyses the movement of key variables during recent U.S. business cycles. A thorough treatment of the theory and empirical evidence about what happens during business cycles can be found in Sherman (1991).

10. See Kotz (2002, 2003) for data supporting the claims made in this section of the paper about the 1990s economic expansion in the U.S.

11. The after-tax rate of profit of the nonfinancial corporate business sector, as a percentage of net worth, was relatively low from 1974 to 1991, compared to the period 1948-73. Starting in 1992 it rose rapidly through 1997. By the latter year it had reached a level not seen since 1967. See Kotz (2002, figure 1, p. 35).

12. Even after the rate of profit peaked in 1997, and fell sharply thereafter, investment continued to grow at a double digit rate. The euphoria induced by the stock market bubble was likely a major explanatory factor, although other conditions may also contribute to high investment when the rate of profit is falling, such as competitive pressures and the availability of new technologies.

13. In 1999 the federal funds rate was 5.0% and the 5-year treasury bond rate was 5.6% while the GDP price deflator rose by only 1.6%.

14. There were severe imbalances in the 1990s expansion, such as the large and growing US trade and current account deficits. However, such imbalances are not our concern here.

15. See the Appendix for a discussion of the profit rate variable and its data sources.

16. The broad Standard and Poors 500 Index reached its peak in August 2000. High technology stocks had peaked several months earlier.

17. While there is no measure available of capacity utilization for the nonfinancial corporate business sector as whole, the ratio of that sector's output to its tangible assets declined by 4.1% during 1997-2000 (U.S. Bureau of Economic Analysis, 2006, National Income and Product Accounts table 1.14; Federal Reserve, 2006, Flow of Funds Accounts, table B.102).

18. Investment in information technologies is directed at reducing costs more than increasing productive capacity. Hence, the significant part of investment in the 1990s which went into information technologies was not very sensitive to changes in the capacity utilization rate.

19. Table 2 breaks down each year's growth rate of GDP into the contributions from the components of GDP. Each component's contribution can be positive or negative, depending on whether it increases or decreases. The size of any component's contribution depends on the rate at which the component changes and the relative share of that component in GDP.

20. The official business cycle record shows a recession in 1980, followed by a weak recovery in 1981, and then another recession in 1982. The 3-year period 1980-82 is sometimes viewed as one long recession.

21. For a component of GDP to be judged a leading factor in GDP growth, it must be growing faster than GDP. While nonresidential and residential fixed investment grew at similar high rates in phase 2, the former is much larger and hence had a much larger impact on GDP growth.

22. See the end of Appendix section 1 for a discussion of this real wage variable. Declining interest rates made a secondary contribution to the rise in the profit rate during this period (U.S. Bureau of Economic Analysis 2006, National Income and Product Accounts table 1.14).

23. Many features of the neoliberal institutional structure contribute to the low degree of worker bargaining power which underlies the stagnation of real wages during economic expansions. These include government and corporate attacks on trade unions, cutbacks in social welfare programs, deregulation of sectors in which unions had previously been strong, and the inflow of cheap manufactured goods from low-wage countries which tend to pull down the wages of U.S. workers.

24. There are other possible means, besides rising consumer debt, by which consumer spending could continue to rise despite stagnating wages. These include a rising labor force participation rate or rising spending by those whose incomes come from profits rather than wages. However, the data on household debt presented here suggest that rising debt has been the principal means of resolving this contradiction in the U.S. in the neoliberal era.

25. The U.S. economy in the 1920s had a liberal institutional structure, and that decade also saw an expansion that was driven, in the later years of the decade, by an asset bubble.

26. In the fourth quarter of 2006 the median price of single family homes fell by 2.7 per cent in the U.S. as a whole, with steeper declines of up to 18 per cent in such previously hot real estate markets as Sarasota-Brandenton in Florida (from data reported by the National Association of

Realtors, *The New York Times*, February 16, 2007, C1).

27. Some past housing bubbles have deflated slowly, with housing prices stabilizing rather than dropping sharply as typically occurs when a stock market bubble bursts. Even a stabilization of housing prices would hinder a continuing increase in consumer borrowing.

28. Li et. al. (2005), Weisskopf (1979), Wolff (2001).