Contradictions of Economic Growth

in the Neoliberal Era:

Accumulation and Crisis in the Contemporary U.S. Economy

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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. 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 central capitalist process, that of capital accumulation. 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.\(^1\)

In the stage of regulated capitalism, strong trade unions and generous welfare state programs tended to make underconsumption or 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.\(^2\) 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, if the state intervenes to moderate and shorten the crisis, as typically occurred in that period, then workers are able to retain significant bargaining power. This tends to produce a problem of continuing class conflict over shares of the pie, which worsens over time and tends to break out in a wage-price spiral. In the U.S. the period 1966 through 1979 witnessed 3 expansions that brought growing inflationary pressure, in 1966-69, 1970-73, and 1975-79. This sequence caused severe problems in world capitalism that ultimately led to the dismantling of the regulationist institutional structure and its replacement by a neoliberal institutional structure.

The neoliberal era has 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.

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.

In Kotz (2003, 2001) I 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 current 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, through 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 few years of economic expansion since 2001, 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 crisis is 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 possibly a shift to a different institutional structure.

The Expansion of the 1990s

In the U.S. economic expansion lasting from 1991-2000, the second half of the expansion was significantly more robust than the first. GDP grew relatively slowly, at 3.1% per year, from 1991 through 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. 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 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.

The state 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. This expansion was the longest in US history, and at the end the unemployment rate reached the relatively low level of 4.0% while inflation remained low.

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 of recession.

The precipitating events for the recession were the bursting of the stock market bubble, which reached its peak in September 2000, and a steady and rapid decline in the rate of profit from 1997 to 2000. The decline in the rate of profit deserves some attention. There are various versions of the rate
of profit. The usual Marxist concept of the rate of profit is the ratio of total surplus value to capital invested, where total surplus value includes not just profit narrowly defined but also interest, some tax payments, and some wage and salary incomes. This broad concept of the rate of profit is the appropriate one for some purposes. However, since the aim here is to define a rate of profit that most directly affects the accumulation decisions of capitalist enterprises, the narrower measure of profit, after taxes, will be used. We define the rate of profit as

\[ r = \frac{P}{NW} \]  \hspace{1cm} (1)

where
\[ r = \text{rate of profit} \]
\[ P = \text{after-tax profit} \]
\[ NW = \text{net worth} \]
The above variables are measured for the nonfinancial corporate business sector (see appendix).

The rate of profit can be expressed as the product of three variables:

\[ r = \frac{P}{NW} = \frac{P}{Y} \times \frac{Y}{TA} \times \frac{TA}{NW} \]  \hspace{1cm} (2)

where
\[ Y = \text{output or income} \]
\[ TA = \text{tangible assets} \]
\[ * = \text{indicates multiplication.} \]
The first ratio, \( \frac{P}{Y} \), is the profit share of income. The second, \( \frac{Y}{TA} \), is the ratio of output to tangible assets, whose variation over short periods of time indicates mainly changes in the degree of utilization of the stock of means of production. The third ratio, \( \frac{TA}{NW} \), indicates the degree of leverage; a rise in \( \frac{TA}{NW} \) indicates that a growing share of tangible assets is financed by borrowing rather than investment by the owners, which would raise the rate of profit on net worth if all else is unchanged. Thus, changes in the rate of profit can be viewed as accounted for by changes in the above three ratios (see appendix).

The first ratio above, \( \frac{P}{Y} \), can be further analyzed as follows:

\[ \frac{P}{Y} = \frac{1}{W} \times \frac{W}{Y} \times \frac{T}{Y} \times \frac{i}{Y} \times \frac{i}{D} \]  \hspace{1cm} (3)

where
\[ W = \text{employee compensation} \]
\[ T = \text{taxes on profits plus indirect taxes} \]
\[ i = \text{interest paid} \]
\[ D = \text{depreciation} \]
Equation 3 is an identity, since total output/income is divided up on the income side among profits, wages, taxes, interest, and depreciation.

Figure 1 shows the rate of profit, as we have defined it, during 1996-2004. Tables 1-3 show the underlying factors affecting the rate of profit over three periods: 1997-2000, 2000-2001, and 2001-2005. The rate of profit rose to a peak in 1997, then fell through 2000, declining by 46.5% by the latter year. Most of the decline in the rate of profit over that period can be accounted for by a
38.1% fall in P/Y (see table 1). That decline in P/Y directly accounted for 81.9% of the decline in r (see appendix for an explanation). A decrease in leverage, reflected by the fall in TA/NW, accounts for a smaller share of the decline in r, while a slight fall in Y/TA contributed slightly to the fall in r.

Table 2 utilizes equation (3) above to show the determinants of the fall in the profit share during 1997-2000. A rise in the wage share turns out to be the main factor, accounting for 93.9% of the fall in the profit share during 1997-2000. Since the change in some of the components of P/Y tended to raise the profit share during 1997-2000, the contributions of those that tended to reduce it sum to more than 100%. Thus, rising interest payments contributed 23.1% of the fall in the profit share and rising depreciation costs contributed 4.5%, while a falling tax burden worked against the fall in the rate of profit (contributing -22.5% of the fall in the profit share!).

The above result appears to present a puzzle. Could a profit squeeze coming primarily from rising wages explain the falling rate of profit in the neoliberal 1990s? Not exactly. Changes in the wage share are determined by three underlying variables: changes in the real wage, in output per worker, and in the ratio of the consumer price index to the output price deflator, based on the following relationship:

\[
\frac{W}{Y} = \frac{w_r \cdot (\text{CPI/PY})}{Y_r/N} \tag{4}
\]

where
- \(w_r\) = real wage per worker (nominal employee compensation per worker deflated by the CPI)
- CPI = consumer price index
- PY = price index for the output of the nonfinancial corporate business sector
- \(Y_r\) = real output of the nonfinancial corporate business sector (deflated by PY)
- \(N\) = number of full-time equivalent workers in the nonfinancial corporate business sector

Note that \(Y_r/N\) is the real output per worker.

Alternatively, equation (4) can be rewritten as

\[
\frac{W}{Y} = \frac{w_p}{Y_r/N} \tag{5}
\]

where
- \(w_p\) = product wage per worker (nominal employee compensation deflated by the output price index)

See the appendix for the derivation of equations (4) and (5) and further explanation of the above variables.

Table 3 is based on equations (4) and (5) above. As that table shows, during 1997-2000 the real wage grew by 8.5%, or 2.8% per year. The low unemployment rate gave workers more bargaining power during those years than they had had in some time, and this was a relatively rapid growth rate in real wages for the period since 1980. However, output per worker grew by 9.0% during 1997-2000, or 2.9% per year. Thus, there was no squeeze on profits coming from rising real wages. The rising wage share was due to the behavior of the third factor, the ratio of the CPI to the output price deflator, which rose by 5.7% during that period (see equation 4 above).

How can one interpret the economic meaning of changes in the ratio of the CPI to the output
price deflator.\textsuperscript{11} Comparing equations (4) and (5), we observe that the product of the real wage and this odd price ratio gives the product wage.\textsuperscript{12} From equation (5), the wage share can be expressed as the product wage divided by output per worker. As table 3 shows, during 1997-2000 the product wage rose by 14.7% while output per worker rose by 9.0%. The economic meaning of this is that capitalists lacked the power to raise output prices as fast as nominal wage costs per unit output were rising. In fact, the output price for the nonfinancial corporate business sector was barely increasing in this period: this price index rose by only 1.5% from 1997-2000, or 0.5% per year.\textsuperscript{13} This suggests that capital as a whole (in the nonfinancial corporate business sector) faced inadequate demand in that period, preventing them from passing on their rising unit labor costs via price increases to protect their profit share. That is, the rising ratio of the CPI to the output price level indicates overproduction relative to demand.

The bursting of the stock market bubble in the late summer of 2000 broke the euphoria that had been one of the factors propelling investment since 1995. Combined with 3 years of a falling profit rate and the apparent development of overproduction relative to demand, the result was 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 4 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 5 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.\textsuperscript{14}

A severe recession was avoided in 2001 by an unusual continuing 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 6 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%.

Consumer spending can rise faster than household income through incurring debt to finance the spending. Figure 2 shows three different measure 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.

In figure 2 we see that, in the three-year long depressed period 1980-82, all three measures of household debt fell.\textsuperscript{15} 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. 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.

Both federal 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 5). 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 2002 expansion began with the highest levels of household debt since 1980.

The Expansion of 2002-2005

As table 4 shows, the U.S. economy grew slowly for the first two years of the current expansion, growing at 1.6% in 2002 and 2.7% in 2003. In 2004 and 2005 the economy expanded more rapidly, at 4.2% and 3.7% respectively. In addition, the factors promoting growth differed in those two periods. The current 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 the current expansion. In phase 1 nonresidential fixed investment was declining or barely growing, as table 4 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 82.0% at the peak in 2000 to 75.3% in 2002 and 75.5% in 2003, the lowest levels since the severely depressed conditions of the early 1980s, when the unemployment rate rose above 10% (Federal Reserve System, 2005).

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 5). 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 7 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 7).

The Bush tax cuts benefitted primarily the very rich, who save most 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 little, 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 5 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 barely rose. 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 accelerated significantly, to 4.2% in 2004 and 3.7% 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 4), rising by 9.4% in 2004 and 8.9% in 2005. Residential investment rose by 10.3% in 2004 and 7.7% in 2005. Total fixed investment contributed 1.47 percentage points of growth in 2004 and 1.35 percentage points in 2005 (table 5).

Why did nonresidential fixed investment grow rapidly starting in 2004? Capacity utilization of industry recovered only marginally in 2004, to 78%, well below the 2000 level of 82.9%. The likely reason was 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 4.9% in 2004, a rise of 86.1%. Nearly all of the increase in the rate of profit during that period is accounted for by a rise in the profit share of income (table 1), whose profit contribution was 39% of the rise in r. The main reason for the rise in the profit share of income was a decline in the wage share of income, which accounted for 76.3% of the rise in P/Y (table 2), while falling interest costs also contributed to the rise in P/Y, accounting for 31.2% of the increase. Falling depreciation made some contribution, while taxes rose relative to nonfinancial corporate business sector income, tending to reduce the after-tax rate of profit.

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As table 3 shows, the fall in the wage share of income during 2001-04 is explained by the
slow growth in the real wage, at 1.1% per year, or 3.3% over that period, while productivity rose at 3.4% per year, or 10.7% over the period. While the product wage rose at 2.0% per year, or 6.2% over the period, which was faster than the real wage, it rose substantially slower than productivity, so that the wage share of output fell. Thus, the main factor in the rise in the rate of profit during 2001-2004 was the operation of the neoliberal model, which tends to repress real wage growth.

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 70% of output growth in 2005. As table 7 shows, disposable personal income in 2004 and 2005 rose significantly more slowly than GDP, yet consumer spending did not. 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 3.7% while disposable personal income rose by only 1.1%. In 2005 the personal saving rate turned negative, at -0.4% of disposable personal income.  

The entire expansion from 2002-2005 has been supported by rising levels of household debt that have reached the highest levels in recent history. From the previous business cycle peak of 2000, household debt over disposable income rose from 91.0% to 111.9%, household debt over assets rose from 13.3% to 16.4%, and the debt service ratio rose from 12.6% to 13.2% (figure 2). The first measure of household debt has risen steadily over the period. The second measure rose from 2000 to 2002, but then stopped rising. The third rose significantly only in the recession year of 2001, stabilizing thereafter. The different pattern of growth of the three measures of household debt suggests the sources of rising debt.

The stabilization of the third measure, the debt service ratio, shows that falling interest rates and easing repayment terms have allowed households to rapidly increase their debt, relative to disposable income, without increasing the repayment burden since 2001. Thus, the Fed's very easy monetary policy allowed households to expand their debt without immediate cost. However, if interest rates rise, the burden of this debt will rise with them.

How have households been able to borrow so much? The stabilization of the second measure, the ratio of debt to assets, 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 them borrow against their appreciating homes.

Figures 4 and 5 show two measures of changes in home values since the early 1980s. One is 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 the rise in the price of an 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 economic value. The second measure, in figure 5, is the difference between the rate of growth of the HPI and the rate of growth of the consumer price index for housing. The two measures show similar, although not identical, patterns for the period since the early 1980s.
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 three years, increasing by 21% during 2000-2004. By the second quarter of 2005 it had risen to 26% over the 2000 level, and was 25% above its highest level during 1980-1999 (reached in 1989). This suggests that an accelerating housing bubble emerged during the current expansion, particularly since 2003.

The second measure, the growth rate of the HPI minus the growth rate of the CPI for housing, peaked in the 1980s at 4.6 to 4.7 percentage points in 1986-87, then subsided (figure 5). In the 1990s this measure was negative in the early 1990s, then slightly positive in the late 1990s. Starting in 2000 it began to grow rapidly, reaching 4.7% in 2002, then jumping to 8.4% in 2004 and 12.4% in the second quarter of 2005. This measure also suggests an accelerating housing bubble, starting one year later, in 2004.

The housing bubble enabled households to gain access to growing credit. It explains why the ratio of debt to assets stopped rising after 2002, despite the continuing rise in debt relative to disposable personal income.

**Concluding Comments**

We now have all the pieces needed to assess the expansion of 2002-2005 and to draw some implications from it. The key factors driving the expansion have been the following, in order of importance: 1) growing consumer spending driven by rising debt, which in turn has been driven by easy monetary policy and a housing bubble; 2) growing nonresidential fixed investment driven by 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 $189 billion surplus in 2000 to a deficit of $453 billion in 2004.

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, and the problematic conditions for realization of surplus value, have 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.17

When a crisis of overproduction 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.

When the housing bubble bursts, as all bubbles must, households will find it difficult to obtain further credit based on home values. 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 difficult for the government to take effective steps to moderate the crisis. Several factors make it likely that the Fed would not be able to lower 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. The Federal Government has little room to pursue further expansionary fiscal measures, in light of the very large federal deficit. 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 and 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 used in this paper, defined in equation (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. One reason for selecting the nonfinancial corporate business sector is that it is the only broad private sector category for which data are available for tangible assets and for net worth as well as profits, from the Federal Reserve. Data for fixed assets are available for the entire corporate business sector, from the Bureau of Economic Analysis, but those data have three disadvantages: 1) inventories are omitted from the measure of the capital stock; 2) no measure of net worth is available for that sector; and 3) there are conceptual problems with combining the financial and nonfinancial sectors for both the measure of capital invested and profit.

On the other hand, the financial sector has been growing relative to the nonfinancial sector. By 2004 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 does cause some disjuncture between the profit rate and the investment variable, 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.

2. Factors Affecting the Rate of Profit

Equation (2) decomposes the rate of profit into three factors: \(P/Y\), \(Y/TA\), and \(TA/NW\) (see text for definitions). This is an identity, and one cannot infer causal relations from an identity. However, one can use an identity for a kind of accounting of the contributions of the factors to changes in their product. This can be done by calculating the percentage rate of change over a period in each of the above three factors and dividing each factor's percentage rate of change by the percentage rate of change in the rate of profit. The resulting percentages can be regarded as indicating the "direct contribution" of change in each factor to the change in the rate of profit. However, the direct contributions do not in general exactly add to 100% because the interaction terms among the three factors also contribute to the change in the rate of profit. If all interaction terms were included, the contributions would add to 100%.

Equation (3) decomposes \(P/W\) by an additive identity rather than a multiplicative one. Hence, for the relationship expressed by equation (3), the appropriate method for calculating the contribution of each component to changes in \(P/W\) is to take the absolute change in the component over the period and divide that by the absolute change in \(P/W\). The sum of the positive and negative contributions of all the components add to 100% of the change in \(P/W\), since there are no interaction terms in an additive identity. See table 2.

Equation (4) decomposes \(W/Y\) into three factors, which is similar to equation (2). Equation (4) is derived as follows (see text for the definition of variable):
\[ \frac{W}{Y} = \frac{w_R \cdot N \cdot CPI}{(Y_R \cdot PY)} = \frac{w_R \cdot (CPI/PY)}{Y_R/N} \]

Equation (5) is derived as follows:

\[ \frac{W}{Y} = \frac{w_N \cdot N \cdot PY}{Y_R \cdot PY} = \frac{w_N}{Y_R/N} \]

The variable W is 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 W rises faster than the wages of production workers. It would be desirable to break down W into the compensation of production workers and that of other employees, but data for that breakdown were not available.

3. Changes in Inventories and Net Exports in the Analysis of GDP Growth

Table 4 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, for table 5, on the contributions to GDP growth, such 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.

4. Data Sources

Data sources are given with each table and figure. All data were downloaded during October through December 2005. The national income and product account data used are the versions that were updated on November 30, 2005.

Figure 1. After-Tax Rate of Profit of the U.S. Nonfinancial Corporate Business Sector, 1996-2004

After-tax rate of profit as a percentage of net worth at the end of the preceding year.

Figure 2. Three Measures of Household Debt, 1980-2004

(a)  

--- ratio of household debt* to disposable personal income

(b)  

--- ratio of household* debt to household assets  --- household debt service ratio**

* 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.

Sources: Federal Reserve Flow of Funds Accounts table B.100 and household debt data; U.S. NIPA table 2.1.
Figure 3. Interest Rates, 1995 to 2004

Interest rates are for the end of December of each year

Source: Federal Reserve 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. HPI 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.

Figure 5. Rate of Growth of Housing Price Index Relative to CPI for Housing

Rate of growth of Housing Price Index minus rate of growth of CPI for housing. All bars are for annual data, except the last two which are for the first and second quarters of 2005.

Table 1. Factors Affecting the Change in the Rate of Profit during Selected Periods

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$r$</td>
<td>-46.5%</td>
<td>-29.2%</td>
<td>86.1%</td>
</tr>
<tr>
<td>$P/Y$</td>
<td>-38.1%</td>
<td>-19.8%</td>
<td>76.5%</td>
</tr>
<tr>
<td>$Y/TA$</td>
<td>-3.8%</td>
<td>-6.8%</td>
<td>6.1%</td>
</tr>
<tr>
<td>$TA/NW$</td>
<td>-12.6%</td>
<td>0.8%</td>
<td>-3.8%</td>
</tr>
</tbody>
</table>

Data are for the nonfinancial corporate business sector.


Table 2. Contributions to the Change in the Profit Share of Income during Selected Periods.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$W/Y$</td>
<td>93.9%</td>
<td>71.2%</td>
<td>78.3%</td>
</tr>
<tr>
<td>$T/Y$</td>
<td>-22.5%</td>
<td>-44.6%</td>
<td>-28.9%</td>
</tr>
<tr>
<td>$I/Y$</td>
<td>23.1%</td>
<td>21.7%</td>
<td>31.2%</td>
</tr>
<tr>
<td>$D/Y$</td>
<td>4.5%</td>
<td>46.1%</td>
<td>19.9%</td>
</tr>
</tbody>
</table>

Data are for the nonfinancial corporate business sector.

Notes:
1. A negative sign indicates that the variable tended to change P/Y in the opposite direction from its actual direction of change.
2. The sum of the contributions to the change in P/Y may not exactly equal 100.0% due to the omission of business transfer payments and due to rounding errors.

Table 3. Factors Affecting the Change in the Wage Share of Income during Selected Periods

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>W/Y</td>
<td>5.2%</td>
<td>1.0%</td>
<td>-4.1%</td>
</tr>
<tr>
<td>real wage</td>
<td>8.5%</td>
<td>-1.2%</td>
<td>3.3%</td>
</tr>
<tr>
<td>output per worker</td>
<td>9.0%</td>
<td>-0.8%</td>
<td>10.7%</td>
</tr>
<tr>
<td>CPI/output price index</td>
<td>5.7%</td>
<td>1.5%</td>
<td>2.8%</td>
</tr>
<tr>
<td>product wage</td>
<td>14.7%</td>
<td>0.3%</td>
<td>6.2%</td>
</tr>
</tbody>
</table>

Data are for the nonfinancial corporate business sector.

Table 4. Growth Rates of Real GDP and its Components, 2000-2005

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005*</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>3.7</td>
<td>0.8</td>
<td>1.6</td>
<td>2.7</td>
<td>4.2</td>
<td>3.7</td>
</tr>
<tr>
<td>Consumption</td>
<td>4.7</td>
<td>2.5</td>
<td>2.7</td>
<td>2.9</td>
<td>3.9</td>
<td>3.7</td>
</tr>
<tr>
<td>Nonresidential fixed investment</td>
<td>8.7</td>
<td>-4.2</td>
<td>-9.2</td>
<td>1.3</td>
<td>9.4</td>
<td>8.9</td>
</tr>
<tr>
<td>Residential investment</td>
<td>0.8</td>
<td>0.4</td>
<td>4.8</td>
<td>8.4</td>
<td>10.3</td>
<td>7.7</td>
</tr>
<tr>
<td>Exports</td>
<td>8.7</td>
<td>-5.4</td>
<td>-2.3</td>
<td>1.8</td>
<td>8.4</td>
<td>6.8</td>
</tr>
<tr>
<td>Imports</td>
<td>13.1</td>
<td>-2.7</td>
<td>3.4</td>
<td>4.6</td>
<td>10.7</td>
<td>5.7</td>
</tr>
<tr>
<td>Government purchases</td>
<td>2.1</td>
<td>3.4</td>
<td>4.4</td>
<td>2.8</td>
<td>2.2</td>
<td>2.0</td>
</tr>
<tr>
<td>Federal government</td>
<td>0.9</td>
<td>3.9</td>
<td>7.0</td>
<td>6.9</td>
<td>5.2</td>
<td>2.8</td>
</tr>
<tr>
<td>National defense</td>
<td>-0.5</td>
<td>3.9</td>
<td>7.4</td>
<td>8.8</td>
<td>7.0</td>
<td>3.6</td>
</tr>
<tr>
<td>Nondefense</td>
<td>3.5</td>
<td>3.9</td>
<td>6.3</td>
<td>3.4</td>
<td>1.8</td>
<td>1.4</td>
</tr>
<tr>
<td>State and local</td>
<td>2.7</td>
<td>3.2</td>
<td>3.1</td>
<td>0.6</td>
<td>0.4</td>
<td>1.6</td>
</tr>
</tbody>
</table>

* through third quarter of 2005.

Changes in inventories are not included – see appendix.

Source: U.S. NIPA table 1.1.1.

Table 5. Contributions to Real GDP Growth, 2000-2005

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005*</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>3.7</td>
<td>0.8</td>
<td>1.6</td>
<td>2.7</td>
<td>4.2</td>
<td>3.7</td>
</tr>
<tr>
<td>Consumption</td>
<td>3.17</td>
<td>1.74</td>
<td>1.90</td>
<td>2.05</td>
<td>2.71</td>
<td>2.59</td>
</tr>
<tr>
<td>Nonresidential fixed investment</td>
<td>1.06</td>
<td>-0.52</td>
<td>-1.06</td>
<td>0.13</td>
<td>0.92</td>
<td>0.80</td>
</tr>
<tr>
<td>Residential investment</td>
<td>0.03</td>
<td>0.02</td>
<td>0.22</td>
<td>0.41</td>
<td>0.55</td>
<td>0.55</td>
</tr>
<tr>
<td>Change in private inventories</td>
<td>-0.10</td>
<td>-0.88</td>
<td>0.43</td>
<td>0.05</td>
<td>0.35</td>
<td>-0.76</td>
</tr>
<tr>
<td>Net exports</td>
<td>-0.86</td>
<td>-0.20</td>
<td>-0.69</td>
<td>-0.46</td>
<td>-0.73</td>
<td>0.15</td>
</tr>
<tr>
<td>Government purchases</td>
<td>0.36</td>
<td>0.60</td>
<td>0.80</td>
<td>0.53</td>
<td>0.41</td>
<td>0.47</td>
</tr>
<tr>
<td>Federal</td>
<td>0.05</td>
<td>0.23</td>
<td>0.43</td>
<td>0.45</td>
<td>0.36</td>
<td>0.30</td>
</tr>
<tr>
<td>National defense</td>
<td>-0.02</td>
<td>0.15</td>
<td>0.29</td>
<td>0.37</td>
<td>0.32</td>
<td>0.26</td>
</tr>
<tr>
<td>Nondefense</td>
<td>0.07</td>
<td>0.08</td>
<td>0.14</td>
<td>0.08</td>
<td>0.04</td>
<td>0.03</td>
</tr>
<tr>
<td>State and local</td>
<td>0.31</td>
<td>0.37</td>
<td>0.37</td>
<td>0.08</td>
<td>0.05</td>
<td>0.18</td>
</tr>
</tbody>
</table>

* through third quarter of 2005.

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

Source: U.S. NIPA table 1.1.2.
Table 6. Consumer Spending in Recessions, 1974-2001

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Annual percentage change in:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP</td>
<td>-0.7</td>
<td>-0.2</td>
<td>-1.9</td>
<td>-0.2</td>
<td>0.8</td>
</tr>
<tr>
<td>Consumption</td>
<td>-0.8</td>
<td>-0.3</td>
<td>1.4</td>
<td>0.2</td>
<td>2.5</td>
</tr>
<tr>
<td>Durable goods consumption</td>
<td>-6.9</td>
<td>-7.8</td>
<td>-0.1</td>
<td>-5.6</td>
<td>4.3</td>
</tr>
</tbody>
</table>

*Source:* U.S. NIPA table 1.1.1.

Table 7. Personal Income, Spending, and Saving, 2000-2005

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Growth Rates of:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal income</td>
<td>5.4%</td>
<td>1.4%</td>
<td>0.4%</td>
<td>1.3%</td>
<td>3.3%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Wage and salary disbursements</td>
<td>5.5%</td>
<td>0.3%</td>
<td>-0.6%</td>
<td>0.7%</td>
<td>2.8%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Supplements to wages and salaries</td>
<td>5.0%</td>
<td>2.7%</td>
<td>9.6%</td>
<td>6.9%</td>
<td>4.6%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Property Income+</td>
<td>5.8%</td>
<td>0.3%</td>
<td>-4.1%</td>
<td>-0.7%</td>
<td>3.5%</td>
<td>-1.1%</td>
</tr>
<tr>
<td>Personal current transfer receipts</td>
<td>3.5%</td>
<td>7.9%</td>
<td>6.2%</td>
<td>2.5%</td>
<td>3.5%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Less: Contributions for government social insurance</td>
<td>3.7%</td>
<td>1.9%</td>
<td>1.2%</td>
<td>1.6%</td>
<td>3.2%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Less: Personal current taxes</td>
<td>8.9%</td>
<td>-1.9%</td>
<td>-16.2%</td>
<td>-6.7%</td>
<td>2.3%</td>
<td>11.5%</td>
</tr>
<tr>
<td>Disposable personal income</td>
<td>4.8%</td>
<td>1.9%</td>
<td>3.1%</td>
<td>2.4%</td>
<td>3.4%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Consumption</td>
<td>4.7%</td>
<td>2.5%</td>
<td>2.7%</td>
<td>2.9%</td>
<td>3.9%</td>
<td>3.7%</td>
</tr>
<tr>
<td>GDP</td>
<td>3.7%</td>
<td>0.8%</td>
<td>1.6%</td>
<td>2.7%</td>
<td>4.2%</td>
<td>3.7%</td>
</tr>
<tr>
<td>Personal saving as a percentage of disposable personal income*</td>
<td>2.3%</td>
<td>1.8%</td>
<td>2.4%</td>
<td>2.1%</td>
<td>1.8%</td>
<td>-0.4%</td>
</tr>
</tbody>
</table>

* Through third quarter of 2005.
+ 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. NIPA tables 2.1, 1.1.1, 1.1.4.
References

Notes

1. Wright (1979, ch. 3) was an early advocate of this view.

2. 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.

3. See Kotz (2001, 2003) for the data supporting the claims made in this section of the paper about the 1990s economic expansion in the U.S.

4. 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 (2001).

5. Even after the rate of profit peaked in 1997, and fell sharply thereafter, investment continued to grow at a double digit rate, propelled by the euphoria induced by the stock market bubble.

6. 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%.

7. 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.

8. Wolff (2001) offers an analysis of the changes in the rate of profit in the US economy using a broad concept of the rate of profit, which includes several forms of surplus value. Although the definition of profit differs in Wolff (2001), the methods used in that article to decompose the rate of profit into underlying factors has some similarity to the methods used in this paper. See also Li, Xiao, and Zhu (2005) for a recent study of the movements in the rate of profit in the leading capitalist countries using a broad definition of profit.

9. The ratio Y/TA is also affected by changes in the organic composition of capital, since Y/TA is equal to Y/W times W/TA where W/TA is a measure of the reciprocal of the organic composition of capital although using U.S. national income account data rather than labor value data. However, the organic composition of capital does not vary much during the short periods of time that we will be analyzing.

10. One component of nonfinancial corporate sector income is omitted here, namely business transfer payments. These are very small relative to total output (around 1%) and change little from year to year.

11. Wolff (2000, p. 321) also finds that movement in this price ratio play a role in the change over time in the profit share.

12. The product wage would be identical to the real wage if workers consumed a wage basket that had the same proportions of products as make up the total output which, of course, is not the case.
13. During those same years, the CPI rose by 7.3%, or 2.4% per year.

14. Table 5 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.

15. 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.

16. The personal saving rate fell in each calendar quarter of 2005, reaching -1.5% of disposable income in the third quarter.

17. 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.