Wage repression and financial excess in the United States: The Clinton Administration's economic legacy[1]

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The performance of the economy during the Clinton presidency was widely regarded as an extraordinary success. There is no doubt that dramatic departures from past U.S. economic trends occurred under Clinton. Three, in particular, stand out: the attainment of balance, and then surplus in the Federal budget; the simultaneous declines of unemployment and inflation, in direct contradiction to the predictions of mainstream economic theory; and the historically unprecedented stock market boom.

But this perception of the U.S. economy's virtuoso performance under Clinton was never accurate. GDP growth and productivity gains did not exceed the performance of previous presidential eras, even after take account of both upward revisions in national accounts to reflect putative contributions to growth by computer technology, and the acceleration in growth that occurred from 1996-2000. Moreover, while unemployment and inflation did both fall, the drop was due, in large measure, to the declining ability of workers to secure wage increases even in persistently tight labor markets. Moreover, the real economic gains under Clinton rested on a fragile foundation – a stock market in which prices exploded beyond any previous historical experience, inducing an enormous expansion of private expenditures on consumption. But because household incomes did not rise anywhere near as far as financial asset values, the result was unprecedented borrowing to pay for the spending spree. As is becoming increasingly evident now with the bursting of the stock market bubble and the U.S. economy on the edge of recession, the springs of economic growth under Clinton came from a levitating stock market setting off a debt-financed private consumption boom.

Of course, what lies ahead for the U.S. economy is of great importance to the entire world. But to discern what lies ahead, we must first get a reasonable grasp of the experience of the Clinton boom. In this paper, I present some evidence of the U.S. economy under Clinton, especially as seen relative to previous Presidential epochs. I then discuss the collapse of the unemployment/inflation tradeoff, and the sources of the stock market boom. The paper concludes by briefly considering how these trends are likely to play out in the coming years.

Economic Performance Under Clinton

Macro Performance

Table 1 presents some basic macro statistics – GDP growth, productivity, unemployment, and inflation. I present data for these figures by presidential eras – I have combined Kennedy/Johnson, Nixon/Ford, and Reagan/Bush, as well as showing the Carter and Clinton years separately.[2]

Table 1: Macro performance indicators

	1961–68 Kennedy-Johnson	*1969–76* Nixon-Ford	*1977–80* Carter	*1981–92* Reagan-Bush	*1993–2000* Clinton
GDP real growth *(pct.)*	4.8	2.7	3.4	2.9	3.9
Productivity growth *(pct. for non-farm business sector)*	3.4	2.1	0.7	1.7	2.1
Unemployment rate *(pct.)*	4.8	5.8	6.5	7.1	5.4
Inflation rate *(pct. measured by CPI)*	2.3	6.5	10.3	4.3	2.6

Sources: National Income and Product Accounts (NIPA); Bureau of Labor Statistics

These indicators make it clear that the Clinton years were not unusually successful in historical terms. Most strikingly, the Clinton period did not approached the macro performance of the Kennedy/Johnson era, when both GDP (4.8 vs. 3.9 percent) and productivity growth (3.4 vs. 2.1 percent) increased much more rapidly, while average unemployment (4.8 vs. 5.4 percent) was substantially lower. On the other hand, at 2.6 percent, the rate of inflation under Clinton was kept down to nearly the 2.3 level attained under Kennedy and Johnson. However, a decline in inflation in itself does not tell us much about who gains or loses from it – it might indicate slack labor markets of no benefit to wage-earners.

Judged by less rigorous standards than the 1960's the macroeconomic record of the Clinton years compares favourably with those of Nixon/Ford, Carter and Reagan/Bush. GDP growth was higher and both unemployment and inflation were lower. Productivity growth was still slow, even relative to the Nixon/Ford years. But the overall performance of the American economy has been stronger, if not to a dramatic degree.

Changing Composition of GDP

Further perspective on the macroeconomic record of the Clinton years is offered by Table 2, showing the breakdown of GDP into component expenditure categories-consumption, government, investment, and net exports. Two sets of figures stand out here. The first is the substantial contraction of government spending, which at 18.0 percent of GDP is far below that of any of the previous presidential

periods we are considering. What we also see in Table 4 is that the slack created by the fall in public expenditure has been taken up by private consumption, which at 67.1 percent of GDP is more than five percentage points higher than during the Kennedy/Johnson boom. It is clear from these figures that the rise in consumer spending has been the driving force of aggregate demand under Clinton, allowing government expenditure to fall without generating a slowdown in overall growth. Thus, to understand what has sustained growth in these years, we need to look at the bases for the expansion of private consumption.

Table 2: Components of GDP (in percentages)

Performance by Presidential Terms

	1961–68 Kennedy-Johnson	*1969–76* Nixon-Ford	*1977–80* Carter	*1981–92* Reagan-Bush	*1993–2000* Clinton
Consumption	61.7	62.2	62.6	64.9	67.1
Government	22.4	21.9	20.0	20.6	18.0
Investment	15.5	15.9	18.2	16.1	16.7
Net Exports	0.4	-0.05	-0.9	-1.6	-1.3

Sources: National Income and Product Accounts (NIPA); Economagic web page

Financial Market Behaviour

The most dramatic economic change of the Clinton presidency has been the transformation of the country's financial structure by the stock market boom and shifts associated with it. Table 3 provides some indication of what has been involved. During the Kennedy/Johnson and Reagan/Bush periods, the Standard and Poor index of the stock prices of the top 500 companies in the economy (S&P 500) rose at a rapid annual rate of 6.2 per cent. During the Nixon/Ford and Carter years, the S&P 500 actually fell in real terms. Under Clinton, it has registered an annual growth rate of 16.2 percent that has no historical precedent.

Table 3: Financial market indicators

	1961–68 Kennedy-Johnson	*1969–76* Nixon-Ford	*1977–80* Carter	*1981–92* Reagan-Bush	*1993–2000* Clinton
S&P 500 real average annual growth rate *(pct.)*	6.2	-3.6	-2.8	6.2	16.2
S&P 500 real growth – GDP real growth *(pct. gap)*	+1.4	-6.3	-6.2	+3.3	+12.3
Total household liabilities/disposable personal income *(pct.)*	5.8	64.3	70.0	77.8	96.1
Total household Liabilities/financial assets *(pct.)*	17.1	19.1	22.2	23.0	21.9
Household bank deposits +govt. securities/total financial assets *(pct.)*	25.1	25.4	26.6	26.0	17.2
Real Interest Rate *(10-year Treasury bond – CPI rate)*	2.2	0.6	-1.2	5.5	3.7

Sources: **Economagic web site; Flow-of-Funds Accounts**
Notes: **Wage data for decile groupings begin in 1973.**

The performance of the stock market under Clinton becomes even more amazing when measured against GDP during the various presidential eras. In theory, fluctuations in stock prices over a full business cycle are supposed to reflect the underlying performance of the real economy. Thus, by measuring the difference between growth of the S&P 500 and GDP, we can observe the extent to which the stock market is responding to real economic developments. Here again, the Clinton experience is without precedent. Under Clinton, the rise in stock prices was 12.3 percent above that of the real economy. Even in the Reagan and Bush years, during which economic policy overwhelmingly favoured the prerogatives of capital, and financial capital in particular, stock prices rose only 3.3 percent faster than GDP.

Table 3 also presents some data on changes in household financial patterns during the Clinton boom. The third row of figures suggests the degree to which the consumption boom has been debt financed. Household debt – including mortgage and consumer debt – jumped upward dramatically during Clinton's tenure,

to reach 96.1 percent of disposable income. This compares with a ratio of 77.8 percent during the Reagan/Bush years, itself an unprecedented level compared with previous periods. The next column, showing household debt relative to total financial assets, indicates how this expansion of debt has been collateralized – by a rise in asset values rather than incomes. Thus, we see that the households' liability/asset ratio has actually fallen slightly during the Clinton presidency, even while the debt/income ratio was shooting up. But the composition of household assets has changed markedly. Traditionally, property-owners have maintained a steady share of their holdings in insured bank deposits and non-defaultable Treasury securities – prior to the Clinton period, somewhere between 25–27 percent. Under Clinton, this ›safe asset‹ proportion has fallen to 17.2 percent, a sharp departure from previous patterns.[3]

Finally Table 3 reports figures on real interest rates for 10-year Treasury bonds. It shows that rates did fall in the Clinton period relative to Reagan/Bush years, from an average of 5.5 to 3.7 percent. But the 3.7 percent rate under Clinton is still far higher than the level of any previous presidential era. Indeed, for the whole post-war period 1947–79, the average real Treasury rate was 1.2 percent, less than a third of its level in the Clinton period.[4] These figures make it difficult to argue the sharp increase in household debt is a response to low interest rates. The reality is that these have been low only relative to the unprecedented peaks of the Reagan/Bush years: they are high by any other historical benchmark. Moreover, the basic justification of the Clinton administration for its drive to eliminate the federal deficit was that this alone could cut interest rates dramatically, by reducing total demand for credit and enabling the Federal Reserve to pursue a looser monetary policy. In practice, however, rates fell relative to the Reagan/Bush years, when federal deficits soared, but remained historically high despite the attainment of fiscal surplus.

Conditions for Workers and the Poor

Table 4 provides some measures of how working people and the poor have fared during Clinton's presidency. The patterns are highly unfavourable to Clinton. Despite the relatively strong macro performance – to say nothing of the stock market boom – both the average wages for non-supervisory workers and the earnings of those in the lowest 10 percent decile of the wage distribution not only remain well below those of the Nixon-Ford and Carter administrations, but are actually lower even than those of the Reagan-Bush years. Moreover, wage inequality – as measured by the ratio of the 90th to 10th wage decile – has increased sharply during Clinton's tenure in office, even relative to the Republican heyday of the eighties.

Table 4: Measures of well-being for workers and the poor

	1961–68 Kennedy-Johnson	*1969–76* Nixon-Ford	*1977–80* Carter	*1981–92* Reagan-Bush	*1993–2000* Clinton
Average Wage for Nonsupervisory Workers (in 2000 dollars)	$13.24	$14.73	$14.62	$13.53	$13.22
Average wage for 10th percent decile (in 2000 dollars)	–	$6.49 *(data begins in 1973)*	$6.68	$6.00	$5.89 *(through 1999)*
Ratio of 90th/10th percent decile wages	–	3.7 *(data begins in 1973)*	3.6	4.1	4.4 *(through 1999)*
Individual poverty rate *(pct.)*	17.5	11.9	11.9	14.0	13.6 *(through 1999)*

Sources: **Bureau of Labor Statistics; EPI website**
Notes: **Wage data for decile groupings begins in 1973**

Nor has there been any significant reduction in poverty under Clinton, relative even to the Reagan/Bush years, during which government anti-poverty efforts were sharply curtailed. The official individual poverty rate was 14.0 percent under Reagan/Bush. This figure falls only to 13.6 percent under Clinton. Moreover, these figures almost certainly understate the extent of poverty under Clinton relative to Reagan/Bush. This is because the official poverty measures take no account of the child-care costs in measuring the basic needs expenditures of the poor. But it is precisely these costs which rose most sharply under Clinton, when his administration abolished the national Aid to Families with Dependent Children program.

What Happened to the Inflation/Unemployment Trade-off?

Whatever else may be said of macroeconomic performance under the Clinton presidency, the simultaneous fall of unemployment and inflation has defied the expectations of virtually all orthodox economists. In the second half of the Clinton presidency, 1997–2000, according to official figures, some 4,4 percent of the work-force were jobless, while inflation was running at a 2,4 average annual rate. Most economists, adhering to the Natural Unemployment/Non-Accelerating Inflation Rate of Unemployment (NAIRU) doctrines dominant since the early 1970s, had long predicted that unemployment in the region of 4 percent must lead to headlong inflation. They argued that policy-makers were therefore obligated to maintain unemployment at or above its NAIRU rate – that is, above the unemployment rate at which inflation would take off. To this end, it was generally believed that unemployment needed to be perhaps as high as six percent.

What caused the dramatic shift in the trade-off between unemployment and inflation, and to what extent has the Clinton administration been responsible for

it? Some leading economists have begun to concede that the NAIRU is subject to change over time. Robert Gordon, for one, has concluded from an extensive econometric analysis of the past two decades that NAIRU is ›time-varying‹ – falling, for example, from 6.2 percent in 1990 to 5.6 by mid-1996.[5] Douglas Staiger, James Stock, and Mark Watson concur, finding that NAIRU in 1997 was between 5.5 and 5.9 percent, a full percentage point below its level for the early 1980s. They also admit that ›the most striking feature of these estimates is their lack of precision‹.[6] Their NAIRU estimate not only varies over time but also has the capacity to range widely at a given point in time.

The general thrust of these broad econometric findings appears solid enough. Indeed, they are difficult to dispute precisely because they are so broad. But in focusing exclusively on the details of how a NAIRU varies over time, they miss the fundamental question that leaps out from these results – namely, what makes a ›time-varying‹ NAIRU vary in the first place? It is remarkable that leading economists who have devoted so much time to estimating values for NAIRU almost completely neglect this question. Occasionally, however, a few revealing hints are dropped as asides. Gordon, for example writes:

> The two especially large changes in the NAIRU ... are the increase between the early and late 1960s and the decrease in the 1990s. The late 1960s were a time of labor militancy, relatively strong unions, a relatively high minimum wage and a marked increase in labor's share in national income. The 1990s have been a time of labor peace, relatively weak unions, a relatively low minimum wage and a slight decline in labor's income share.[7]

Gordon also casually refers to intensified world competition in product and labor markets, and increased flows of unskilled immigrant labor into the United States, as factors contributing to a declining NAIRU. Though again these observations are mere asides in Gordon's paper, the overall point is clear: it is changes in the balance of forces between capital and labor, and the growing integration of the US into the global economy – which has increased the difficulty of U.S. firms raising prices and U.S. workers getting wage increases – that have been the main forces driving the NAIRU down. Gordon's general hunch is consistent with the econometric results generated by Cara Lown and Robert Rich of the New York Federal Reserve Bank. They found that, between 1990 and 1995, the stagnation of wages and benefits by itself fully explains the lack of inflationary pressure at low levels of unemployment.[8] Data for the Lown and Rich study end in 1995. Since then, additional factors did contribute to dampening inflation. For one, energy prices fell substantially over 1997–98. In addition, the East Asian financial crisis triggered currency devaluations throughout the region, making American imports cheaper.

The central fact remains, however, that wage gains during the Clinton boom were well below those of any other expansion, much less a period of near full employment. These facts provide the basis for the poll findings reported in *Business Week* (12/27/99) that substantial majorities of US citizens expressed acute dissatisfaction with various features of their economic situation. For example, 51 percent of American workers interviewed by the magazine declared that they ›felt cheated by their employer‹. Such negative popular reactions are striking. Behind them lies the primary explanation for the collapse of the trade-off between unemployment and inflation, openly acknowledged by Alan Greenspan in his regular semi-annual testimony to Congress in July 1997. Saluting the economy's perfor-

mance that year as ›extraordinary‹ and ›exceptional‹, he remarked that a major factor contributing to its outstanding achievement was ›a heightened sense of job insecurity and, as a consequence, subdued wages.‹[9] This ›heightened sense of job insecurity‹ lies at the very foundation of the Clinton administration's economic legacy.

The Stock Market Boom

The stock market boom has been the other extraordinary development associated with the Clinton presidency. From a perspective beyond that just of Wall Street itself, what makes it extraordinary is the effect it has on the rest of the U.S. and world economy. Foremost among these broader effects has been the way it has underwritten the debt-financed consumption boom. Dean Baker has summed up this effect as follows:

> The run-up in stock prices, in excess of GDP growth, has added more than $8 trillion in financial wealth over the last nine years. A conventional rule of thumb is that $1 of stock wealth increases consumption by 3 cents. This calculation would imply that the $8 trillion of excessive stock market accumulation over the last nine years has increased consumption by $240 billion compared with a situation where the stock market had only kept pace with GDP. This additional consumption corresponds almost exactly to 4.5 percentage point drop in the saving rate that the economy has experienced during this period.[10]

The rise in debt-financed consumption has, in turn, maintained a buoyant level of aggregate demand in the US economy, despite the fact that government expenditures have declined and the trade deficit has grown. At the same time the federal government received nearly $50 billion more in revenue in 1997 relative to 1992 from capital gains tax – by far the largest proportional increase from any fiscal source. Thus the stock market boom has been central both to the creation of a fiscal surplus under Clinton, and – through wealth-driven increases in consumption – to counter the negative effects of that surplus on aggregate demand.

What Caused the Stock Market Boom?

Conventional explanations of the bubble give pride of place to the dramatic advances in computer and internet-related technology, which are held to have engendered formidable productivity gains. But we have seen that productivity has not registered exceptional growth through the full Clinton presidency, even after national accounts were revised upward to make special provision for computer-driven improvements. Still, we should note that productivity did accelerate between 1996–2000, to an average annual rate of 2.8 percent, relative to the dismal 0.8 percent figure for 1993–95, the first three years of Clinton's term. But such productivity figures are hardly a sufficient basis to underwrite the Clinton stock market boom. To begin with, assuming the new productivity figures are accurate, a 2.8 percent growth figure is still significantly less than the 3.4 percent average rate in the Kennedy/Johnson period, during which time nothing close to the Clinton stock market boom ever occurred. In addition, much recent research suggests that the productivity statistics are indeed inflated, perhaps by a substantial amount.[11]

Of course, the promise of future internet-led leaps in productivity remains. But even if we allow that possibility, it still does not explain the magnitude of the current stock price inflation. As Doug Henwood noted in 1999:

> The Internet stocks that have headlined the mania over the last year are without known precedent in U.S. financial history. At its highs in early April, the market capitalization of Priceline.com, which sells airline tickets on the web and has microscopic revenues, was twice that of United Airlines and just a hair under American's. America Online was worth nearly as much as Disney and Time Warner combined, and more than GM and Ford combined. Oh yes, enthusiasts respond, but these are bets on a grand future. But previous world-transformative events have never been capitalized like this....RCA peaked at a P/E of 73 in 1929. Xerox traded at a P/E of 123 in 1961. Apple maxed out at a P/E of 150 in 1980.[12]

Given the historically unique character of the bubble of the 1990s, it will be some time before we have a definitive account of its causes. But for the moment, and still to some extent groping in the dark, we may point to five significant factors:

1. Financial deregulation

Charles Kindleberger and others have amply documented the way in which speculative manias have historically recurred in financial markets.[13] After the Wall Street crash of 1929 and the slump of the 1930s, post-war governments in all major capitalist economies set in place far-reaching systems of financial regulation to prevent renewed bouts of destructive speculation. In consequence, for the first 25 years after the end of World War II, stock markets were relatively tranquil. This experience suggests one simple explanation for the Clinton boom: that in the absence of effective regulation, speculative excess will inevitably occur in financial markets, though exactly how bubbles will emerge and develop can never be known in advance. The Clinton administration was especially aggressive in promoting financial deregulation, through, among other actions, abolishing the main features of the regulations established under the 1934 Glass-Steagall Act.

2. Increased inequality and profitability

As we have seen, the rewards of economic growth under Clinton were claimed increasingly by the wealthy. Wages stagnated or declined for most workers, even as GDP and productivity growth rose. With wages held down as output and productivity rise, profits inevitably increase. Under Clinton they reached a thirty-year peak. In 1997 the share of total corporate income accruing to profits was 21.6 percent, as opposed to cyclical highs under Nixon (1973) of 18.0 percent, Carter (1979) of 17.4 percent, and even Reagan (1989) of 18.4 percent.[14] If the strong measured productivity gains since 1996 end up being real and sustainable, this in turn will yield still higher profit shares, until the point at which U.S. labor achieves increased bargaining power. But as labor remained weak under Clinton, the escalation of profits fed expectations of further increases in profitability, in conditions where the political system continues to favour so heavily the interests of the rich, regardless of whether there are Democratic or Republican incumbents in the White House.

3. Changes in US wealth-holding patterns

We have seen the extent to which American households have moved their portfolios out of low-risk bank deposits and Treasury securities into riskier assets – above all equities. The rise of mutual funds and derivative markets, through which the risks associated with stock-ownership are spread, has certainly contributed to this shift. But it also suggests that property-owners have come to believe that

equities are now less of a hazard than they have been at any prior point in history.[15] The Clinton administration alone is obviously not responsible for creating this state of mind among investors. In part, such thinking stems from the rise in profitability and especially the positive feedback effects of favorable returns on investor expectations. Alan Greenspan himself did occasionally, though not consistently, try to dampen such ›irrational exuberance‹ among wealth-holders. But the enthusiasm with which the Federal Reserve and the Clinton administration have pushed for the deregulation of financial markets has more than counterbalanced any downward jawboning efforts by Greenspan.

4. Shifts in foreign wealth-holding patterns

From 1989 onwards, the US has become a net debtor nation, as foreign-owned assets in the country have exceeded American-owned assets abroad. Through the 1990s, foreign wealth-holders have increasingly purchased dollar-denominated assets in US financial markets. By the end of 1998, the magnitude of the foreign debt had reached $1.5 trillion, equal to 18 percent of GDP – tripling in size over the previous 24 months.[16] This inflow of foreign savings is the other side of the persistent American trade deficit. Indeed, it is the continued willingness of foreigners to accept payment in dollars and to invest in dollar-denominated assets that alone has made the trade deficit sustainable. Here the instability of stock markets across the rest of the world has been critical for making American assets so attractive. At the same time, the main source of the rise in foreign-owned assets in the US in 1998 was not an increase in net new holdings, but rather price increases in the value of previously purchased foreign-held American assets relative to the prices of American-held foreign assets.

5. Adept Federal Reserve policy

The Federal Reserve has been praised for allowing unemployment to fall well below the level that inflation hawks had said was prudent. But, as we have seen, Greenspan understood that job insecurity would inhibit American workers from pressing for wage demands even in tight labor markets, as they had done in the past. Greenspan's real achievement during the Clinton presidency was elsewhere – in holding a balance between the need to keep financial markets liquid enough to sustain the stock market, and to keep interest rates high enough to ensure a continued flow of foreign savings into the US. Greenspan did certainly manage this well, even as the countervailing market pressures mounted. Furthermore, had Greenspan not conducted successful bail-out operations when the sequence of Mexican, East Asian and Long-Term Capital Management crises broke out, the US stock market would probably have dived as the cumulative effects of these shocks coursed through global financial markets.[17] By a ›successful‹ bail-out, I mean an operation that not only prevented a chain-reaction of debt defaults, but also protected the wealth of US investors – since substantial losses by American investors would almost certainly have burst the US bubble.

Conclusion

How does the record of Clintonomics sum up? Wealth exploded at the top, of course. But wages for the majority either stagnated or declined, even while unemployment fell. Clinton also provided essentially no relief from the widely denounced record on poverty alleviation achieved during the Reagan/Bush era. Meanwhile, with the stratospheric rise of stock prices and corresponding debt-financed private spending boom being the economy's primary growth engine, Clinton handed over to George W. Bush the most precarious financial pyramid of the post-war epoch. It should not have been a surprise that the bursting of the financial bubble and signs of recession both emerged even prior to Clinton's departure from office in January 2001. Of course, the Bush administration's priorities are skewed even more heavily in favor of the rich. This should lead to even deeper financial instability and a possible severe recession, in addition to creating even greater social inequality.

These conditions would appear to invite the development of an alternative macroeconomic policy approach. This approach would first stress higher average wages and greater income and wealth equality, because of their positive effects on aggregate demand and thus as an anti-recession intervention, as well as their benefits in terms of social equity. The alternative approach would also need to develop a new policy regime for effectively dampening speculative financial markets. But the fundamental question with such a policy approach is political rather than economic – whether there exists in the U.S today any effective vehicle to carry forward such policies. The experience under Clinton and the transition to Bush cannot engender optimism on this score. But U.S. politics is likely to become increasingly open to new ideas as it becomes clear that the Bush administration offers no solutions to the highly unstable macroeconomy created by wage repression and financial excess under Clinton.

Notes

1 This is a shortened and updated version of the paper »Anatomy of Clintonomics« which appeared in the May-June 2000 issue of *New Left Review*

2 In a longer version of this paper (Pollin 2000) I also present the same sets of figures grouped according ty NBER business cycles, as a check on the reliability of the evidence grouped by Presidential epochs. It becomes clear that this alternative grouping does not change the basic patterns presented in the tables shown here. Among other reasons, the Presidential epochs do correspond fairly closely with the dating of business cycles.

3 Wynne Godley provides a detailed analysis as to why these financial patterns in the household sector cannot last. See *Seven Unsustainable Processes: Medium-Term Prospects and Policies for the United States and the World,* Levy Institute, Annandale 1999.

4 For the historical figures on interest rates, see Robert Pollin and Gary Dymski, ›The Costs and Benefits of Financial Instability: Big Government and the Minsky Paradox‹, in Dymski and Pollin (eds), *New Perspectives in Monetary Macroeconomics,* Ann Arbour 1994, pp 369-402.

5 Robert Gordon, 'The Time-Varying NAIRU and its Implications for Economic Policy', *Journal of Economic Perspectives,* 1997, 11:1, pp 11-32.

6 Douglas Staiger, James Stock and Mark Watson, ›The NAIRU, Unemployment and Mone tary Policy‹, *Journal of Economic Perspectives,* 1997, 11:1, pp 33-50.

7 ›The Time-Varying NAIRU‹, p. 30.

8 Cara Lown and Robert Rich, ›Is there an Inflation Puzzle?‹ *Federal Reserve Bank of New York Economic Policy Review,* December 1997, pp 51-69.

9 Greenspan's testimony can be found on the Federal Reserve site at www.bog.frb.fed.us.boarddocs/hh/1997/July/testimony.htm

10 Dean Baker, 'What's New in the Nineties', typescript, Center for Economic and Policy Analysis, Washington DC 1999.

11 Robert Gordon of Northwestern contends that since 1995, virtually all the increases in productivity have occurred in the manufacturing of computer hardware. Gordon claims that »there has been no productivity acceleration in the 99 percent of the economy located outside the sector which manufactures computer hardware," James Grant, »Wired Office, Same Workers« *New York Times,* May 1, 2000, p. A27.

12 ›The United States‹, *Monthly Review,* July 1999, p. 129.

13 See especially Kindleberger, *Manias, Crashes and Panics: A History of Financial Crisis,* New York 1977.

14 See Lawrence Mishel, Jared Bernstein and John Schmitt, *The State of Working America 1998-1999,* Ithaca 1999.

15 Recent business-book titles giving graphic expression of this state of mind include *Dow 36,000* by James Glassman and Kevin Hassert; *Dow 40,000: Strategies for Profiting from the Greatest Bull Market in History* by David Elias, and, not to be outdone, *Dow 100,000: Fact or Fiction* by Charles Kadlec and Raplh Acampora. An insightful antidote to this literature is Robert J. Shiller, *Irrational Exuberance.*

16 See Jane D'Arista, ›International Capital Flows and the US Capital Account‹, *Capital Flows Monitor,* December 6, 1999.

17 In saying ›probably‹, as opposed to ›certainly‹, I am acknowledging the countervailing possibility that worsening conditions in overseas markets might have driven foreign investment in the US upwards still further. But it is still difficult to imagine that a full-scale bankruptcy of Long-Term Capital Management would not have burst the bubble of ›irrational exuberance‹ in America.