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Briefing Paper

Dangerous Minds?

The Track Record of Economic and Financial Analysts

By Dean Baker [1]

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CENTER FOR ECONOMIC AND POLICY RESEARCH • 1621 CONNECTICUT AVE., NW, SUITE 500
WASHINGTON, D.C. 20009 • (202) 293-5380 • <WWW.CEPR.NET> • EMAIL: CEPR@CEPR.NET

[1] Dean Baker is co-Directors of the Center for Economic and Policy Research. . Debayani Kar, John Schmitt, and Mark Weisbrot gave helpful comments on this paper.

EXECUTIVE SUMMARY

The economy continues to experience the fallout from the collapse of the stock market bubble. This collapse was the immediate cause of the recession in 2001 and it has continued to hamper growth through 2002. The stock bubble created patterns of growth—investment in tech sectors for which there was no demand, and a consumption boom that was inconsistent with the need of the baby boom generation to save for its retirement—which could not be sustained. The economy will not be able to resume a stable growth path until it has recovered from the bubble induced excesses of the nineties. In the meantime, the unemployment rate will remain high and growth will remain slow, with a strong possibility that the economy may fall back into recession.

In addition, the stock bubble deceived tens of millions of baby boomers about their need for retirement savings. Millions of workers assumed that the stock gains of the late nineties were real and that the market would continue to show strong growth for the indefinite future. As a result, they saved far less than will be needed to support the retirement living standards that they are expecting. These workers will either have to work far later into their lives than they had anticipated or get by on a lower retirement income.

This paper points out that the damage caused by the stock bubble and its inevitable collapse could have been avoided if economic and financial analysts had done their job competently. It shows that:

1) It should have been very simple for any competent analyst to recognize the bubble as the ratio of stock prices to corporate earnings hit levels that clearly were not sustainable in the late nineties. Had analysts and policy makers recognized the bubble and warned investors and the general public, stock prices never would have risen to their bubble peaks, and the resulting damage would have been far less than what the economy is currently experiencing. While the exact point at which the market had reached an unsustainable level could not be known, and the precise timing of its collapse could not be predicted, it required only simple arithmetic to recognize that the market had reached levels that guaranteed bad returns to long-term investors at the end of the nineties.

The failure to recognize the bubble and warn of its consequences stems in part from a misunderstanding of the stock market and its role in the economy. While it is good to have a strong stock market, which allows firms to raise capital at a reasonable price, a stock market that has risen beyond levels that can be justified by reasonable expectations of future profits damages the economy. It leads to mistaken investment decisions and causes households to underestimate their need to save for the future. A stock market that is seriously over-valued is at least as detrimental to the economy as a stock market that is significantly under-valued.

2) While there were some economic analysts who did warn of the market bubble, their views were almost completely excluded from the media. Major media outlets, including elite

media outlets like the New York Times, Washington Post, National Public Radio, and the Lehrer Newshour, relied almost exclusively on analysts that managed to miss the bubble.

3) Due to their failure to recognize the stock market bubble, official forecasters, like the Congressional Budget Office (CBO) and the Social Security Administration (SSA), made projections that were implausible on their face. For example, in January of 2000, CBO projected that capital gains tax revenue would remain above its normal share of GDP, implying continued strong growth in stock prices. At this time, price to earnings ratios were already more than twice their historic average and CBO was projecting zero real growth in corporate profits over the next decade. CBO was still using vastly exaggerated projections of capital gains in 2001 when Congress was debating President Bush's tax cut proposal. Based on these projections, Federal Reserve Board Chairman Alan Greenspan spoke in support of the tax cuts, saying that he was concerned that the nation would pay off its debt too quickly.

The SSA projected that stocks could provide their historic average returns even as the market was reaching its bubble peaks in 1999 and 2000. Had Social Security funds been placed in the market during this period, as many policy makers advocated, it would have led to losses in the tens of billions of dollars. State budget analysts also managed to overlook the stock bubble. Some states, like California, now find themselves with huge budget shortfalls as a result of these erroneous projections.

4) Most managers of large investment funds, including public and private pensions, and university and foundation endowments, failed to see the bubble and its inevitable collapse. As a result, most defined benefit pension funds now have severe shortfalls. Corporations will have to inject tens of billions of dollars into these pensions in the next few years. Universities and private foundations have been forced to make large cutbacks as their investment managers left much of their endowments invested in hugely over-valued stocks.

While the failure to recognize and warn of the stock bubble amounted to an enormous professional lapse, few economic or financial analysts seem to have paid much of price for their mistake. In most cases, analysts who completely missed the bubble continue to provide economic and financial advice. Relatively few investment managers seem to have experienced significant negative consequences as a result of their poor performance. In spite of the extraordinary negligence involved in failing to recognize the bubble, most economic and financial analysts continue to hold high-paying jobs. This constitutes a serious market failure—apparently there is no mechanism that sanctions failure among this group of economic and financial analysts. Given this market failure the public should recognize that the economic and financial "experts" who appear in the media, and advise them on their personal finances, often have little understanding of these issues.

INTRODUCTION

It is always difficult to predict how the economy will perform over the near-term future. As with the weather, there is always going to be a large unpredictable element to the economy's performance. Specifically, the sentiments of consumers and investors are notoriously fickle. They can, and often do, change in important ways without any obvious reason. These changes in sentiment can mean the difference between a booming economy and a recession.

For this reason, predicting the economy's near-term path will always involve a great deal of intelligent guesswork, and even the best informed guesses will often turn out wrong. But, there are underlying features of the economy that provide a basis for projecting the economy's path, at least over a more long-term time horizon. When it comes to assessing these underlying features, economic analysis can do better than guesswork. Economic analysis provides a basis for determining whether or not a current trend can be sustained, and what conditions would be necessary to sustain it.

The recent stock bubble in the United States was one such trend. The stock market rose an average of 22.1 percent annually from July of 1994 to March of 2000.[2] At the markets peak, the ratio of stock prices to corporate earnings was 33 to 1, more than twice the historic average of 14.5 to 1.[3] The fact that the price to earning ratio had reached a record high had inescapable implications for the future course of the market. Specifically, it meant that stock prices could not possibly maintain their levels, unless investors were willing to accept far lower returns on stock than had been the case in the past.

Historically stocks had provided a real (inflation-adjusted) return of approximately 7.0 percent annually. This was attributable to a dividend yield (including share buybacks) in the range of 3.5 percent to 4.0 percent, and real capital gains in the range of 3.0 percent to 3.5 percent a year.[4] The situation of the market and the economy in the late nineties and 2000 meant that it would be impossible to continue these rates of return going forward.

In the case of dividends the arithmetic is straightforward. Historically, earnings were equal to approximately 6.9 percent of the share price. Firms paid out 50-60 percent of their earnings as dividends, using the rest to finance new investment. With the stock peaks of 2000, earnings had fallen to an average of just over 3.0 percent of the share price. This meant that if firms paid out 60 percent of their earnings as dividends, the dividend yield would be just 1.8

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[2] This is based on the S&P 500.

[3] The value of all corporate equities on March 31, 2000 was $17,818 billion—Flow of Funds Table L.213, line 19. After-tax corporate profits for the first quarter of 2000 were $536.8 billion (National Income and Product Accounts, Table 1.14, line 30).

[4] For purposes of this analysis, dividend payments and share buybacks can be seen as identical. Both provide a way for firms to distribute money to shareholders out of current profits.

percent. If firms tried to pay dividends equal to 3.5 to 4.0 percent of their share price, as they had historically, they would be paying out all of their earnings as dividends, forcing them to finance new investment entirely from borrowing, a situation which could not be long sustained.

The prospect for maintaining the historic growth rate for stock prices was also not very promising. Unless the price to earnings ratio continually rises, a scenario which no serious economist has argued is possible, then stock prices and corporate earnings will rise at approximately the same rate. Over long periods, corporate profits increase at approximately the same rate as the economy grows. However, there are often significant variations in the growth rate of profits and GDP over the course of a business cycle. Typically profits fall off sharply during a recession—20 to 30 percent—while the economy rarely declines by more than 1.0-2.0 percent. In the upturn, profits then typically grow much more rapidly than the economy, until they have made up for their lost ground.

This is exactly what happened in the nineties, except the recovery of profits had gone further than in past business cycles, with the profit share of corporate output reaching levels that had not been seen since the Vietnam War.[5] As a result, it was unlikely that profits would grow even as fast as the economy in the future. It would be reasonable to expect that the profit share would fall back towards its historic average. Following this logic, the Congressional Budget Office (CBO) actually projected that inflation-adjusted corporate profits would not grow at all between 2000 and 2010 (CBO, 2000).[6]

With this information, it was possible to project stock returns going forward in the late nineties. The dividend yield would be in range from 1.5 percent to 2.0 percent, with little possibility of an increase for the simple reason that firms could not pay out all their profits as dividends. If stock prices increased along with profits, and profits followed the path projected by the CBO, then real capital gains would be close to zero over the next decade.

This meant that total returns on stock (the dividend yield plus the capital gain) would be between 1.5 and 2.0 percent, more than 5.0 percentage points below the historic average. Furthermore, it was possible to buy an inflation indexed government bond which paid approximately 4.0 percent interest at the time. Unless, investors were suddenly willing to hold stock for very low returns, and actually get a lower return than what they could receive from a completely safe asset (an inflation-indexed government bond), the stock prices of the late nineties did not make sense. It was inevitable that stock prices would fall sharply. A large drop in prices was necessary to allow the dividend yield to rise, and the stock return to move back towards its historic levels.

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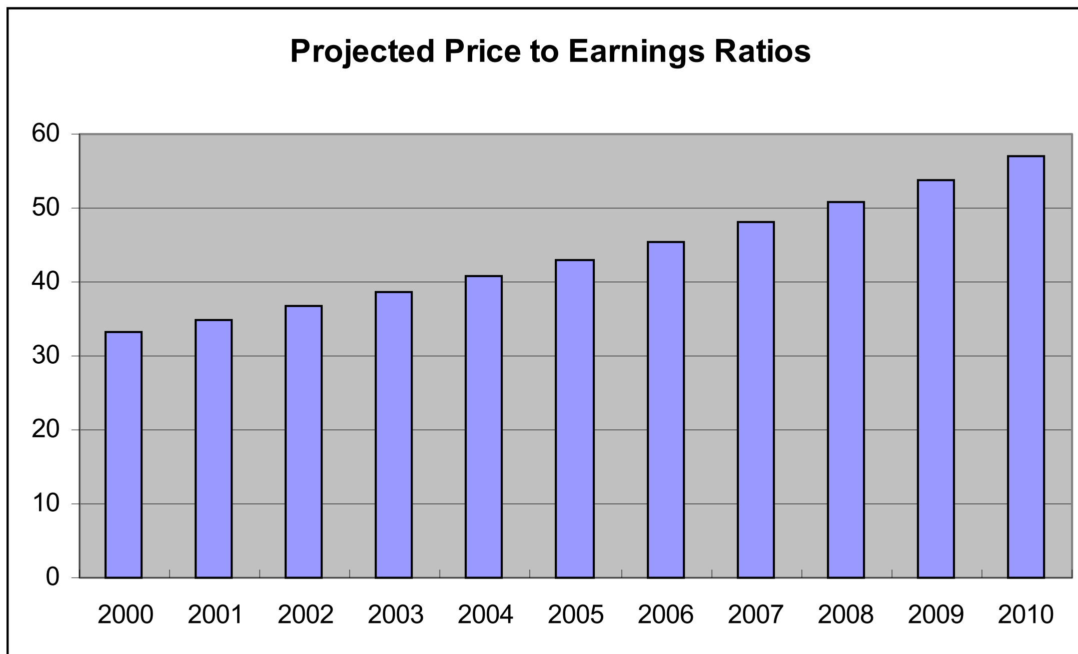
[5] The profit share (including interest) of corporate income hit 21.6 percent in 1997. By comparison, the peak profit share of both the seventies and eighties cycles was less than 19.0 percent. This calculation relies on data from the Commerce Department's national income and product accounts (NIPA), table 1.16. The measure of profit includes the capital consumption adjustment and inventory valuation adjustment (line 9), interest is taken from line 17, and the denominator is domestic income in the corporate sector (line 5).

[6] The CBO estimate for corporate profits for the year 2000 is $829 billion (*Budget and Economic Outlook: Fiscal Years 2001-2010*, table 2-1). Corporate profits are projected to rise to $1060 billion in 2010. The inflation rate as measured by the CPI is projected to average 2.5 percent annually over this period. The CPI is used as the measure of inflation throughout this discussion. The choice of the CPI is convenient, since indexed treasury bonds are tied to the CPI. Nothing in the analysis would change if a different deflator were used.

While there are some issues that can be raised about this simple analysis—for example it is arguable that earnings growth could have been somewhat more rapid than projected by CBO—there is no way around the basic logic. Once the price-to-earnings ratios had reached extraordinary levels, there was no way that stock prices could continue to grow enough to give investors anywhere close to the historic rate of return that they expected from stocks. Figure 1 shows the path for price-to-earnings ratios, if annual stock returns going forward from 2000 maintained their historic average of 7.0 percentage points above the rate of inflation, and the CBO projections for profit growth proved correct. Unless investors had suddenly become willing to hold stock at very low rates of return, the stock prices at the end of the nineties boom did not make sense and a crash was inevitable.[7]

Figure 1



Source: Federal Reserve Board 2002, BEA 2002, CBO 2000, and author's calculations. See appendix.

This is the sort of problem that a competent analyst of the economy or financial markets could not possibly have missed. The inevitability of the collapse of the stock market bubble was a matter of simple logic and arithmetic. While the timing could not be known in advance, there was no doubt that stock prices would have to decline on the order of 40-60 percent relative to corporate profits.

The implications of this fact for the economy's prospects and for individuals' finances were enormous. The run-up in stock prices was a major factor in the late nineties boom. It had

[7] There is no evidence that expected returns on stocks had declined in the late nineties. In fact, a number of surveys done by brokerage houses indicated that expectations of returns had increased, as many investors expected the extraordinary returns of the late nineties to persist indefinitely.

two important effects on the economy. First, through the wealth effect, it helped propel consumption. Economists have usually estimated the size of the wealth effect at 3-4 percent, meaning that an additional dollar of stock wealth leads to 3-4 cents of additional consumption each year (Dynan and Maki, 2001; Maki and Palumbo, 2001). The stock bubble increased the value of household's direct and indirect holding of stock by $6.4 trillion.[8] The standard estimates of the size of the wealth effect imply that this would have generated $192 billion to $256 billion in additional consumption each year, an amount equal to 1.9 to 2.6 percent of GDP.

The other way in which the stock market had a large effect on the late nineties economy was through its impact on investment. Typically, only a tiny fraction of a new investment is financed through the stock market, with most firms relying on retained earnings or bond and bank borrowing to finance their investment. However, with stock prices soaring to record highs in the late nineties, and many new firms able to raise billions of dollars in stock sales before they had even made a profit, the market suddenly became an important source of funds for new investment. The value of new stock issues soared from $85 billion in 1994 to a peak of more than $320 billion in 2000. Much of this money went directly to finance investment in high tech sectors.

With the crash in the stock market, both of these sources of demand were likely to be substantially curtailed. When stock prices fell to more normal levels, it was virtually certain that there would be a sharp cutback in investment in the tech sector, since firms would no longer be able to raise money at almost no cost on the stock market. This is in fact exactly what has happened in the last two years. Investment in information processing and software fell by more than $60 billion from its 2000 level to the low hit in the fourth quarter of 2001.[9]

Similarly, consumption has also fallen back as the wealth effect reverses, although not as much as may have been expected. The savings rate (the flip side of soaring consumption is declining saving) had fallen to just 1.9 percent by the fourth quarter of 1999, a record low.[10] It rose 1.8 percentage points to 3.7 percent in 2001 (NIPA table 2.9, line 8). This is a substantial increase, but it still leaves the saving rate far below its historic average of 10 percent.[11]

One result of the low savings rates attributable to the stock bubble, and the subsequent collapse of the stock market, is that many older workers are poorly prepared to face retirement. Many of these workers had counted on the stock market to continue to provide large gains—they were not anticipating 2 or 3 years of large negative returns. For younger workers, there will be

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[8] This number is based on the Federal Reserve Board's estimate of the value of household assets in corporate stock and mutual funds in the first quarter of 2001 (Flow of Fund Accounts, table L.10 lines 13 and line 14). It assumes that at its peak, stocks were selling for twice their proper value. This figure probably understates the impact of the bubble on household wealth, since it doesn't include stock holdings that took other forms, such as personal trusts.

[9] Investment in information processing and software was $446.9 billion in 2000. It had fallen to $385.5 billion in the 4th quarter of 2001 (NIPA table 5.4, line 9).

[10] It hit an even lower 0.8 percent in the fourth quarter of 2001, as incentives for car buying lead to a consumption splurge in the wake of the 9-11 attack.

[11] There are two reasons that the saving rate has not risen more. First, it appears that the wealth effect may be asymmetric, with households quicker to increase their consumption in response to an upturn in stock wealth than they are to decrease consumption in response to a decline in stock wealth. The second reason is that a housing bubble has developed in the last seven years, with housing prices outpacing the overall rate of inflation by more than 30 percent since 1995 (Baker 2002). Inflated housing values also have a wealth effect that induces consumption.

time to make up for the recent losses in the market; however, millions of older workers will have much lower living standards in their retirement because of the stock bubble.

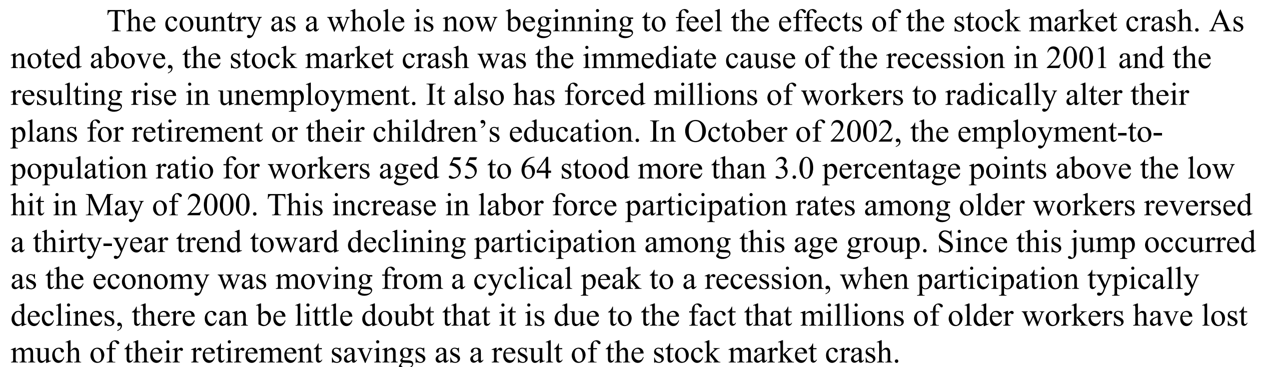
In short, the stock market bubble and its inevitable collapse had very serious negative economic consequences for the economy. The collapse virtually ensured a serious recession as investment and consumption demand plummeted. In addition, millions of families now found themselves with far too little savings to support themselves in retirement. We have already experienced part of the downturn caused by the bursting of the bubble, but a further weakening is likely, as households finally begin to increase their savings to make up for stock market losses.

It is also important to recognize that much of the investment induced by the stock bubble was wasted, with hundreds of billions of dollars going into Internet and telecommunications investment that are of little or no use. Had it not been for the distortions created by the stock bubble, this money could have been invested in more productive investment. The stock bubble also created an environment that facilitated the accounting scandals that have come to light recently. In a world in which stock prices have little relationship to reality, it is easier to pass off profit numbers that also bear little relationship to reality.

Finally, the stock bubble has coincided with, and contributed to, a dollar bubble, with the dollar rising to levels that are not sustainable over any significant period of time. The high value of the dollar has led the United States to run a large current account deficit, which is now approaching $500 billion (or 5 percent of GDP) on an annual basis. This deficit corresponds to the sale of U.S financial assets at a time when the nation should be accumulating assets in anticipation of the retirement of the baby boomers. The inevitable process of readjustment, with the deficit brought down to a sustainable level, will likely be a painful one, with a falling dollar leading to more inflation and a decline in living standards. For all these reasons, the stock bubble will have serious negative consequences for the economy for some time to come.

It was easy to see both the bubble and the problems that would result from its inevitable collapse, and some economists did raise warnings (e.g. Baker, 1997, 1998, 2000a, 2000b; Diamond, 1999; and Shiller 2000). In fact, no economic analyst who examined the ratio of stock prices to the current and plausible future path of corporate earnings could have failed to notice the bubble. Yet, the vast majority of economists and economic analysts completely ignored the stock bubble in the late nineties, acting as though price-to-earnings ratios could rise forever, or that the collapse of the bubble would have little consequence for the economy.

In short, the imminent disappearance of close to $10 trillion in paper wealth in the stock market prompted little interest among economists. Instead, other much more minor problems—for example the prospect of modest shortfalls in the Social Security program two or three decades in the future—occupied the agenda of some of the nation's leading economists. The refusal to consider the implications of the stock market bubble and its collapse was a huge failure of the economics profession. The next section examines the economic pronouncements of economists and economic analysts who were featured in major national news outlets in the period just prior to the crash.



The country as a whole is now beginning to feel the effects of the stock market crash. As noted above, the stock market crash was the immediate cause of the recession in 2001 and the resulting rise in unemployment. It also has forced millions of workers to radically alter their plans for retirement or their children's education. In October of 2002, the employment-to-population ratio for workers aged 55 to 64 stood more than 3.0 percentage points above the low hit in May of 2000. This increase in labor force participation rates among older workers reversed a thirty-year trend toward declining participation among this age group. Since this jump occurred as the economy was moving from a cyclical peak to a recession, when participation typically declines, there can be little doubt that it is due to the fact that millions of older workers have lost much of their retirement savings as a result of the stock market crash.

Responsible economists and economic analysts should have been warning the public about the prospects of a market crash and its implications for both the economy as a whole and their personal finances. However, few economists were issuing such warnings. And if they were, the media was not paying attention, so the public never would have heard an explanation as to why the stock market boom of the late nineties virtually guaranteed a subsequent crash. The elite media (e.g. the New York Times, National Public Radio, the Lehrer News Hour, the Washington Post) gave almost no attention to experts who were making statements about the stock market and the economy that should have been obvious to any competent economic analyst. Instead of presenting the views of economists warning about the collapse of the stock bubble, these news outlets almost exclusively presented the views of analysts who touted record market valuations as good news. In almost all cases, these "experts" were surprised by both the collapse of the stock bubble and the recession in 2001.

For example, as late as November of 2000, just weeks before the onset of the recession, the *Washington Post* ran an article on the likely course of the Federal Reserve Board's policy ("Analysts Predict Fed Will Leave Rates Alone," 11-10-00; E1). The article included a comment from Alfred Broaddus, the president of the Richmond Federal Reserve Bank that, "it's quite possible that the near-and intermediate-term outlook for the next year, year and a half, could be very bright indeed." One of the other analysts quoted in the article, Stephen D. Slifer of Lehman Brothers, commented that an interest rate cut was unlikely because, "we think the economy is growing too quickly and that the labor markets are too tight for that to occur."

The following week, the *Post* ran an article that relied on two economists at financial firms, both of whom predicted continued growth ahead. One of them, Richard Bernier at Morgan Stanley, referred to the latest forecasts from the members of the National Association of Business Economists: "the economists 'continue to see a soft landing for the economy with overall inflation declining and no recession in sight'" ("Fed Puts Rates On Hold Again; But Inflation Is Still Viewed as a Risk," 11-16-00; E1).

At the end of 2000, the *New York Times* ran an article, which did include in passing a warning about the risk of a recession, but also included the assertion from Abby Joseph Cohen, the chief United States investment strategist at Goldman, Sachs, that "the market is undervalued, the S.& P. on the order of 15 percent or so ..... the valuations are the best we've seen in a long time" ("The End of the Party, or Is It?" New York Times, December 24, 2000, Section 3, page 1). The article reported her prediction that the S.& P. 500 index would be at 1650 at the end of 2001, compared to its close of 1,305.97 the previous week. (It closed 2001 at approximately 1150, in the summer of 2002, it briefly fell under 800.)

The article included several other optimistic assessments about the state of the market and economy, including the view of Byron R. Wien, the chief United States investment strategist at Morgan Stanley Dean Witter, that the overall market was 10 percent undervalued. Even though this article did present a dissenting voice, there is little doubt about the view it sought to convey to readers. The second paragraph of this lengthy piece assured investors, "but investors need not panic. Really."

Even well after the economy had begun to contract in the first quarter of 2001, most of the economic analysts featured in the media were still talking of good times. Diane Swonk, the chief economist at Bank One Corporation, who was a frequent guest on both National Public Radio's *Morning Edition* and *All Things Considered*, told listeners on March 9th that, "the signs are in all the wrong directions for a recession. ... We're laying the groundwork for a nice reacceleration of growth" ("Solid Employment Report Suggests the Economy May Still Have Time to Avoid Recession," *All Things Considered*, March 9, 2001).

The other expert featured in this segment was Lyle Gramley, of the Mortgage Bankers Association, who told listeners, "with housing doing well, with consumers continuing to spend reasonably well given the state of confidence, we're seeing enough signs there to justify a view that the economy's continuing to grow, albeit sluggishly, and that the risks of recession have, indeed, receded" ("Solid Employment Report Suggests the Economy May Still Have Time to Avoid Recession," *All Things Considered*, March 9, 2001).

Remarkably, as the economy was sinking into recession, and with the stock market crash already in progress, the main debate over national economic issues focused on whether President Bush’s tax cuts would absorb the entire non-Social Security surplus over the next decade (e.g. “Medicare Becomes Critics’ Weapon of Choice in Tax Cut Battle, *Washington Post*, March 13, 2001;A5; “First Bush Budget Proposes to Raise Aid For Education,” *New York Times*, April 10, 2001; A1; and “Putting Faith in Discipline,” *New York Times*, April 10, 2001;A1). While the wisdom of this tax cut certainly was, and is, an appropriate topic for debate, whether or not it absorbed the entire non-Social Security surplus was a question with absolutely no significance for the nation’s economy. In fact, given the accuracy of long-term budget projections, even in the absence of the financial meltdown facing the nation, the relationship of the size of the tax cut to the size of the non-Social Security surplus was probably not even worth a footnote in a long article. Instead it became a leading topic of debate for many of the nation’s top policy experts.

Of course once the economy had begun to slide into recession in the fall of 2000, the stock bubble had already expanded to its peak and was on the way down. At that point, there was

little that could be done to prevent the damage from the collapse, apart from providing a warning of the troubles ahead. The failure to recognize the coming downturn, and the underlying unsustainability of the boom, as the economy was on the edge of a recession, simply demonstrates how little economic analysts often know about even the current state of the economy.

The more serious issue was the complete failure of most economic analysts to recognize the stock bubble as it grew, when their warnings may have actually helped to prevent some of the subsequent damage. The basic problem of most analysis is that many of the experts show little awareness of the basic relationship of the stock market to the economy. There is almost no appreciation of the fact that stock prices must on average track corporate profits, and that corporate profits cannot consistently grow more rapidly than the economy, unless there is a massive redistribution from wages or from the public sector through tax cuts.[12]

The media routinely ran stories in this period in which it mistakenly reported the new highs reached by the stock market as good news indicating the continuing strength of the economy. The fact that the rising stock market indicated a financial sector that was getting increasingly out of balance with the real economy was rarely even raised as a possibility.

For example, National Public Radio (NPR) ran a story in October of 1999, a time at which price-to-earnings ratios were more than 60 percent above their historic averages, praising a 3.5 percent single day jump in the S&P 500 ("US Economy and Stock Market Both Doing Well," *All Things Considered*, 10-28-99). The story began, "just when confidence in the US economy's brilliant balancing act begins to erode, it seems to respond yet again with another encore." The next month, a weekend story on NPR summarized all the good features of the economy, including the observation that, "the market keeps going up" (*Weekend Edition*, 11-21-99).

The media continued to celebrate the rising stock market as it hit new highs in December of 1999. When the Nasdaq crashed through the 3,900 mark, the New York Times headline read, "Nasdaq Soars Above 3,900 as Fed Leaves Rates Alone." The article includes two assessments by analysts one neutral and one positive. The latter assessment, by Laszlo Birinyi, who runs a stock research firm, was that, "this is not a mania, because it is so broad and deep," (11-22-99;C14). An end of year wrap-up by an NPR reporter noted the market's record year, and held out the promise for even more growth in 2000, "investors have repeatedly defied expectations of a slowdown and they could well do so again," ("US Stock Markets Enjoyed A Record Year In 1999," *Morning Edition*, 11-31-99).

There was occasional mention of the possibility of a stock bubble on the *Lehrer News Hour*, although it did not seem to get taken very seriously, nor were the implications of a stock bubble explored at any length. For example, one segment featured Kevin Hassett, an economist at the American Enterprise Institute, who co-authored a book titled *Dow 36,000* (10-15-99). This book argued that the proper valuation of the Dow Jones index at the time was 36,000, more than

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[12] Foreign earnings can allow corporate profits to grow more rapidly than the domestic economy, but it is not possible to construct a plausible scenario under which foreign profits will allow for a large sustained divergence in these growth rates (see Baker, 1999).

3 times its bubble peak. This segment also included David Jones, an economist at Aubrey Lanston, a firm that trades government securities, to give an opposing view. However, Mr. Lanston fairly quickly joined Mr. Hassett in arguing that stocks were the best bet for long-run investors, regardless of their current valuations: "we may be in for a period of a perhaps somewhat longer correction. I do certainly accept the view over the long-term that the stock market is the place to be, though."

In November of 1999, the *Lehrer News Hour* featured a roundtable with two economists expressing nothing but praise for the economy's current state (11-16-99). In fact, one of the economists, Bruce Steinberg of Merrill Lynch, commented that, "our economy is functioning much better than it has ever probably functioned in our economic history." He later went on to assert that the economy will keep growing fairly strongly and that "corporate earnings will keep going up."

Two weeks later, the *Lehrer News Hour* had a lengthy discussion of the economy on the day after Thanksgiving in 1999 (11-26-99). This discussion included some mention of the possibility of a stock market bubble, but it was quickly dismissed by Gary Goldsmith, a professor at Wake Forest University. Professor Goldsmith told viewers that there could be a bubble in the market, but that even if the market drops, "I don't think it will be for a long time. And so we'll be back up."

When Larry Summers was appointed Treasury Secretary in May of 1999, Senator Daniel Patrick Moynihan was quoted as saying that the Dow Jones had reached 11,000 under Robert Rubin, Mr. Summers' predecessor, and that the "Dow Jones might hit 22,000" under Summers ("Summers a Key Player In Global Rescue Effort," *Washington Post*, May 13, 1999, page A18). Senator Moynihan's comment was intended, and reported, as a positive assessment of Mr. Summers, as opposed to a claim that the bubble would continue to expand out of control. Of course, nothing could have been worse for the economy than if the Dow Jones had reached 22,000 before collapsing. It would have led to even more mis-investment and larger losses of savings to workers who assumed that the market's upward track would be enduring. Senator Moynihan's wishes for the Dow would be comparable to hoping that Japan's Nikkei index, which peaked at 39,000 before its collapse brought to less than 10,000, had managed to climb to 78,000 before its crash. Unfortunately, the *Post* presented no analysis to call readers attention to the ridiculous nature of Senator Moynihan's comment.

In addition to the bad information from experts that was being transmitted by the media to the public, there were also occasions where reporters added misinformation of their own. For example, a discussion in the *Post* of the market's likely future course included the comment that profits typically grow 10 percent to 15 percent annually ("Has Wall St's Bear Market Hit Bottom?," *Washington Post*, March 14, 2001, Page A1). Since the economy has been growing at a 5 to 8 percent nominal rate, the range for profit growth set out in this article would imply the most massive redistribution from labor to capital in the history of the world. Similarly, one of the Post's business reporters assured readers on October 16, of 1999 that stock returns will average 8 percent over the next decade ("Buy Into Stocks, Not Wall Street Worries," *Washington Post*, October 16, 1999, page E1).

These sorts of comments were typical of those being presented to the public, even as the stock bubble was inflating towards its peak levels. It would have been almost impossible for an informed lay person to be cognizant of the dangers that the stock bubble posed to the economy and their own finances. There were some reporters who did make a point of presenting the views of those who recognized the bubble, but this was a tiny current running against an overwhelming flow of stock market boosters. For the most part, the media simply shut out the voices of analysts warned about the stock bubble and the inevitability of its collapse.

The business reporters and producers, who are responsible for determining which views get presented to the public, share much of the blame for the stock bubble and the resulting damage. The people who hold these positions—at least within the elite media—should have had enough knowledge of the economy to be able to recognize for themselves the existence of a stock bubble. Instead, these reporters and producers—individuals at the top of their profession—managed to overlook the largest financial bubble in the history of world.

THE OFFICIAL NUMBERS: WHY DID CBO GET IT WRONG?

In January of 2001, the CBO was projecting that corporate profits would rise by approximately 1.5 percent annually in real terms from 2000 to 2011.[13] At the same time, CBO was projecting that the federal government would collect $1240 billion in capital gains tax revenue over the period from 2001 to 2011 (CBO 2001, table 3-6). This latter estimate assumed that capital gains tax revenue would gradually fall back from unusually high levels in 1999 and 2000, towards its average share of GDP in the post-war era. This calculation completely ignored the bubble in the stock market at the time. It effectively assumed that the stock bubble, and its imminent collapse, would have no effect on future capital gains revenue.

With the plunge in the stock market, capital gains tax revenue was considerably lower in 2001 than CBO had projected, leading CBO to revise down its projections for capital gains revenue over the same eleven year period by $124 billion, or 10 percent, in its January 2002 projections (CBO 2002a, table 3-6). While the data for 2002 will not be known for several more months, CBO has already acknowledged that capital gains revenue will be far lower than the projections made in January (CBO 2002). In fact, it is likely that capital gains tax revenue will be considerably below average for several years into the future, as investors gradually use their capital losses from the collapse of the bubble to offset subsequent gains. In total, capital gains tax revenue for the decade may fall short of the 2001 projections by more than $400 billion (Baker 2002a). It is likely that the falloff in capital gains revenue significantly understates the full impact of the collapse of the stock bubble on the budget, since many stock gains, such as those

[13] This calculation used the projections for corporate profits from CBO 2001, table 3-7 and the projection for inflation from table 2-1.

from employee stock options, are taxed as normal income. With many options losing their value as a result of the bursting of the bubble, this source of tax revenue also disappeared.

CBO's failure to recognize the impact of the bubble's collapse on the budget likely had serious policy consequences. Specifically, the size of the projected budget surplus was a major factor in the congressional debate over President Bush's tax cut. Proponents of the cut argued that it could be easily accommodated—the government would not even be forced to spend the Social Security surplus, much less face an overall deficit on the unified budget. In fact, Federal Reserve Board Chairman Alan Greenspan testified that the rapid pace of debt reduction then being projected was an important argument for the tax cut, since he was concerned that the federal government would pay off its debt too quickly and would then have to start buying private financial assets ("Greenspan Supports a Tax Cut," by John M. Berry, *Washington Post*, January 26, 2001; A1).

CBO was not the only government agency that gave misleading projections because it failed to recognize the stock market bubble. The Social Security Administration (SSA) also produced projections that were clearly impossible given stock valuations at the time (e.g See Stephen C. Goss, Deputy Chief Actuary, Social Security Administration, "Long-Range OASDI Financial Effects of the Social Security Guarantee Plan - INFORMATION," April 29, 1999). The SSA consistently used projections which showed that the stock market would provide returns that were 7.0 percent above the rate of inflation when it was asked to score Social Security proposals that involved putting Social Security money in the stock market. It was easy to show that these projections were almost certainly impossible given the stock valuations at the time and SSA's projections for future profit growth (see Baker 1999, [http://www.cepr.net/Social_Security/letter_to_feldstein2.htm]).

If Social Security funds had been placed in the market during the bubble years, it would have resulted in large losses either to workers directly, if this was done through individual accounts, or to the program as a whole, if the trust fund was directly invested. Based on the stock market values of June 30, 2002, setting aside 2 percentage points of the tax for individual accounts would have led to a loss of $31 billion if it had been done in 1998 and a loss of $29 billion if it had been done in 1999.[14] If a more ambitious plan involving 5 percentage points of the tax had been put in place in 1998 the losses would have been $78 billion. If such a plan had been put in place in 1999 the losses would have been $72.6 billion.

Political stalemate prevented Social Security funds from being placed in the stock market either through individual accounts or direct investment of the trust fund. However, the failure of the SSA to provide accurate predictions of stock returns could have led to enormous losses either to workers' retirement funds or to the Social Security trust fund, if the money had been directly invested. Fortunately, politics prevented this failure from having serious consequences.

[14] This calculation is taken from Baker 2002b.

THE WISDOM OF FINANCIAL ADVISORS

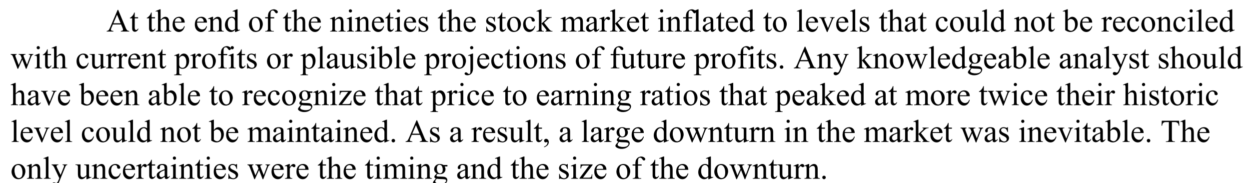
With very few exceptions the professional financial analysts, who give advice or manage pension and investment funds, completely ignored the existence of the stock bubble. These analysts continued to recommend placing large amounts of money in the stock market even as it was hitting its peak price-to-earnings of ratios in late 1999 and at the beginning of 2000. As a result, few investors escaped the crash unscathed. As noted before, millions of workers who relied on the advice of their 401(k) fund managers saw large chunks of their retirement savings vanish over a span of less than two and a half years.

However, large investors fared no better. Company pension funds now face huge shortfalls, as do the funds run by state and local governments. The value of defined contribution pension funds fell by 13.5 percent from the end of 1999 to the end of 2001, from $2101.9 billion to $1818.1 billion.[15] This figure will undoubtedly show a further decline when the end-of- the-year data is available for 2002. Similarly, most colleges and universities, as well as most of the nations charitable foundations, saw their endowments shrink 20 to 30 percent over this period. In some cases the losses were larger. For example, the Ford Foundation had a 36 percent decline in the size of its endowment between September of 1999 and September of 2002. The endowment of Packard Foundation shrank by more than 70 percent during this time ("Cultural Groups and Charities Are Feeling Each Bump on Wall Street," *New York Times*, 10-11-02; A27).

Remarkably, the individuals responsible for this financial disaster have largely not be held accountable for their actions. While some analysts and financial managers have lost their jobs, at least partly as a result of the market's downturn, the vast majority continue in their positions, generally drawing six and even seven figure salaries. Apparently, these highly paid advisors and money managers are not subject to the same sort of accountability that most workers face on their jobs. Unlike people who work as bus drivers, school teachers, custodians, or at almost any low or moderate paying job, financial analysts and managers apparently don't suffer consequences even when their performance is nothing short of disastrous.

Being completely wrong apparently doesn't even damage their standing as experts in the field. The *New York Times* recently quoted Abby Joseph Cohen, the notorious bull analyst on her view of the stock market's current prospects ("Between a Paw and a Sharp Place," *New York Times*, 11-10-02; Section 3, page 1). Ms. Cohen gained notoriety in the boom by regularly predicting double digit annual gains for the market. These predictions proved accurate until the market peak, at which time she was still predicting double digit gains. (She is still predicting double digit gains.)

[15] Federal Reserve Board, Flow of Funds, Table L.119.b, line 1.



Conclusion: Financial Experts are Dangerous to Your Finances

At the end of the nineties the stock market inflated to levels that could not be reconciled with current profits or plausible projections of future profits. Any knowledgeable analyst should have been able to recognize that price to earning ratios that peaked at more twice their historic level could not be maintained. As a result, a large downturn in the market was inevitable. The only uncertainties were the timing and the size of the downturn.

Unfortunately, very few experts recognized the bubble and the implications of its eventual collapse. As a result, the bubble expanded further than otherwise would have been the case. Many important decisions were made based on the expectation that the bubble valuations would persist and actually grow. This included budget decisions—such as President Bush's tax cut—which assumed clearly implausible levels of capital gains tax revenue. Many states similarly made unrealistic assumptions about capital gains tax revenue in planning their own budgets.

Corporations and state and local governments planned pension fund contributions based on the assumption that the bubble would continue to expand—a direct implication of the assumption that stock returns would not be affected by the bubble. As a result, many of these companies will experience depressed profits for many years in the future, as they replenish their pension funds. State and local governments may be forced to raise taxes or cut social services to address the shortfalls in their pensions.

Similarly, colleges and universities, and major foundations, experienced large losses in their endowments as a result of the collapse of the stock bubble. Since they were unprepared for these losses, they are now being forced to make large cutbacks in spending. Many colleges and universities are also raising tuition.

Millions of workers lost a large portion of their retirement savings as a result of the market crash. They had assumed, based on the advice of financial experts, that the money they had in the market was secure, even at the peak of the bubble. Based on this advice, they expected the market to continue to rise at least at its historic pace, and adjusted their savings plans accordingly. With the plunge in the market, these workers now find their savings far below their expected level. Already, this has led hundreds of thousands of workers to defer retirement. Unless older baby boomers rapidly increase their saving, millions more will find that they either have to delay their retirement or subsist with a far lower standard of living than they had anticipated.

The experts responsible for this disaster have largely escaped unscathed. Many of these experts still hold the same positions that they did prior to the crash. Their careers have apparently not been affected by even this massive failure in their job performance. These experts continue to

give financial advice to governments, corporations, universities, and individuals. They continue to be cited regularly by the press and to appear on major news and business shows. Even Abby Joseph Cohen, the notorious bull of the Internet bubble, is still quoted prominently in the media. In short, in the cae of economic and financial analysts, the market does not seem to punish failure or reward success.

Since there is apparently no market mechanism that weeds out exponents of faulty economic and financial advice, the best the public can do is to be warned. The public should recognize that the experts they hear on television and radio, or see quoted in the newspapers, or who give them financial advice directly on managing their 401(k)s often have no idea what they are talking about. In many cases, the public would be better served reading horoscopes or the sports section to inform their investment decisions rather than listening to these "experts." In short, being an expert in this area pays very well and does not seem to require much in the way of performance—nice work, if you can get it.

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APPENDIX

Figure 1—The price-to earnings ratio was calculated by taking the Federal Reserve Board's estimate for the value of all equities of domestic corporations at the end of the first quarter of 2000 ($17,818 billion—Flow of Funds Table L.213, line 19) divided by after-tax corporate profits, with inventory valuation and capital consumption adjustment ($536.8 billion—National Income and Product Accounts, Table 1.14, line 30). The Congressional Budget Office's projections for profits can be found in *The Budget and Economic Outlook: Fiscal years 2001-2011*, table 2-1. The estimate for corporate profits for the year 2000 is $829 billion. Corporate profits are projected to rise to $1060 billion in 2010. The inflation rate is projected to average 2.5 percent annually over this period.[16] This means that the CBO projection implies that corporate profits will be $828.1 billion in 2010, in year 2000 dollars. The calculations assume that the market gives a 7 percent real return (9.5 percent nominal) each year, with the dividend yield (including share buybacks) equal to 60 percent of corporate profits.

[16] This is the projected rate of inflation as measured by the CPI. The CPI is used to be consistent with the discussion in the text, which makes comparisons with the return available on inflation indexed government bonds that are tied to the rate of inflation shown by the CPI.