



May 4, 2004

**Bush Economy in the Midst of a Robust Recovery**

**Middle-Class ‘Misery’ Mythology**

***Executive Summary***

- Real Gross Domestic Product has grown for the past 10 consecutive quarters and increased by 5.5 percent over the past three quarters, the fastest pace in 20 years. In addition, the economy has created 759,000 jobs over the past seven months and household wealth is at an all-time high of \$44.41 trillion. The Misery Index (7.5) is roughly the same as it was in 2000, with an unemployment rate of 5.7 percent and year-on-year inflation of 1.8 percent.
- Some critics argue that these figures fail to capture the real conditions of average Americans, and have constructed a new index for the John Kerry campaign that, although biased and unreliable, speaks to common Democrat criticisms of current economic conditions:
  - “College tuition costs are up.” Since President Bush took office, the real increase in federal aid to support post-secondary education expenses (23 percent) *has exceeded* the real increase in average tuition and fee expenses at four-year colleges and universities (20 percent).
  - “Gasoline Prices are at record levels.” When adjusting for inflation and fuel efficiency, a middle-class family *pays even less per mile* to power the average automobile in 2004 (\$0.07) than it did in 1972 (\$0.09), the “golden age” of pre-embargo, cheap gasoline.
  - “Healthcare Premiums have increased.” Private healthcare spending increases *have been out-paced* by increases in public spending. More importantly, research demonstrates that increases in healthcare expenditure lead to corresponding *increases in quality of life* and disease-specific life expectancy.
  - “Jobs have been lost in record numbers.” While payroll jobs have declined since January of 2001, the household employment survey (used to calculate the unemployment rate) has shown that the number of Americans with a job *has increased* by 508,000 since then.
  - “Median income has fallen.” After-tax median income (excluding capital gains and losses) *has increased* by 3.6 percent since 2000. This is the measure that more accurately captures middle-class families’ disposable income because it takes tax relief into account and ignores the swings in realized capital gains that rarely affect these predominately long-term investors.

## Introduction

When attempting to assess the relative strength or weakness of the U.S. economy, policymakers and analysts have a large battery of statistical indicators, surveys, and indexes from which to choose. While Gross Domestic Product (GDP) provides the most comprehensive measure of economic performance by quantifying the total dollar value of all of the goods and services produced in a given quarter, other data are often used to highlight the condition of specific sectors, such as the labor market, or to provide a different measure of economic well-being.

In 1976, economist Arthur Okun, who served as Chairman of the Council of Economic Advisers for President Lyndon Johnson, developed the “Misery Index” to capture Americans’ dissatisfaction with the economy during the campaign of presidential candidate Jimmy Carter. The index simply added the unemployment rate to the level of inflation as measured by the annual increase in the Consumer Price Index (CPI). The higher the total, the more miserable the economic conditions. Although simplistic, the Misery Index aims to assess Americans’ economic welfare by measuring both the availability of jobs and the purchasing power of the income generated by those jobs.

Last month, former Clinton Administration economic advisers Gene Sperling and Jason Furman – now advisers to the presidential campaign of Democrat John Kerry – took issue with this time-tested formula. They argue that the traditional Misery Index fails to capture “the pressures faced by American families,” and so introduced their new creation, the “Middle Class Misery Index” (MCMI), a compilation of seven equally weighted statistical indicators.<sup>1</sup>

The introduction of this new Misery Index is interesting because the traditional Misery Index would judge current economic conditions quite favorably – the March 2004 Misery Index was 7.5, which is 3.3 points better than the average of the past 28 years and only 0.2 points above 2000. Yet, the MCMI paints a far different picture. While the MCMI is currently near its average for the past 28 years, Sperling and Furman argue that the MCMI is not to be understood in terms of its absolute level – but rather by its change over any given period. With a weakening of 13 points since 2000, they note that the MCMI pegs the past four years at being the worst period on record.<sup>2</sup>

Given the fact that GDP has rebounded well from the recession of 2001 and that the traditional Misery Index is roughly the same as it was in 2000, the MCMI attempts to challenge the conventional wisdom about how Senators are to judge the economic record of the past four years. Although some have dismissed the MCMI because it is the invention of a presidential campaign, so too was the original Misery Index. Moreover, the MCMI is worthy of careful scrutiny because its statistical components speak to common Democrat criticisms of current economic conditions.

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<sup>1</sup> John Kerry for President, Inc., “Record Deterioration in the ‘Middle Class Misery Index,’” April 12, 2004. available at: [http://www.johnkerry.com/pressroom/releases/pr\\_2004\\_0412.html](http://www.johnkerry.com/pressroom/releases/pr_2004_0412.html).

<sup>2</sup> Middle Class Misery Index (MCMI). Note: Unlike the traditional Misery Index, the higher the MCMI, the better the economic conditions.

## **Middle-Class Misery Index: A Flawed Tool, a Flawed Portrayal**

The MCMI's creators elected to combine seven equally weighted statistical indicators to form their new index: median family income; college tuition; healthcare premiums; gasoline prices; homeownership; private-sector job growth; and personal bankruptcies. Aside from homeownership, which reached an all-time high of 68.6 percent at the end of 2003, the other factors included in the MCMI have trended in a negative direction since 2000.<sup>3</sup> The MCMI purports to focus on these data so as to capture the factors that directly "squeeze" middle-class families.<sup>4</sup>

As is the case with any aggregation of statistics used to capture an abstract concept – in this case, middle-class "misery" – the MCMI is open to charges of "selection bias," which refers to the use or selection of data in a way that biases results. There can be little doubt that the MCMI is infected with such bias. Although a convincing case can be made that almost all of the MCMI's components have an effect on the average family, the index arbitrarily focuses on three areas where costs have increased faster than the overall price level, and it cherry-picks the statistics used to represent each component to accentuate the negative.

### **Methodological Problems with Inflation Measures**

The **Consumer Price Index (CPI)** is the most oft-cited and comprehensive measure of the overall price level of goods and services in the United States and already includes gasoline, medical care, and college tuition.<sup>5</sup> Yet the MCMI discards the CPI in favor of only these three components because, according to Sperling, these three costs are "the major things people see and feel."<sup>6</sup> But this contention ignores that the Bureau of Labor Statistics (BLS) already uses detailed expenditure information provided by over 30,000 individuals and families to weight the CPI market basket. This means that the CPI includes the impact of the price of gasoline, medical care, and college tuition in a manner that is directly proportionate to their weight in the average family's budget.<sup>7</sup>

Not only does the MCMI ignore the effect on the average family's budget of the prices of over 2,000 other goods and services (including food, clothing, and housing), it also provides a misleading picture of the three components that it does include. Moreover, for reasons discussed below, focusing only on the increases in the dollar value of college tuition, gasoline, and healthcare fails to adequately capture the impact of each on the average family.

### **'Record' Increase in the Cost of College Tuition**

The biggest contributor to the deterioration in the MCMI was the 13-percent real increase in "college tuition" between 2002 and 2003. However, the MCMI defines "college tuition" as "the average tuition and fees for *public* four-year universities."<sup>8</sup> By excluding private four-year

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<sup>3</sup> U.S. Census Bureau, Report on Residential Vacancies and Homeownership, February 3, 2004.

<sup>4</sup> MCMI.

<sup>5</sup> For information on the CPI, see "CPI: Frequently Asked Questions," Bureau of Labor Statistics, available at: <http://bls.gov/cpi/cpifaq.htm>.

<sup>6</sup> Sperling quoted in "Beware Politicians Quoting Economic Statistics," *Charleston Gazette*, April 18, 2004.

<sup>7</sup> CPI Frequently Asked Question Nos. 6 and 7.

<sup>8</sup> MCMI.

universities – the real cost for which increased by only 5 percent between 2002 and 2003 – Sperling and Furman are either guilty of selection bias, or are suggesting that middle-class families need not concern themselves with sending their children to private colleges.<sup>9</sup> Since 32 percent of U.S. college undergraduates attend private college, it is clear this constituency is comprised of many middle-class families.<sup>10</sup>

Even if it were appropriate to include only public tuition, a far better measure of its affordability for middle class families would be net, rather than gross or published, tuition costs. Thanks to federal, state, and institutional grant aid – money that requires no repayment – **net tuition and fees** for the average student at four-year public universities *declined* in real terms between 2000 and 2002 before edging up slightly to \$1,682 in 2003.<sup>11</sup>

Although the average college tuition price has increased by 45 percent in real terms over the past 10 years, this increase was more than offset by the increase in total student aid (grants plus loans, federal work-study programs, and tax credits), which increased by *137 percent* in real terms over the same period.<sup>12</sup> Moreover, since President Bush took office, the real increase in federal aid to support post-secondary education expenses (23 percent) has exceeded the real increase in average tuition and fee expenses at four-year colleges and universities (20 percent).<sup>13</sup>

By attempting to quantify the effect of college tuition increases on middle-class families without also considering offsetting increases in student aid, the MCMI paints an inaccurate and misleading picture.

### **'Near Record' Increase in the Cost of Gasoline**

Another large contributor to the overall deterioration in the MCMI is the 15-percent increase in the inflation-adjusted price-per-gallon of unleaded, regular gasoline.<sup>14</sup> According to the Energy Information Administration (EIA), the average price of a gallon of regular unleaded gasoline was \$1.77 on April 19, 2004.<sup>15</sup> Although this is indeed a 15-percent real increase over the price reported on January 15, 2001 (\$1.45), it is relatively low by any historical standard.

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<sup>9</sup> The College Board, *Trends in College Pricing, 2003*. Available at: [http://www.collegeboard.com/prod\\_downloads/press/cost03/cb\\_trends\\_pricing\\_2003.pdf](http://www.collegeboard.com/prod_downloads/press/cost03/cb_trends_pricing_2003.pdf).

<sup>10</sup> *Trends in College Pricing*, p. 17.

<sup>11</sup> *Trends in College Pricing*, pgs. 3 and 14.

<sup>12</sup> Total inflation-adjusted aid increased from \$42.45 billion in 1991-1992 to \$105.12 billion in 2002-2003. The College Board, *Trends in Student Aid, 2003*, p. 14. Available at: [http://www.collegeboard.com/prod\\_downloads/press/cost03/cb\\_trends\\_aid\\_2003.pdf](http://www.collegeboard.com/prod_downloads/press/cost03/cb_trends_aid_2003.pdf).

<sup>13</sup> Total inflation adjusted federal student aid increased from \$58.41 billion in 2000-2001 to \$71.57 billion in 2002-2003, *Trends in Student Aid*, p. 7. (no figure available for 2003-2004). The average tuition for full-time students at four-year colleges and universities increased from \$7,946 in 2000-2001 to \$9,499 in 2003-2004. Calculated from data contained in *Trends in College Pricing*, p. 8. The average tuition and fee expense is calculated for both years by assigning a 68 percent weight to the public and a 32 percent weight to private enrollment-weighted tuition and fee costs. This weighting is based on the public and private share of full-time undergraduate enrollment during the 2000-2001 school year, *Trends in College Pricing*, p. 17.

<sup>14</sup> MCMI.

<sup>15</sup> Energy Information Administration (EIA), *U.S. Weekly Retail Gasoline Report*, April 19, 2004.

Adjusting for inflation, the price of a gallon of gasoline was \$1.66 in 1955, \$1.28 in 1972, \$1.98 in 1976, and \$2.36 in 1981.<sup>16</sup>

However, since gasoline is a fuel, it represents an input whose effect on consumers should be viewed in context of its use (transportation), rather than its stand-alone price. Thanks to greater fuel efficiency, **the cost to power a car one mile** has dropped by 47 percent since 1981, even though the price of gasoline has only fallen 25 percent (in real terms) since then.<sup>17</sup> By this standard, a middle-class family pays even less per mile to power the average automobile in 2004 (\$0.07) than it did in 1972 (\$0.09).<sup>18</sup>

It is also important to recognize that in the context of the current geopolitical and economic environment, such low gasoline prices are a stunning achievement. World oil markets have been riled by external shocks to both supply and demand. Instability in the Middle East has caused investors to demand a significant risk premium to be compensated for the potential of supply disruptions caused by terrorism,<sup>19</sup> while, at the same time, the emergence of China as the world's second largest consumer of oil has boosted worldwide demand.<sup>20</sup> China's share of world oil consumption rose by 27 percent between 1998 and 2003,<sup>21</sup> and its oil imports increased by over 35 percent on a year-on-year basis in the first quarter of 2004.<sup>22</sup>

### **'Record' Increase in Healthcare Premium Costs**

The MCMC also includes private healthcare premiums, which increased by 11 percent in 2003 (according to an estimate provided by the Kaiser Family Foundation).<sup>23</sup> While private healthcare spending has accelerated a bit since 2000, it now makes up a smaller percentage of aggregate healthcare spending than it did four years ago.<sup>24</sup> This is because public healthcare spending has grown even faster during that period.

Since 1993, total U.S. healthcare spending has increased in both inflation-adjusted terms (40.5 percent) and as a percentage of GDP (11.2 percent).<sup>25</sup> Healthcare spending will increase as the population continues to age, but it is impossible to understand the increase in healthcare spending without putting it in the context of **the corresponding improvements in quality of care and quality of life.**

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<sup>16</sup> Jerry Taylor and Peter Van Doren, "Gas Panic," *The Wall Street Journal*, April 6, 2004. The 1976 figure was calculated from CPI and gasoline price data from the BLS.

<sup>17</sup> James S. Tisch, "No Need to Sing Those Gas-Guzzlin' Blues," *The Wall Street Journal*, April 8, 2004.

<sup>18</sup> EIA, *25th Anniversary of the 1973 Oil Embargo: Energy Trends Since the First Major U.S. Energy Crisis*, September 3, 1998 (1972 miles-per-gallon estimate of 14.5). National Highway Traffic Safety Administration, *Automotive Fuel Economy Program: 2002 Annual Update*. DT-HS-809-512, September 2003 (2002 miles-per-gallon estimate of 24.6, including Sport-Utility Vehicles).

<sup>19</sup> Ian Bremmer, "Crude Politics in a Kingdom of Contradictions," *Financial Times*, April 15, 2004.

<sup>20</sup> Michael Mimicopoulos, "Oil Demand Could Constrain China," *Financial Times*, April 15, 2004.

<sup>21</sup> Martin Wolf, "Asia's Big Appetite Ensures a Healthy Commodities Market," *Financial Times*, April 21, 2004.

<sup>22</sup> Jennifer Hughes and Stephen Schurr, "U.S. Spells Out Fear Over Rise in Energy Prices," *Financial Times*, April 13, 2004.

<sup>23</sup> MCMC.

<sup>24</sup> Center for Medicare and Medicaid Services, "National Health Expenditures," January 2004.

<sup>25</sup> Center for Medicare and Medicaid Services.

For example, thanks to increased screening and the broader dissemination of medical technology and treatments, the mortality rate for breast cancer has fallen by 2.3 percent per year over the past decade, with similar declines for colorectal (1.7 percent per year), lung (0.7 percent per year), and prostate cancer (4 percent per year in the second half of the decade).<sup>26</sup> Overall, the increase in spending has led to improvements in 20 of the 57 measures of healthcare quality that have trend data.<sup>27</sup> Moreover, a new book published by the American Enterprise Institute argues that increased healthcare expenditures – especially for pharmaceuticals, which is the fastest growing segment of the U.S. healthcare system – increases quality of life and disease-specific life expectancy.<sup>28</sup>

By highlighting the cost of healthcare spending, while completely ignoring the corresponding benefits, the MCMI is wholly unsuited to measure middle-class misery. Policymakers seeking a better score would simply turn to healthcare rationing and privation. As *The New Republic* senior editor Gregg Easterbrook explains:

Healthcare costs are rising, but so are benefits. Rates of almost all major diseases are in decline while people are living ever-longer; this means society keeps getting more for its healthcare investment. Also, with an aging population, healthcare spending would be expected to increase. It would be easy to reduce healthcare costs – just stop paying for heart surgery over the age of 70, stop paying for most dialysis, stop paying for nonessential procedures that only relieve pain, stop trying to save very premature infants, and so on. (I cite these because they are the real-world ways that some European health care systems restrain costs.)<sup>29</sup>

### **'Decline' in Median Family Income**

Beyond selective cost increases, the MCMI includes the median family real income, which declined by 3.3 percent between 2000 and 2002.<sup>30</sup> However, the MCMI uses pre-tax income for its analysis, which ignores the effect of tax relief on take-home pay. If **after-tax income** is used, the decline in median family income was 2.1 percent.<sup>31</sup>

However, it is important to consider that if capital gains and losses are excluded from the data, the median after-tax real income actually *increased* by 3.6 percent between 2000 and 2002.<sup>32</sup> Although a majority of Americans own stocks or stock mutual funds, most stockowners (particularly those in the middle class) are long-term investors whose income is unlikely to be affected by swings in realized capital gains.<sup>33</sup> Consequently, this is the measure that more

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<sup>26</sup> Agency for Healthcare Quality and Research, "National Healthcare Quality Report," December 2003. AHRQ Publication No. 04-RG003.

<sup>27</sup> Agency for Healthcare Quality and Research.

<sup>28</sup> Richard D. Miller and H. E. Frech, *Health Care Matters: Pharmaceuticals, Obesity, and the Quality of Life*, AEI Press, March 2004.

<sup>29</sup> Gregg Easterbrook, *Easterblog*, available at: <http://www.tnr.com/easterbrook.mhtml?pid=1554>.

<sup>30</sup> U.S. Census Bureau, *Income in the United States: 2002*, September 2003.

<sup>31</sup> U.S. Census Bureau.

<sup>32</sup> *Income in the United States: 2002*. Table RDI-1. Household Income Before and After Taxes: 1990-2002.

<sup>33</sup> ABC News/*Washington Post* poll conducted by telephone July 11-15, 2002 among a random national sample of 1,512 adults. Available at: [http://abcnews.go.com/sections/business/DailyNews/market\\_poll020716.html](http://abcnews.go.com/sections/business/DailyNews/market_poll020716.html).

accurately captures the disposable income of a middle class family. Unrealized capital gains contribute to household wealth, which hit an all-time high in 2003.<sup>34</sup>

### **Loss of 'Private Sector' Jobs**

As in the original Misery Index, employment is a component of the MCMI. But instead of using the overall unemployment rate, Sperling and Furman chose to focus only on *private-sector* payroll jobs, which have declined by 2.6 million since January of 2001.<sup>35</sup> If public-sector employment were included, the payroll job loss would be 1.8 million.<sup>36</sup> Although some libertarian economists argue that public-sector jobs should be excluded from employment statistics since the resources used to employ public workers must be extracted from the private sector,<sup>37</sup> it is unlikely that Sperling and Furman share this view. This omission was more likely another example of selection bias.

An even more significant omission in the index is the **household employment survey**, which is used to calculate the unemployment rate. While payroll jobs have declined since January of 2001, the employment survey has shown that the number of Americans with a job has increased by 508,000 since then.<sup>38</sup>

The divergence between the two employment numbers has never been so large, and the reason why is difficult to explain. Some economists suggest that it is caused by an increase in start-up businesses and the ranks of the self-employed, which are not counted in the payroll data but are counted in the employment survey. Others believe the changing nature of employer-employee relationships is responsible: as more and more work is contracted out instead of being performed by in-house employees, the business reports fewer jobs on its payroll, but the contractor doing that work is counted in the employment survey. Given the divergence between the two employment figures and the changing nature of the economy, relying on payroll data alone can be very misleading.<sup>39</sup>

### **Record Personal Bankruptcies**

The final – and perhaps oddest – statistic used to calculate the MCMI is the number of personal bankruptcies, which, according to the American Bankruptcy Institute, is at an all-time high.<sup>40</sup> Surely the increase in bankruptcies is troubling, but it is difficult to decipher precisely what it means for the average household. Some analysts suggest that the increase in bankruptcy filings is actually a product of overly lenient bankruptcy laws, which encourage debtors to file so as to void existing contractual obligations and halt the accrual of interest on debts.<sup>41</sup> If the increase in bankruptcies is merely a product of the exploitation of the current legal regime, it is

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<sup>34</sup> Federal Reserve, Flow of Funds Report, March 5, 2004.

<sup>35</sup> MCMI.

<sup>36</sup> Bureau of Labor Statistics, Current Employment Statistics, April 2004.

<sup>37</sup> See, for example, Thomas Di Lorenzo, "Why Government Jobs Programs Destroy Jobs," *The Freeman*, November, 1987, Vol. 37, No. 11.

<sup>38</sup> Bureau of Labor Statistics, Current Population Survey, April 2004.

<sup>39</sup> The Joint Economic Committee, "A Tale of Two Employment Surveys," October 14, 2003.

<sup>40</sup> American Bankruptcy Institute, Annual Non-business Filings by Chapter and Judicial District, 2000-2003.

<sup>41</sup> Joseph Pomykala, "Bankruptcy Reform Principles and Guidelines," *Regulation*, CATO Institute, Vol. 20, No. 4, 1997.

useless as a proxy for the financial health of the average American family, as Federal Reserve Chairman Alan Greenspan explained in a recent address.<sup>42</sup>

Were Sperling and Furman seeking to gauge the financial health of American families, they would have been better served to use the quarterly **debt-service ratio**, the Federal Reserve's primary measure of household indebtedness. This figure has remained roughly constant for the past two decades,<sup>43</sup> but has been overshadowed by a dramatic increase in **household net worth**, which hit a record \$44.41 trillion at the end of 2003, an increase of 5.8 percent over January of 2001.<sup>44</sup>

## Conclusions About the Middle Class Misery Index

In sum, the MCMI is a thinly veiled contrivance to find fault with an improving economy. Some of its components are included only for their negative implications, while data are manipulated to present other components in as negative a light as possible. Certainly, the great length Sperling and Furman had to go to misrepresent current economic conditions is a testament to the strength of the current recovery.

Analysts and policymakers would be wise to ignore the MCMI in favor of more conventional measures of economic health, which point to a strong and rapidly improving economy: GDP has grown for the past 10 consecutive quarters and increased by 6.2 percent in the second half of 2003, the fastest pace in 20 years;<sup>45</sup> the economy has created 759,000 jobs over the past seven months, with job growth in March the highest in four years;<sup>46</sup> and the traditional Misery Index is nearly 40-percent better than the average of the past 30 years, with the unemployment rate (5.7 percent) 1.3-percent lower than the average and the rate of inflation (1.8 percent) 3.5-percent lower than its annual average.<sup>47</sup>

### Amazing Economic Record in Historical Context

What is truly remarkable about the economic record of the past four years is that it came during a time of unprecedented economic shocks. The policies of the past four years – specifically successive rounds of tax relief – have allowed the economy to not only rebound from these shocks, but continue to expand.

First, in the last year of the Clinton Administration, financial markets began to recognize that stock prices were vastly overvalued, particularly in the technology sector. Between August of 2000 and August 2001, the broad-based S&P 500 declined by more than 28 percent, while the

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<sup>42</sup> “Bankruptcy rates are not a reliable measure of the overall health of the household sector because they do not tend to forecast general economic conditions, and they can be significantly influenced over time by changes in laws and lender practices.” Alan Greenspan, “Understanding Household Debt Obligations,” Credit Union National Association 2004 Governmental Affairs Conference, February 23, 2004.

<sup>43</sup> Greenspan.

<sup>44</sup> Federal Reserve, Flow of Funds Report, March 5, 2004. Table available at: <http://www.federalreserve.gov/releases/Z1/Current/z1r-5.pdf>.

<sup>45</sup> Bureau of Economic Analysis, April 29, 2004.

<sup>46</sup> Bureau of Labor Statistics, Current Employment Statistics.

<sup>47</sup> Bureau of Labor Statistics and Bureau of Economic Analysis.

NASDAQ fell 55 percent over that same period.<sup>48</sup> Based on the Federal Reserve Board of Governors' model, this stock market decline caused GDP to drop by approximately 1.75 percent, or slightly less than \$180 billion.<sup>49</sup>

The nation was then confronted with the terrorist attacks of September 11, 2001, which cost an estimated \$83 billion in destruction of property and interruption to business activity. Much more significant, however, was the economy-wide impact from the attacks arising from depressed economic activity, which was estimated at \$191 billion for 2001 alone.<sup>50</sup>

The following year the bankruptcies of Enron, WorldCom, Adelphia, and other large corporations created a crisis of confidence in the integrity of U.S. financial disclosure that cost the economy between \$21 billion and \$50 billion in 2002 alone.<sup>51</sup> The cumulative effect of these shocks depressed GDP by over 4 percent (\$420 billion), a figure that would have been difficult, if not impossible, to overcome without the economic stewardship of the past four years.

## **Conclusion**

Like the original Misery Index, the Middle Class Misery Index is a political tool designed by economic advisers to characterize the economy. But unlike the original index, which is still widely used today, the MCMI is a flawed concoction unlikely to be remembered beyond this year. Whereas the simplicity and straightforward logic of the original Misery Index made it so effective at indictment of the 1976 economy, surely it is a tribute to the strength of this economy that detractors had to construct such an absurdly complex index in order to attack it.

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<sup>48</sup> Yahoo! Finance, Historical Prices. Available at: <http://finance.yahoo.com/>.

<sup>49</sup> John V. Duca, "The Controversial Stock Wealth Effect," Federal Reserve Bank of Dallas, June 2001.

<sup>50</sup> Milken Institute estimate in General Accounting Office, Impact of Terrorist Attacks on World Trade Center," GAO-02-700R, May 29, 2002.

<sup>51</sup> Carol Graham, Robert E. Litan, and Sandip Sukhtankar, "Cooking the Books: The Cost to the Economy," Brookings Institution, Policy Brief No. 106, August 2002.