The Impact of the 9/11 Terrorist Attacks on the US Economy

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Abstract: Following the September 11, 2001, terrorist attacks on American soil, much shock reverberated around the world. Feelings of uncertainty ensued regarding the impact these attacks would have on the United States in terms of national security and the economy. As such, this paper specifically examines several facets of the US economy, noting the impacts that the attacks may or may not have had on the economy. Furthermore, this paper highlights the US economy's resilience despite the catastrophic nature of the attacks.

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I. Introduction

Following the September 11, 2001, terrorist attacks on U.S. soil, feelings of uncertainty immediately ensued regarding national security as fear loomed of possible future attacks. At the same time, feelings of uncertainty resounded regarding exactly what impact these attacks would have on the economies of both the United States and the global community. Such uncertainty was warranted given that the United States was already in the midst of a recession.[1] In addition to striking at the heart of the entity that symbolizes US military capability (the Pentagon), the attacks also struck an important economic symbol (the World Trade Center complex), resulting in a four-day hiatus of Wall Street trade activities.

An attempt to predict the impact of these events on the economy resulted in the formation of basically three camps of forecasters.[2] One set of forecasters—which consisted of an insignificant few—projected the economy would worsen, causing a deepening in the recession and a loss of U.S. economic hegemonic power. A second camp of forecasters—and the majority of forecasters—believed that, beyond New York's economy, the attacks would not alter the country's economic direction in which it was already headed. In essence, barring another attack, the recession would continue. A third camp of forecasters projected benefits to result from the attacks in the form of an increase in spending on security and technology development needed to adjust to globalization and all that comes with it.

Indeed, the United States and the international community for the most part were in shock. First, the events that transpired on that day were not like any other catastrophe to occur within the United States. Second, US stock markets halted for four business days and stocks fell immediately in the re-opening days of the stock market, with the Dow Jones falling 684.81 points on re-opening day; the 9/11 attacks simply fueled more concern given that the markets were already undergoing tumultuous times with the "dancing in the dollars" era coming to a close by year-end 2000. Third, while economic growth slowed immediately following the attacks, the US economy was already in a recession with consumer confidence declining throughout the months prior to the terrorist attacks. Finally, the United States had just experienced a very tumultuous close presidential election. As such, the 2000 election resulted in a divided country, with many political pundits quickly blaming both the outgoing Clinton administration and, to a lesser extent, the current Bush administration for failing to prevent these attacks. Needless to say, as for the Bush administration, initially most political views seemed to rally around the flag. Yet, as time passed, such sentiments waned as the country grew "war weary" after finding itself engaged in fighting two wars with the second war being recognized as a mistake altogether.

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[1] According to the National Bureau of Economic Research's Business Cycle Dating Committee, the 2001 recession began in March and ended in November. Also, see Greg Kaza's "There was no Double-Dip," in *National Review Online Financial*, February 18, 2005. http://www.nationalreview.com/nrof_comment/kaza200502180852.asp .

[2] "How has September 11 Influenced the Global Economy," in the International Monetary Fund's *World Economic Outlook Reports*, Chapter II, December 2001. http://www.imf.org/external/pubs/ft/wed/2001/03/index.htm.

Nevertheless, the goal of this paper is not to necessarily examine the two different U.S. administrations' score cards on fighting terror. Instead, the focus will be on examining several economic indicators that serve to explain the U.S. economy's resilience in the wake of disaster.

As such, this paper posits that, while there may be post-9/11-related policy implications in play, the 9/11 terrorist attacks did not have the type of impact that those in camp number one claimed. In fact, as posited by the majority of forecasters, this paper supports the notion that the US economy was not crippled in the wake of 9/11 and, while there were costs to the economy, to some extent the economy may have accrued some benefits as a result of these events. To make this determination, an examination was made of the following areas:

1. The impact on the U.S. stock market
2. The impact on U.S. economic growth
3. The impact on consumer confidence in the form of spending
4. The impact on foreign direct investment in the United States
5. The impact on fiscal policy and budgetary resources

In the end, this analysis will show just how resilient the US economy is when faced with a crisis. Though US capability has been demonstrated throughout history, clearly it is times like these in which fears of terrorism continue to exist, that such realities of resilience bear reminding.

II. The Impact of 9/11 on the US Stock Market

While the Dow Jones averages are affected by many other factors besides terrorism, an examination of the Dow's movements following terrorist attacks against US interests is conducted in this paper simply to gauge the stock market during periods of uncertainty brought about by fear and shock. Admittedly, to capture all other factors that may come into play, a much more in depth analysis would be required for future study. In the meantime, Table I highlights the Dow Jones's resilience to terrorist attacks against U.S. interests.[3] Indeed, the U.S. stock market has demonstrated remarkable resilience to terrorism since the 1920 Wall Street bombings which resulted in 40 deaths.

[3] E.S. Browning, "Stocks Stand Up to Terror: Last Week's Quick Rebound Reflects the Dow's Tendency to Shrug Off Most Attacks," *The Wall Street Journal*, July 11, 2005, C1, http://www.proquest.umi.com. This article was based on research conducted by Ned Davis Research, Inc.

Table I: Aftermath of Selected Terrorist Events involving US Interests: Percent Change in Dow Jones Industrial Average

Event Date	Event	First trading day	After the fifth Trading Day	After 252 trading days (a typical year)*
Sept. 16, 1920*	Wall Street bombings kill 40	0.92%	0.16%	-22.33%
Sept. 5, 1972	Terrorists kill 12 at Munich Olympics	-0.07%	-1.55%	-7.11%
Oct. 7, 1985	Achille Lauro hijackers kill one	-0.33%	0.84%	33.52%
Dec. 21, 1988	Scotland Pan Am bombing kills 270	-0.07%	0.02%	24.45%
Feb. 26, 1993	World Trade Center bombing kills six	0.17%	1.00%	15.65%
Apr. 19, 1995	Oklahoma City bombing kills 168	0.68%	2.90%	34.48%
Aug. 7, 1998	U.S. embassy bombings in Tanzania and Kenya kill 225	0.24%	-1.38%	24.91%
Sept. 11, 2001	Terrorist attacks in U.S. kill approximately 3000	-7.13%	-14.26%	-12.76%
Oct. 12, 2002	Bali, Indonesia bombings kill 202	0.35%	6.01%	24.38%
Mar. 11, 2004	Madrid bombings kill more than 190	-1.64%	0.03%	5.39%

*In 1920 stocks traded on Saturdays, therefore, a 252-trading day period was less than a year.

Clearly, the 1920 Wall Street bombings left the Dow Jones in the negative a year after the event transpired. Since then, however, the stock market has shown tremendous resilience as denoted in the above Table I. Of the ten events, only three showed a 252-day decline (the Sept 16, 1920, Wall Street bombings, the Sept 5, 1972, Munich Olympics terrorist attack, and the Sept 11, 2001, attack on major U.S. private and public facilities). So, while terrorism played a role in these three cases, it also shows that a majority (seven) of the incidents did not appear to be negatively affected 252 days after the occurrence of a terrorist incident. As noted, other factors tend to impact the stock market. For instance, in the case of 9/11, investors were already cautious about the US economy given the recession that the country was already facing despite the acts of terrorism.

Several studies have been conducted pertaining to the impact of terrorism on the stock market. Karolyi and Martell (June 2006) provides a quantitative analysis to assess the effects, examining a sample of 75 attacks between 1995 and 2002. Their findings show a statistically significant negative stock price reaction of -0.83%, corresponding to an average loss per firm per attack of $401 million in firm capitalization. This negative decline was derived after excluding stock prices of US Air and American Airlines to minimize distortion of the data given that the airline industry was the hardest hit on the 9/11 event day).[4] In essence, the quantitative analysis confirmed the obvious—that there is a greater market reaction on the day of the attacks, but with positive recovery occurring following the attacks. Unfortunately, the study places little emphasis on stock movements prior to the attacks and stock recovery time following the attacks.

On the other hand, Johnson and Nedelescu's IMF Working Paper (March 2005) contends that, because of well-functioning financial markets, US markets rebounded much more quickly than 12 other major markets, even though the direct attack occurred in the United States. Tokyo's stock exchange experienced the quickest recovery, taking only six days to recover, while the US stock market came in second, taking 13 days to rebound. Other stock markets took anywhere from 22 days (London) to 107 days (Norway) to rebound following the 9/11 attack. The authors stress that such "…market resilience can be at least partially explained by a banking/financial sector that provides adequate liquidity to promote market stability and stifle panic."[5]

Brian Taylor also reiterates the market's ability to correct itself. Looking at crises events that transpired during WWI (1914), WWII (1939), the Gulf War (1991), the first World Trade Center bombing (1993), and the 2001 terrorist attacks, Taylor shows that a pattern exists, noting…:

> "…that there is initially a flight to safety in financial markets, producing a decline in stock markets and volatility in commodity markets. The impact of the crisis itself is short-term. After a brief period of time, calm returns and markets return to their situation before the crisis."[6]

Clearly, the notion of self-correction is evident given that when WWI erupted following the assassination of Archduke Francis Ferdinand on June 23, 1914, the New York Stock Exchange closed July 1914 and did not reopen until five months later on December 12, 1914. The stock exchanges for London, Paris, and Berlin closed for longer periods with Berlin's stock exchange not re-opening until 1917.[7] On the other hand, unlike actions taken during WWI, the New York Stock Exchange (NYSE) remained open throughout

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[4] G. Andrew Karolyi and Rodolfo Martell, "Terrorism and the Stock Market," *Social Science Research Network* (June 2006). http://www.papers.ssrn.com.

[5] R. Barry Johnson and Oana M. Nedelescu, "The Impact of Terrorism on Financial Markets," *International Monetary Fund*, Working Paper WP/05/60 (March 2005) 8. http://www.internationalmonetaryfund.com/external/pubs/ft/wp/2005/wp0560.pdf.

[6] Brian Taylor, "The Historical Impact of Crises on Financial Markets," *Global Financial Data*, 1. www.globalfinancial.com. Reprinted in Headlines & Bottom Line, http://www.tocqueville.com.

[7] Ibid, Taylor.

the Second World War. In fact, the longest closure during WWII was for only one week in September when Germany attacked Poland on September 1939, with the NYSE rising following that event. The stock exchange also opened the day following the attack on Pearl Harbor. The same follows when considering the 1990/1991 Gulf War (the market rose over 20 percent in the month following the US attack on Iraq) and the 1993 World trade Center bombing (which virtually had no impact on the markets). Despite oscillations throughout each of these crisis events, it became evident that "…the quicker the markets are allowed to process news, the quicker markets can adjust to the economic and financial changes that have occurred."[8] Thus, in hindsight, it was discovered that it is best for the stock exchanges to remain open, thus, allowing markets to undergo a self-assessment and consequently a self-correction. Indeed, having learned this lesson, no such long-term closures have followed since that time.

In the case of 9/11, however, airline and insurance companies' stock movements during the weeks prior to the attacks bear examination. In the case of the airline industry, it was noticed that unusual trading in the U.S. stock options market had occurred, showing trades (or 'puts') betting that American Airlines stock price would fall. It seems that 450,000 shares of American Airlines stock involved 'puts.' Still, "…what raised the red flag is more than 80 percent of the orders were 'puts,' far outnumbering 'call' options, those betting the stock would rise."[9] From the outset such activity indicated that there may have been foreknowledge by some speculators that the attacks were coming.

Additionally, similar observations were made regarding the insurance industry stocks, particularly stocks of reinsurance companies. Following the attacks, …

> Several companies in the reinsurance business were expected to suffer huge losses from the attack. Munich Re of Germany and Swiss Re of Switzerland—the world's two biggest reinsurers, and the AXA Group of France. In September, 2001, the *San Francisco Chronicle* estimated liabilities of $1.5 billion for Munich Re and $0.55 billion for the AXA Group and *telegraph.co.uk* estimated liabilities of £1.2 billion for Munich Re and £0.83 billion for Swiss Re….
> Trading in shares of Munich Re was almost double its normal level on September 6 and 7, and trading in shares of Swiss Re was more than double its normal level on September 7.[10]

Although a Securities Exchange Commission (SEC) investigation was launched, investigators failed to find evidence of the market being manipulated prior to the

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[8] Ibid, Taylor.

[9] "Profiting from Disaster?: Investigators Checking on Unusual Trading in Stock Options," September 19, 2001, http://www.cbsnews.com/stories/2001/09/19/eveningnews/main311834.shtml.

[10] "Insider Trading: Pre-9/11 Put Options on Companies Hurt by Attack Indicates Foreknowledge," *9-11 Research,* last modified August 21, 2007. http://911researchwtc7.net/sept11/stockputs.html. (accessed February 18, 2008).

attacks.[11] Furthermore, by May 2007, no hard evidence ensued. Even with US intelligence agencies working in conjunction with SEC investigators (with the CIA briefing the SEC), the conclusion was the same. With US intelligence agencies monitoring the markets for terrorists, "…US intelligence agencies determined that portfolio managers coincidentally initiated trades before al Qaeda's attack." Without confirming if 'terrorists' or others were responsible for the manipulation of these stocks prior to the attacks, the intelligence community stressed that "…The challenges of regulating a global market in which large sums of money move around the world with the push of a computer button will likely emerge as a major policy issue in Washington."[12] Additionally, the Chairman of the SEC Christopher Cox explained…

> "This phenomenon is born of the arrival on the scene of so many different, and substantial, liquidity pools…It used to be that significant capital had to be raised in the United States," but that is no longer true.
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> And therein lies SEC's great regulatory challenge. While insider trading in Dow Jones, TXU and Reebok securities linked to Hong Kong, Pakistani and Croatian residents may capture public attention, more significant market threats are harder to detect.
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> Criminals now purposely disperse operations into different countries to avoid detection and prosecution. For example, residents of Hong Kong, Malaysia, Estonia and Latvia have hacked into U.S. online brokerage accounts and used the money to bid up the price of their own stocks. In one "account intrusion" case, criminals made more than $732,000 trading 15 Nasdaq-listed stocks.
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> The SEC's jurisdiction ends, of course, at the U.S. border, and extends into foreign countries through agreements with foreign regulators. This is how the commission freezes bank and brokerage accounts in foreign countries. "We're not into real time international enforcement," Cox said. "We now have templates for sharing information in many cases on a prudential basis in advance of problems cropping up."[13]

So, while no hard evidence has materialized to prove intentional stock manipulation occurred in an attempt to benefit persons with foreknowledge of the terrorist attacks, one thing is for certain. The attacks subsequently brought about accrued benefits for both the insurance and airlines industries, as both industries received some type of relief from government assistance. For instance, the Air Transportation Safety and System Stabilization Act was passed September 22, 2001, to preserve the viability of the US air transportation system by providing disaster relief (Public Law 107-42-September 22, 2001). As for the insurance industry, the first indication of accrued benefits came in the

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[11] Jesse Eisinger, "Investigators Fail to Find Evidence of Pre-Attack Market Manipulation," *The Wall Street Journal*, September 18, 2001, C20. ProQuest Database: ABI Inform Global, http://www.proquest.umi.com (accessed February 18, 2008).

[12] Steven M. Bears, "Odd Couple: CIA Briefs SEC," *Barron's*, May 21, 2007, M11.

[13] Ibid.

form of the Terrorism Risk Insurance Act (TRIA), signed into law November 26, 2002. The law created a new program within the U.S. Department of Treasury and it entails the federal government sharing the risk/cost of losses, resulting from any future terrorist attacks, with the insurance industry for a three-year period.[14] Although the act was created as a temporary 'back stop' measure for insurance claims and therefore was given an expiration date of December 31, 2005, it was extended another two years. However, as the December 7, 2005, deadline neared, reauthorization of the legislation was made, extending the act even further until December 31, 2014. In essence, what began as a four-year 'back stop' eventually became a 13-year extension.

In addition to legislative reauthorizations, the insurance industry also accrued additional benefits following the terrorist attacks. This second type of accrued benefits came in the form of increased profits as reflected in Appendix A. Prior to 9/11, the insurance industry was experiencing a decline in its stocks while insurance premiums were falling (as experienced between mid-1980s and 2000) to the point where insurance companies were not making any money.[15] Following the attacks, however, the reverse began to occur as premium prices across all lines of commercial businesses (including property, liability, and employee health) continued to climb upward. While explanations for this jump varies, it is clear that insurance companies' premiums were increasing due to the cost to provide coverage, especially given the significant claim payouts that resulted due to these attacks. This is supported by the insurance industry's earnings-per-share data (see Appendix A). An examination of the data indicates revenues began outweighing expenses after 9/11. For instance, during the period of 2000-2001 (prior to the 9/11 attacks), only 20 (49%) of the 41 companies listed showed an increase in their earnings per share. However, for the periods following, earnings per share began to increase. For instance, from 2001 to 2002, 29 (71%) of the companies listed showed an increase in earnings per share; for the 2002-2003 period, 36 (88%) reflected an increase; and for the period 2003-2004, 32 (78%) showed an increase. Overall, from 2001 to 2004, 37 (90%) of the listed companies experienced an increase in their earnings per share. In essence, during the post-9/11 economic environment, it appears that bad news was essentially good news for the insurance industry.

II. The Impact of 9/11 on US Economic Growth

While, overall, the 9/11 attacks had a minute impact on the US economy, New York's economy endured a direct impact, both to its private and public sector areas.

> "The destruction of physical assets was estimated in the national accounts to amount to $14 billion for private businesses, $1.5 billion for State and local government enterprises and $0.7 billion for Federal government. Rescue, cleanup

[14] Catherine A. Seifert, "Insurance pricing likely to remain strong into 2004," Standard & Poor's Industry Surveys, Insurance: Property-Casualty, January 16, 2003. NetAdvantage database in the Nova Southeastern University Alvin Sherman Library, http://www.nova.edu/library/localnsu/NetAdvan_go.html (accessed January 19, 2008)

[15] Jay Johnson, "The truth about insurance premiums," November, 1, 2003, http://www.lpgasmagazine.com/lpgas/safety%2/FRegulatory/The-truth-about-insurance-premiums/ArticleStandard/Article/detail/74074.

> and related costs have been estimated to amount to at least $11 billion. Lower Manhattan lost approximately 30 per cent of its office space and scores of businesses disappeared. Close to 200,000 jobs were destroyed or relocated out of New York City, at least temporarily."[16]

On the whole, however, the U.S. rebounded within two years of the 9/11 attacks with growth rates going from 1 percent following the terrorist attacks in 2001 to rise to a pre-9/11 level of 3 percent by 2003 and 4 percent by 2004. Clearly, the attacks had an impact on the US and world psyche given the horrific nature of the events highlighted by the unexpected—passenger jet liners being used as weapons of destruction to launch the attacks. However, as with previous catastrophic events that had occurred in US history, the US economy continued to demonstrate its resilience following 9/11. Appendix B (US Economic Growth Rates) highlights US growth rates since 1929 and provides a more accurate perspective of how the US economy has fared in light of other various major events. Indeed, such growth trends—reflected in both nominal and real dollars—tend to support the notion of economic resilience even in the wake of crises.

Upon examining growth rates for two world wars, it appears that growth for those periods were higher than any other period. During the two world wars, US production was at its highest while its war machine was simultaneously being enhanced for national security purposes. The war-driven economy exhibited increased employment as well as government and private consumption, even if it was for the short term. The Vietnam War period also shows increased growth rates beyond today's average 3 percent, with growth rates for that war period reaching anywhere from 3 to 7 percent in real dollars. However, growth seemed to slow as the cold war began to dissolve, as symbolically portrayed by the 1989 dismantling of the wall that separated East and West Berlin and the 1991 fall of the Soviet Union. This is not to say that terrorism and wars drive economic growth alone; instead, this approach is employed to highlight the fact that, to an extent, a correlation exists.

Since the dissipation of the Cold War spending era, growth rates have steadily remained in the 3 to 4 percent range in real terms. In fact, when comparing growth rates between the Clinton and the following Bush administrations, economic growth has not varied much, except for the 2001-2002 period, which not surprisingly, was somewhat due to uncertainty resulting from the 9/11 attacks as well as the ongoing recession that began prior to the attacks. However, by 2004, the US economy grew by 4 percent in real dollars, the highest growth rate to occur since 1989's similar 4 percent growth. In fact, although growth rates are not at the higher levels as seen during the spending eras of the two world wars and the Vietnam War, clearly, the increases since the 2001 attacks are a sign of a slow, yet, steady economic recovery. This recovery will be slow indeed, as concerns remain regarding the US's domestic economy (given the forecasts of another recession) as well as global security concerns that continue to exist.

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[16] Anonymous, "Economic Consequences of Terrorism," *Organisation for Economic Cooperation and Development, OECD Economic Outlook*. no. 71 (June 2002) 3, http://www.proquest.umi.com.

Indeed, US economic growth efforts may be slowed due to several factors including concerns over the falling dollar, a weakening housing market, and rising oil prices. As for the impact of 9/11 on world oil prices, an examination of oil prices before and after the US wars in Afghanistan and Iraq is necessary to discern some idea as to whether these wars—as policy implications resulting from the 9/11 attacks—have had an impact on world oil prices. As shown in Table III, oil prices have been climbing since 2003. Previously, there was a cycle of events, besides the 9/11 attacks, which resulted in oil price oscillations. For instance, rapid increases in oil prices came to an end in 1997 and 1998 when Asian consumption fell for the first time since 1982, thus resulting in an overproduction of OPEC oil. By early 1999, prices began inching upward again as OPEC began setting production quotas which resulted in reduced production and oil prices above $25 per barrel into year 2000. Prices did not begin to fall again until four OPEC quota increases occurred between April and November of year 2000. Despite the strike that occurred in the Venezuela oil company (PDVSA), with additional OPEC production resulting from the quota increases, prices began to moderate during years 2001 and 2002. Nevertheless, while the Venezuelan strike was coming to an end military action commenced on March 19, 2003. Note, however, during this time the US economy was improving and the Asian economies were growing rapidly; thus, demand for crude oil by both economies were growing at a rapid pace, thus, driving up the price of oil even further.[17]

Table III: Crude Oil: Annual Average Price

Year	Price of Crude Oil* ($US)
1997	18.28
1998	11.82
1999	17.13
2000	27.07
2001	22.73
2002	23.47
2003	27.11
2004	34.62
2005	49.87
2006	60.32
2007	70.91

Data source: Energy Information Administration. http://tonto.eia.doe.gov/dnav/pet/hist/wtotworldw.htm.
*The data reflects averages for the entire year. For example, the first week average price for 2007 was $50.77; by the last week of the year, the average was $87.62. On January 4, 2008, the price of oil on the market was $92.93.

[17] "Oil Price History and Analysis," *WTRG Economics, Energy Economist* Newsletter, 6-7, http://www.wtrg.com/prices.htm.

While a slight reduction occurred in 2001, oil prices have continued to rise since then, breaking record history on January 2 when the price rose to $100 per barrel before falling back to the low $90s. Clearly, several factors are driving the price of oil besides post-9/11 repercussions of war activities. One primary factor for the continuing increase is due to increasing world consumption (80 million barrels per day), which in turn has "…added a significant risk premium to crude oil prices and is largely responsible for prices exceeding $40-$50 per barrel."[18] In addition to increased world consumption, other factors contributing to the current oil price levels include:[19]

1. a weak dollar: since oil is priced in dollars, as the value of the dollar falls, the price of oil in dollars goes up. The dollar has fallen by 33 percent again the Euro in the past five years;
2. Asian economies: the rapid growth in Asian economies resulting in their increased petroleum consumption;
3. weather: the 2005 hurricanes and US refinery problems associated with the conversion from methyl t-butyl ether (MTBE) as an additive to ethanol;
4. supply cutoff threats: Iran preparing to use oil as a weapon by cutting off exports;
5. no spare capacity;
6. investment slowdown: not enough money flowing to regions where there are known oil reserves, i.e. Iraq which has an oil infrastructure that is in need of upgrades and Nigeria and Venezuela are undergoing political turmoil; and
7. investor demand: oil prices also being fueled by investors in the futures market who have no intention of ever taking delivery of a barrel of crude; they are simply betting that prices will move higher, thus, bidding up the futures contracts.

In essence, while it may be easier to attribute the increase in oil prices to the Iraq war which came about in response to the 9/11 terrorist attacks and the assumption that Iraq had something to do with these attacks, military action alone does not explain the rise in oil prices. Similar to the stock market, the price of oil is a reaction to a variety of other factors that are exclusive of war activities. Exactly how much causal effect has military actions had on oil prices (relative to the impact of other factors) have yet to be clearly determined. What is evident, however, is that uncertainty and instability continue to exist in the region, and as such, tend to impact oil prices as well.

Indeed, the United States appears to be entering into another recession, not only due to rising oil prices, but probably more so due to a weakening in housing markets and related consumer spending. In fact, according to Martin Feldstein, the president of the NBER, "Unfortunately, I think that there is a better-than-even chance that we are headed into a recession in 2008."[20] Admittedly, the housing bubble bust may, in part, be a result of the impact of high oil prices on disposable income, and therefore, homeowners' abilities to

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[18] Ibid, 8.

[19] See "Oil Price History and Analysis," *WTRG Economics*, http://www.wtrg.com/prices.htm and John W. Schoen's "What's Pushing Oil Prices Higher?: 7 reasons why crude has soared to record levels," Answer desk-MSNBC.com, http://www.MSNBC.msn.com/id/13862677/

[20] Barbara Hagenbaugh, "Economist fears 'nasty' recession is headed our way", *USA Today*, http://www.usatoday.com/money/economy/2008-01-08-recession_N.htm.

service their mortgages. Still, the decline in the housing markets may have less to do with 9/11 spillover and more to do with avaricious bankers who were all too aware of consumers' desperate desires to own their own homes at any cost. In essence, bankers continued to encourage consumers to purchase homes at adjustable (sub-prime) interest rate levels in an effort to get consumers into the homes of their choice at any cost as long as the bankers and affiliated mortgage institutions profited. Consumers in turn were desperate in the sense of being eagerly willing to contract on a home at such enticingly low interest rates without gaining a full understanding of the meaning of "adjustable rate." Nor did they seem to consider the additional costs associated with owning a home such as property taxes, insurance, maintenance, and an increasingly higher mortgage payment as their interest rates adjusted upward in response to market forces. Indeed, the long-term consequences of foreclosures and how they would impact the domestic economy as a whole were not a priority for consideration at the time.

In addition, one can delve even further to ascertain a sense of 9/11 impacts on the economy by considering economic forecasts before and after 9/11. For instance, a February 2001 consensus report from Blue Chip Economic Indicators forecasted real GDP growth for 2001 at 2.1 percent, down from 2.6 percent in January and from its high of 3.5 percent last September-August.[21] "Blue Chip emphasizes, however, that the consensus continues to predict the bulk of this year's weakness will be concentrated in the first half and that real GDP growth will rebound back and above the 3 percent level in the final six months of the year."[22] As such, Federal Reserve Chairman at that time Alan Greenspan projected, based upon this consensus report of federal Reserve Board governors and bank presidents, that real GDP growth was expected between 2 and 2.5 percent in 2001.[23]

Furthermore, according to Johannes Lapre, President of the northern European area for economic consulting Data Resources, Inc.-Wharton Econometric Forecasting Associates (DRI WEFA, now known as Global Insights, Inc.), "…before the events of 11 September there was a 50:50 chance the US and the rest of the world could avoid a recession. The fallout from the attack now makes a global recession inevitable."[24] This statement was made during a speech at an ECMSA (European Chemical Marketing and Strategy Association) conference held October 8-10, 2001. Note however, that the recession was already underway. As such, for 2001 and 2002, the DRI still forecasted…

> "…a growth in US GDP of 1% this year and 1.6% next year, compared with the pre-attack estimate of 1.6% this year and 3% next year. Europe is predicted to grow only a little faster than the US—1.6% this year and just over 2% next year. This economic outlook is based on a number of assumptions: there will be no more terrorist attacks in the near future; the US counter-attack will have no

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[21] Purchasing Hotline, Reed Business Information, a division of Elsevier, Inc. 3/8/2001, http://www.purchasing.com/article/CA139787.html.

[22] Ibid.

[23] Ibid.

[24] "Economic forces reshape top players," ICIA Chemical Database (October 15, 2001), http://www.icis.com/Articles/2001/10/15/149004/economic-forces-reshape-top-players.html.

> permanent negative impact on confidence or oil prices; consumer and business confidence will recover by the first quarter of next year; oil prices will remain weak, and more fiscal and monetary stimulus is in the plan."[25]

In retrospect, these revised forecasts for 2001 and 2002 were not far off the mark as actual GDP for 2001 and 2002 were 1 and 2 percent respectively; by 2003 and 2004, GDP was at 3 and 4 percent respectively. Still, while the economy appeared to be growing in the wake of the 9/11 events, there are other factors to consider, such as the impact the terrorist attacks would have on US consumer confidence as well as foreign investors' confidence in US markets.

In fact, as of this writing, another US economic recession looms on the horizon. Thus, the following section will show that, while there has been a modest increase in US economic growth since the 9/11 attacks, such growth does not necessarily mean that consumer confidence is at an all-time high. On the other hand, it also does not signify a steady trend of consumer confidence erosion either.

III. The impact of 9/11 on Consumer Confidence in Regards to Spending

First, personal consumption expenditures and personal income and the disposition of income represent a few of the indicators depicting consumer confidence. As such, data pertaining to these areas are presented in Table II.

Table II: Consumer Confidence Indicators (Billions of dollars)

Year	PCE	PI	DPI	PS	PS/DI
1992	3.3	5362	4751.4	366	7.7%
1993	3.3	5558.5	4911.9	284	5.8%
1994	3.7	5842.5	5151.8	249.5	4.8%
1995	2.7	6152.3	5408.2	250.9	4.6%
1996	3.4	6520.6	5688.5	228.4	4.0%
1997	3.8	6915.1	5988.8	218.3	3.6%
1998	5.0	7423	6395.9	276.8	4.3%
1999	5.1	7802.4	6695	158.6	2.4%
2000	4.7	8429.7	7194	168.5	2.3%
2001	2.5	8724.1	7486.8	132.3	1.8%
2002	2.7	8881.9	7830.1	184.7	2.4%
2003	2.8	9163.6	8162.5	174.9	2.1%
2004	3.6	9727.2	8680.9	181.7	2.1%
2005	3.2	10,301.1	9092.0	44.6	0.5%
2006	3.1	10,983.4	9629.1	0.5	0.4%

Source: Bureau of Economic Analysis, National Income and Product Accounts Table, last revised on December 20, 2007.
PCE=Personal Consumption expenditures (Percent Change from previous years)
PI=Personal Income
DPI=Disposable Personal Income
PS=Personal Savings
PS/DI=Personal Savings (percent of Disposable Income)

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[25] Ibid.

Note, however, that the purpose here is to simply point out economic growth and consumer confidence level changes during the year of the attacks. Indeed, a more in-depth analysis would be required to test whether 9/11 served as an independent and significant variable to explain these movements.

While personal and disposable income has been on the rise, clearly, personal consumption declined from its 5.1 percent pre-9/11 level due to various factors, with 9/11 serving as one of those factors. The ensuing declines began shortly after 1999, and by the time of the 2001 attacks, a 2.5 percent change occurred and with only moderate increases to follow each year thereafter. More importantly, the 2.5 percent change in consumer confidence in 2001 was for the whole year (with 9/11 occurring near the end of that year) and this declining level was due mainly to the recession that began before the 9/11 attacks.

Further, the data shows personal savings also declined following the 2001 attacks, rebounding a bit in 2002 through 2004, but declining to its lowest levels in 2005 and 2006, which essentially shows relatively no apparent personal savings. Consumers were spending less and saving less as well due to a concomitant number of factors pertaining to the rising cost of living, i.e. housing costs, fuel prices, etc.

Indeed, consumer confidence registered a sharp decline following the terrorist attacks, going from 114.0 in August 2001 to 97.0 in September 2001.[26] On the other hand, other economic analysts contend that, despite the positive statistics, the US economy was already in a recession, particularly when examining specific indicators such as unemployment levels. Consumer confidence was actually down during the two months preceding the attacks. In August, unemployment was at its highest in almost four years and continued to rise following the terrorist attacks' impact on an economy that was already in a recession. In addition to unemployment, a reduction in consumer spending and reverberations in other sectors of the economy, i.e. housing, exports, and investment, were also on the decline prior to 9/11.[27]

Subsequently, an examination of the Conference Board's report on consumer confidence following the attacks shows that levels of confidence dropped to two-digit levels for the months immediately following the attacks (September 2001 through February 2002). Consumer confidence began to rise to three-digit levels four months later, then descended back to two-digit levels starting in July 2002 through May 2004. Consumer confidence finally reached 3-digit levels in June 2004 (102.8) and July 2004 (105.7) only to dip again for four months before reaching the three-digit level in December 2004 (102.7). Since that time, confidence levels have remained pretty much in the 3-digit range each

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[26] Conference Board, "EconStats: Consumer Confidence," http://www.econstats.com/rt_cconf.htm.

[27] See Christian E. Weller and Laura Singleton, "Prosperity wasn't just around the corner: Signs indicate weakening economic performance before September 11 attacks," *Economic Policy Institute* (October 4, 2001) http://www.epi.org/content/fmm/issuebriefs_ib166. Also, see John M. Virgo, "Economic Impact of the Terrorist Attacks of September 11, 2001," *Atlantic Economic Journal*, 29, 4 (December 2001), ABI/INFORM Global database, http://www.proquest.umi.com.

month until August 2005, excluding April 2005 (97.5). By September 2005, however, consumer confidence dropped to 87.5 and preliminary figures put confidence levels for August 2006 (most recent data provided) at 99.6 [28]

Such confidence levels over the course of four years after 9/11 seem a bit surprising given that the US economy had suffered a number of setbacks leading up to the 9/11 events. Such setbacks included the bursting of the technology bubble, significant losses of stock market wealth, a stagnant job market, and corporate accounting scandals.[29] On top of these setbacks was added the 2001 terrorist attacks and uncertainties related to US engagement in two wars (Afghanistan and Iraq), as well as soaring gas prices which had reached monumental levels particularly by fourth quarter 2005 and continue to climb. Whether these confidence levels reflect a sign of consumers being truly confident about the economy or simply consumers having grown numb to bad news, in either case, the US economy and its consumers seem to be undergoing natural oscillations, while simultaneously adjusting to the occurrences of domestic and global events.

IV. Impact of 9/11 on Foreign Direct Investments in the United States

Foreign investments in the United States fared quite well, as demonstrated in Tables IV and V, mainly because it is easier to hold back on increasing exposure than to simply pack up operations and retrench from already established locations. While shocked at the idea that an attack of this magnitude could occur in the United States, other countries' companies continued to maintain their exposure, although with an eye of caution. Clearly, they deduced that such an occurrence was rare and did not require an exodus en masse from US markets.

Table IV: Foreign Direct Investment in the United States, 1992-1999 (In Millions of Dollars)

	1992	1993	1994	1995	1996	1997	1998	1999
FDI	423,131	467,412	480,667	535,553	598,021	681,842	778,418	955,726
% change		10.46%	2.83%	11.41%	11.66%	14.0%	14.16%	22.78%

Source: US Department of Commerce, Bureau of Economic Analysis, National Income and Product Accounts Table, last updated January 9, 2008.

Table V: Foreign Direct Investment in the United States, 2000-2006 (In Millions of Dollars)

	2000	2001	2002	2003	2004	2005	2006
FDI	1,256,867	1,343,987	1,327,170	1,395,159	1,520,316	1,594,488	1,789,087
% change	31.5%	6.9%	-01.25%	5.1%	9.0%	7.53%	12.2%

Source: US Department of Commerce, Bureau of Economic Analysis, National Income and Product Accounts Table, last updated January 9, 2008.

[28]Conference Board, "EconStats: Consumer Confidence," http://www.econstats.com/rt_cconf.htm. (accessed January 27, 2008)

[29] Betty W. Su, "The U.S. economy to 2012…," *Monthly Labor Review* (2004) http://findarticles.com/p/articles/mi_m1153/is_2_127/ai_n6145009.

Nevertheless, while a drastic departure from US markets did not occur, there was a decline in cumulative FDI stock in the United States, falling from a record 31.5 percent growth in investments in 2000 to a 6.9 percent growth by the end of 2001. Also, by 2002, investments fell even further to -01.25 percent. Even still, these declines were miniscule given the catastrophic events that occurred. Subsequently, however, by 2003 foreign investments were back on the rise with investors adopting more of a "wait and see how the US responds" attitude than that of lack of confidence in US markets.

Economists Alberto Abadie and Javier Gardeazabal (2005) conducted a case study on terrorism and its impact on the world economy, with emphasis on Spain's Basque region and the ETA terrorist group. With FDI at the center of analysis, this case study highlights a permanent drop in Spain's output, with the decline having to do more with a shifting of economic activities from the terrorist-prone regions to more secure regions. The emphasis was not on a large economy as the United States. The study concluded that, while terrorism may have a large effect on net foreign investment in an open world economy, it serves only as a small fraction of the total economic risk. Abadie and Gardeazabal further emphasize the allocation of productive capital across countries in response to terrorism, reflecting the ability of investors to diversify their investment strategies in an attempt to minimize their risks.[30]

Others, however, clearly assert that terrorism does not play a major role in explaining FDI inflows to the United States. For instance, Daniel Wagner's (2006) analysis of FDI behavior shows that terrorism does not seem to play a significant, if any, role in investors' decisions to invest abroad, highlighting investment decisions as being driven primarily by profit, not terror.

Indeed, the March 3, 2005 Congressional Research Service Report for Congress does not even consider terrorism at all as a factor of analysis. The report concludes that, despite the typical cyclical trends, "…the U.S. economy remains a prime destination for foreign direct investment"[31] with a bulk of this investment continuing to flow from developed countries, mainly European, and specifically lead traditionally by British companies.

To emphasize this hypothesis of investments being driven by profit regardless of terrorism fears and the instable economic and political systems, Jackson (2006) looked at US FDI in the Middle East where terrorist activities tend to have fomented. That analysis also found that, despite the existence of several terrorist groups operating in the region (Hezbollah, Hamas, Al Qaeda just to name a few), US FDI is not showing a retrenchment from the region.[32] In essence, investors in general do not seem to be deterred by terrorism in making investment decisions; instead, profits and ample markets in a region continue

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[30] Alberto Abadie and Javier Gardeazabal, "Terrorism and the World Economy," *University of the Basque Country—Department of Foundations of Economic Analysis II*, Series of DFAEII Working Papers (October 2005) 1, 4.

[31] James K. Jackson, "Foreign Direct Investment in the United States: An Economic Analysis," *CRS Report for Congress*, Order CodeRS21857 (March 23, 2005) 6.

[32] Olivia A. Jackson, "Dollars Still Flow Into the Middle East," *Foreign Direct Investment* (Financial Times Business: April/May 2007) 99.

to serve as the primary determinants for investments. As for the impact of 9/11 on foreign investments in the US insurance markets, the world's more than 100 insurers worldwide announced some type of exposure to this terrorist event, and it was projected that the world's largest reinsurers would more than likely be faced with paying out more than half of the total claims resulting from 9/11. Of these insurers, the five firms with the largest exposures to these catastrophic attacks were European firms. Indeed,

> Based on information from the Insurance Information Institute, as of late November 2001, reinsurers are estimated to be liable for 56% of total claims, primary property-casualty insurers for 36%, and life insurers for 8%....
> Based on data collected as of November 27, 2001, the five firms with the largest loss exposures are as follows: Lloyd's of London (with $2.8 billion in estimated loss exposure), Berkshire Hathaway ($2.3 billion, through its General Re unit), Munich Re ($2.1 billion), Swiss Re ($1.3 billion), and Allianz ($920 million).[33]

Clearly, given the magnitude of this topic, further research and analysis would be required to gain better insight to the insurance industry's investment behavior. As such, a research effort of this nature would include an examination of political risk and terrorism insurance and the implications of this coverage being provided by the government versus the private sector.

V. The Impact of 9/11 on fiscal policy and budgetary resources

In the wake of the 9/11 attacks it was no surprise that U.S. military action would be launched in Afghanistan in pursuit of Bin Laden and his Al Qaeda network, which was being harbored by that country's Taliban regime. US military action in Afghanistan was launched October 7, 2001. However, the US now finds itself simultaneously fighting two wars, taking the "War on Terror" initiative into Iraq on March 20, 2003. Both wars are ongoing as of this writing, and are funded through government borrowing and not through a rise in taxes.[34]

Indeed, when military action occurs, an increase in expenditures occurs as well, resulting in both short and long-term impacts on the economy.[35] Clearly, engaging in two wars simultaneously has resulted in further budgetary expenditures. Table VI depicts US military expenditures from 1988 through 2006.[36] Notice expenditures reached double-digit percentage increases following the 2001 attacks. However, during the 1991 Gulf War, the US was still actively engaged in the arms reduction process (arms reduction

[33] Catherine A. Seifert, "Assessing the aftermath of a disaster," Standard & Poor's Industry Surveys, Insurance: Property-Casualty, January 24, 2002, NetAdvantage database in the Nova Southeastern University Alvin Sherman Library, http://www.nova.edu/library/localnsu/NetAdvan_go.html (accessed January 19, 2008)

[34] Anonymous, "Economic Consequences of Terror." *Organisation for Economic Cooperation and Development, OECD Economic Outlook*, no. 71 (June 2002) 14, http://www.proquest.umi.com.

[35] Ibid, 3-11.

[36] The SIPRI Military Expenditure Database, *Stockholm International Peace Research Institute*, http://www.first.sirpi.org/non_first/milex.php.

talks culminated in 1991), with military expenditures during the 1990-1991 period declining by 8.5 percent. Keep in mind that such reductions were eminent in the wake of the 1989 fall of the Berlin Wall and the 1991 collapse of the Soviet Union. It also must be noted that the decline in expenditures did not necessarily mean a reduction in US military capability given the arms build up that occurred over the previous years. Yet, expenditures climbed due to the fighting of two wars as part of the government's *War on Terror* policy, going from $301,697 billion in 2000 to $546,018 billion in 2006.

Table VI: U.S. Military Expenditures, 1998-2005 (In Millions of Dollars)

Year	Military Expenditure	Percent Change
1988	293,093	
1989	304,085	3.8%
1990	306,170	0 .69%
1991	280,292	-8.55%
1992	305,141	8.9%
1993	297,637	-2.5%
1994	288,059	-3.2%
1995	278,856	-3.2%
1996	271,417	-2.76%
1997	276,324	1.8%
1998	274,278	-0.7%
1999	280,969	2.4%
2000	301,697	7.3%
2001	312,743	3.7%
2002	356,720	14.0%
2003	415,223	16.4%
2004	464,676	11.9%
2005	504,638	8.6%
2006	546,018	8.2%

Source: The Stockholm International Peace Research Institute, Military Expenditure Database

In addition to an increase in military expenditures, there was an increase in appropriations to support the mission of protecting the US borders and providing a nationwide security network through the creation of Homeland Security. This newly-created federal department was formally institutionalized through Executive Order 13228, Section 2, on October 8, 2001, "…to coordinate relevant agencies rather than tackle the change of combining them in a new department."[37] This institutional and re-organizational development resulted in an immediate infusion of $19.56 billion in FY2002 and $37.7

[37] National Commission on Terrorist Attacks Upon the United States, *9/11 Commission Report*, (New York: Barnes & Noble Publishing, Inc., 2006) 327.

billion in FY2003 (the first post-9/11 budget for this endeavor) in budgetary expenditures to support this national security effort.[38]

Tables VII and VIII show US receipts and expenditures for the 1992-1999 period (pre-9/11 attack) and the 2000-2006 period (the period surrounding the 9/11 attack). As such, net lending/borrowing (surplus/deficit) shows US accounts at deficit levels immediately following the 2001 attacks. Note, however, that deficits existed from 1992 (-$365.6 billion) to 1997 (-$66.1 billion). Only during the 1998-2000 period was there a surplus ranging from $37.9 billion in 1998 to $159 billion in 2000. While the 2001 deficit following the attacks ballooned from -$39.3 billion in 2001 to -$529.7 billion by 2003, the deficit appears to be on the decline, and by 2006 (-$344.8), shows it falling below 1992 levels (-$365.6).

Table VII: Government Current Receipts and Expenditures, 1992-1999 (In Billions of Dollars)

	1992	1993	1994	1995	1996	1997	1998	1999
Total Receipts	1,859.5	1,963.4	2,109.2	2,232.7	2,399.2	2,578.9	2,756.6	2,931.7
Total Expenditures	2,225.1	2,292.4	2,361.0	2,464.9	2,570.0	2,645.0	2,718.7	2,852.7
Net Lending/Borrowing	-365.6	-328.9	-251.8	-232.3	-170.7	-66.1	37.9	79.0

Source: US Department of Commerce, Bureau of Economic Analysis, National Income and Product Accounts Table, last revised on January 12, 2008.

Table VIII: Government Current Receipts and Expenditures, 2000-2006 (In Billions of Dollars)

	2000	2001	2002	2003	2004	2005	2006
Total Receipts	3,161.6	3,148.8	2,991.5	3,063.7	3,284.5	3,619.5	3,967.5
Total Expenditures	3,002.6	3,188.2	3,388.2	3,593.4	3,793.2	4,066.0	4,312.3
Net Lending/Borrowing	159.0	-39.3	-396.7	-529.7	-508.7	-446.5	-344.8

Source: US Department of Commerce, Bureau of Economic Analysis, National Income and Product Accounts Table, last revised on January 12, 2008.

In essence, the deficit reflects in large part the US government's response to the attacks. Furthermore, controversy remains regarding the United States' justification for fighting a war in Iraq, which has evolved over time into an ethnic war between Iraqi Sunnis and Shi'as with US troops caught in the middle.

VI. Conclusion

Despite the horrific nature of the 9/11 attacks, overall, the United States has proven to be quite resilient as it has in the past in the wake of crises. With the stock market closing for even four business days, on the one hand, that is an indication of over-concentration and vulnerability in the financial markets. On the other hand, however, it also exemplifies the country's resilience. The quick reopening of markets allowed for a self-assessment and correction following the attacks, with the Dow Jones going from 8920 points (dropping

[38] President George W. Bush, "Securing the Homeland Strengthening the Nation," http://www.whitehouse.gov/homeland/homeland_security_book.pdf.

684 points on the re-opening day following the 9/11 attacks) to reach 13,000-plus by April 26, 2006. Although year 2007 experienced declines in the stock market, with 2008 starting out no better while an impending recession looms on the horizon, it is expected that, as in the past, the stock market and the US economy as a whole will rebound.

Despite forecasts of another recession for 2008, stock market declines, and a crash in the housing market and related financials sector, economic growth remained steady with 2007 ending with 3% growth, similar to the previous two years. Furthermore, while consumer confidence remains shaky, consumers are adapting to these new times, which entails adjusting to both terror-related and non-terror-related events that concomitantly tend to affect the economy. This may be a sign that consumers are simply becoming numb to bad news and have learned to adjust to the natural economic oscillations, recognizing that the fact that the US is operating in a global and interdependent environment which tends to bring about even greater challenges than in the past. Furthermore, foreign investors are not retrenching from US markets as many had feared. Instead, growth continues in this area as the United States and its cities continue to welcome investors even amid cries from protectionists.

While budgetary outlays show deficits ensued immediately following the attacks, such a change in the balance sheet is not surprising given, what appears to be, an occurrence of unpredictable events. Unfortunately, however, the crisis has resulted in shifting resources from more productive areas into much needed areas of security which generally are not considered factors of productive resources for economic stimulation. Furthermore, Senator Ron Paul's 'blowback' ideas bear consideration here as he stresses the propensity for terrorism to rise as US military activities in other countries expand in an effort to spread democracy and peace across the globe. While the cause may be noble, unfortunately, an extension of military activities could also result in unintended consequences, such as an even greater increase in terrorist activities.

Still, given the nature of terrorism, it is virtually impossible to project exactly when an attack will occur. Even with indications—during both the Clinton and Bush administrations—that an attack was looming, predicting the exact time and location of the attacks were unlikely. Indeed, the primary objective of terrorism is to strike in an unpredictable manner. Nevertheless, the policy responses that followed in the wake of the attacks entailed both international cooperation and domestic realignments. This was exemplified in part by the actions of the Federal Reserve and others in the financial sectors which succeeded in maintaining the necessary liquidity to keep capital flowing within the United States and between the United Sates and other countries.

In summary, this paper highlights the United States' ability to continue to persevere in the wake of crisis. As highlighted, instead of weakening the economy, 9/11 played no significantly direct role in altering the direction in which the economy was headed, given that the United States was already enveloped in a recession before the attacks occurred. If anything, such a tragedy as 9/11 brought about more challenges for the country, consequently, resulting in a more heightened US awareness and increasing stamina to meet these challenges.

Appendix A: Insurance Industry: Earnings per Share Data

Earnings Per Share ($)

Company	2004	2003	2002	2001	2000
Property Casualty:					
ACE LTD	3.95	5.10	0.19	0.64	2.37
ALLSTATE CORP	4.82	3.87	2.07	1.62	2.97
AMBAC FINANCIAL GROUP	6.62	5.90	4.08	4.10	3.49
BERKLEY (WR) CORP	3.49	2.71	1.53	(0.93)	0.42
CHUBB CORP	8.15	4.51	1.31	0.65	4.10
CINCINNATI FINANCIAL CORP	3.30	2.11	1.33	1.09	0.67
FIDELITY NATIONAL FINL INC.	4.33	5.81	4.06	2.41	1.11
FIRST AMERICAN CORP/CA	4.04	5.89	3.27	2.51	1.29
INFINITY PROPERTY & CAS CORP	4.69	2.86	2.25	0.48	(2.46)
LANDAMERICA FINANCIAL GP	8.07	10.43	8.10	3.42	(6.60)
MBIA INC	5.73	5.67	4.00	3.94	3.58
MERCURY GENERAL CORP	5.25	3.39	1.22	1.94	2.02
OHIO CASUALTY CORP	2.11	1.25	(0.01)	1.64	(1.32)
OLD REPUBLIC INTL CORP	2.38	2.53	2.17	1.95	1.66
PHILADELPHIA CONS HLDG CORP	3.78	2.75	1.67	1.85	2.53
PROASSURANCE CORP	2.50	1.34	0.40	0.51	1.04
PROGRESSIVE CORP-OHIO	7.74	5.79	3.05	1.86	0.21
RLI CORP	2.90	2.84	1.80	1.54	1.46
SAFECO CORP	4.62	2.45	2.33	(8.18)	0.90
SCPIE HOLDINGS INC	(0.84)	(1.37)	(4.12)	(6.22)	1.84
SELECTIVE INS GROUP INC	4.81	2.54	1.67	1.07	1.07
ST PAUL TRAVELERS COS INC	1.56	3.90	0.53	3.18	Na
STEWARD INFORMATION SERVICES	4.56	6.93	5.33	3.01	0.04
UNITED FIRE & CAS CO	3.68	2.53	0.88	1.20	0.77
XL CAPITAL LTD	8.17	2.71	2.92	(4.55)	4.07
ZENITH INSURANCE	4.09	2.33	0.03	(0.90)	(1.85)
Reinsurance:					
EVEREST RE GROUP LTD	8.85	7.89	4.60	2.14	4.06
Multi-line Group:					
AMERICAN FINANCIAL GROUP INC	5.00	4.53	1.82	(0.07)	(0.80)
AMERICAN INTERNATIONAL GROUP	3.79	3.55	2.11	2.10	2.43
GENWORTH FINANCIAL INC.	2.34	1.98	Na	Na	Na
HANOVER INSURANCE GROUP INC	3.43	1.64	(5.72)	0.00	3.75
HARTFORD FINANCIAL SERVICES	7.32	(0.33)	4.01	2.31	4.42
HCC INSURANCE HOLDINGS INC	1.63	1.13	1.13	0.35	0.74
HORACE MANN EDUCATORS CORP	1.32	0.44	0.28	0.63	0.51
LOEWS CORP	5.64	(4.21)	4.49	(2.75)	9.44
UNITRIN INC	3.51	1.83	(0.12)	5.64	1.32
Insurance Brokers:					
AON CORP	1.80	2.08	1.65	0.54	1.84
BROWN & BROWN INC	0.94	0.81	0.62	0.43	0.29
ARTHUR J GALLAGHER & CO	2.06	1.63	1.49	1.48	1.12
HILB ROGAL & HOBBS CO	2.27	2.17	2.09	1.18	0.85
MARSH & MCLENNAN COS	0.34	2.89	2.52	1.77	2.17

Note: All data are as of December year end

Source: Standard & Poor's Industry Surveys, Insurance: Property-Casualty Archives, NetAdvantage database (accessed Jan. 27, 2008.

Appendix B: US Economic Growth Rates, 1929-2006
(Current-Dollar and "Real" Gross Domestic Product)

Event Transpiring	**Year**	**GDP in Billions of Current Dollars***	**% Change**	**GDP in Billions of Chained 2000 dollars****	**% Change**
WWI, 1914-1918					
	1929	103.6		865.2	
	1930	91.2	-12%	700.7	-19%
	1931	76.5	-16%	739.9	6%
	1932	58.7	-23%	643.7	-13%
	1933	56.4	-4%	635.5	-1%
	1934	66.0	17%	704.2	11%
	1935	73.3	11%	766.9	9%
	1936	83.8	14%	866.6	13%
	1937	91.9	10%	911.1	5%
	1938	86.1	-6%	879.7	-3%
WWII, 1939-1945	1939	92.2	7%	950.7	8%
	1940	101.4	10%	1,034.1	9%
	1941	126.7	25%	1,211.1	17%
	1942	161.9	28%	1,435.4	19%
	1943	198.6	23%	1,670.9	16%
	1944	219.8	11%	1,806.5	8%
	1945	223.1	2%	1,786.3	-1%
	1946	222.3	0%	1,589.4	-11%
	1947	244.2	10%	1,574.5	-1%
	1948	269.2	10%	1,643.2	4%
	1949	267.3	-1%	1,634.6	-1
	1950	293.8	10%	1,777.3	9%
	1951	339.3	15%	1,915.0	8%
	1952	358.3	6%	1,988.3	4%
	1953	379.4	6%	2,079.5	5%
	1954	380.4	0%	2,065.4	-1%
	1955	414.8	9%	2,212.8	7%
	1956	437.5	5%	2,255.8	2%
	1957	461.1	5%	2,301.1	2%
Cuban Missile Crisis, 1958-1962	1958	467.2	1%	2,279.2	-1%
	1959	506.6	8%	2,441.3	7%
	1960	526.4	4%	2,501.8	2%
	1961	544.7	3%	2,560.0	2%
	1962	585.6	8%	2,712.2	6%

Continued…Table II: US Economic Growth Rates, 1929-2006

Event Transpiring	Year	GDP in Billions of Current Dollars*	% Change	GDP in Billions of Chained 2000 dollars**	% Change
Vietnam War, 1964-1973	1963	617.7	5%	2,834.0	4%
	1964	663.6	7%	2,998.6	6%
	1965	719.1	8%	3,191.1	6%
	1966	787.8	10%	3,399.1	7%
	1967	832.6	6%	3,484.6	3%
	1968	910.0	9%	3,652.7	5%
	1969	984.6	8%	3,765.4	3%
	1970	1,038.5	5%	3,771.9	0%
	1971	1,127.1	9%	3,898.6	3%
	1972	1,238.3	10%	4,105.0	5%
	1973	1,382.7	12%	4,341.5	6%
	1974	1,500.0	8%	4,319.6	-1%
	1975	1,638.3	9%	4,311.2	0%
	1976	1,825.3	11%	4,540.9	5%
	1977	2,030.9	11%	4,750.5	5%
	1978	2,294.7	13%	5,015.0	6%
	1979	2,563.3	12%	5,173.4	3%
	1980	2,789.5	9%	5,161.7	0%
	1981	3,128.4	12%	5,291.7	3%
	1982	3,255.0	4%	5,189.3	-2%
	1983	3,536.7	9%	5,423.8	5%
	1984	3,933.2	11%	5,813.6	7%
	1985	4,220.3	7%	6,053.7	4%
	1986	4,462.8	6%	6,263.6	3%
	1987	4,739.5	6%	6,475.1	3%
	1988	5,103.8	8%	6,742.7	4%
	1989	5,484.4	7%	6,981.4	4%
Persian Gulf War, Jan-Apr 1991 ***Collapse of Berlin Wall and end of Cold War***	1990	5,803.1	6%	7,112.5	2%

Continued…Table II: US Economic Growth Rates, 1929-2006

Event Transpiring	**Year**	**GDP in Billions of Current Dollars***	**% Change**	**GDP in Billions of Chained 2000 dollars****	**% Change**
Clinton Administration, 1992-2000	1991	5,995.9	3%	7,100.5	0%
	1992	6,337.7	6%	7,336.6	3%
	1993	6,657.4	5%	7,532.7	3%
	1994	7,072.2	6%	7,835.5	4%
	1995	7,397.7	5%	8,031.7	3%
	1996	7,816.9	6%	8,328.9	4%
	1997	8,304.3	6%	8,703.5	4%
	1998	8,747.0	5%	9,066.9	4%
	1999	9,268.4	6%	9,470.3	4%
Bush Administration, 9/11 attack, Afghanistan war (2001-current)	2000	9,817.0	6%	9,817.0	4%
	2001	10,128.0	3%	9,890.7	1%
Iraq War, 2003-current	2002	10,469.6	3%	10,048.8	2%
	2003	10,960.8	5%	10,301.0	3%
	2004	11,712.5	7%	10,675.8	4%
	2005	12,455.8	6%	11,003.4	3%
	2006	13,246.6	6%	11,319.4	3%
	2007 (3rd quarter)	13,970.5	6%	11,658.9	3%

Source: US Department of Commerce, Bureau of Economic Analysis, US Economic Accounts, last revised on 12/20/07.
*= in nominal dollars
**=in real dollars

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