Is This the Worst Ever?

A comparison of historical recessions.

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EVERY TIME the U.S. economy slows, pundits claim that it is the worst recession ever and will drag on much longer than in the past. These claims are frequently made when it is not even a recession, or after the recession is over and the economy is in the early stages of a recovery. In October 1970, Representative Wilbur Mills predicted a "serious recession if inflation is not controlled" in the *New York Times*; the economy grew the next three years in spite of accelerating inflation. In April 1975, the *Times* wrote that the United States is "sliding deeper and faster into recession that is showing no signs of bottoming out"; the recession had ended a month earlier. In April 1980, an

Aetna strategist wrote in the *Wall Street Journal* that "the risks of a credit crunch and a severe recession were still very high"; the recovery was a month under way. In October 1981, the *Times* reported that "the price of lower inflation is a severe recession and 10.1 percent unemployment, the highest rate since 1940… some economists also argue that the outlook for recovery is still uncertain"; the recession was actually ending. In July 1992, the *Wall Street Journal* confidently asserted that "this recession has been the longest since before World War II"—sixteen months after the recession had ended. In February 2003, AFL-CIO president John Sweeney was quoted by the *Times* as saying, "There's an economic code red for America's working families who are in the worst economic crisis in two decades"—a full fifteen months after the recession's end.

Today we have the Great Capital Strike. In August 2008, Nouriel Roubini wrote in the *RGE Monitor*, "At this point, a severe recession and a severe financial crisis is unavoidable." Do you detect a common thread? Just as many teenagers take a perverse pleasure in watching Jason killing other teens on screen in the fortieth sequel to *Friday the 13th*, many observers seem to relish the eminent demise of the U.S economy. To put the current slowdown in perspective, it has yet to be categorized as a recession, even using today's watered-down definition. But how bad is it? To separate myth from fact, we compared the economic performance during the first seven months of 2008 with U.S. recessions of the past forty years.

According to the current definition of the National Bureau of Economic Research: "A recession is a significant decline in economic activity spread across the economy, lasting more than a few months, normally visible in real GDP, real income, employment, industrial production, and wholesale-retail sales. A recession begins just after the economy reaches a peak of activity and ends as the economy reaches its trough. Between trough and peak, the economy is in an expansion. Expansion is the normal state of the economy; most recessions are brief and they have been rare in recent decades." This is a more elastic approach to defining a recession than the Bureau's previous definition of "two consecutive quarters of negative real GDP growth."

Using the current definition, there have been six recessions over the past forty years. The first five would be categorized as recessions under both definitions, while the 2001 episode was only a recession under the new definition. Specifically, only the first and third quarters of 2001—not two consecutive quarters—experienced real negative GDP growth. The key features of the six recessions, and the first eight months of 2008, are summarized in Table I.

Table I: "Worst ever" U.S. recessions over the past 40 years

	12/69-11/70	11/73-03/75	01/80 03/80	07/81-11/82	07/90 03/91	03/01-11/01	01/08 07/08
Duration in Months	12	17	3	17	9	9	6
Change in GDP (%)	-0.4%	-3.5%	-0.7%	-2.7%	-1.4%	-0.2%	1.3%
Change in Payroll Employment (%)	-1.2%	-1.6%	0.2%	-3.1%	-1.1%	-1.2%	-0.3%
Change in Real Household Net Worth (%)	1.7%	-10.1%	-1.8%	-1.4%	-3.5%	-3.4%	0.2%
Change in Auto Sales (%)	-29.2%	-30.4%	-15.9%	-12.5%	-15.2%	-6.2%	-5.9%
Change in Industrial Output (%)	-7.1%	-15.0%	-0.8%	-8.5%	-4.4%	-4.0%	-1.4%
Change in Real Sales by Retail Stores (%)	-2.1%	-9.5%	-4.9%	-5.1%	-5.2%	-1.3%	-1.9%
Change in Construction Contracts for C&I Builidings (%)	-37.6%	-52.2%	-21.1%	-41.3%	-25.0%	-33.6%	-28.6%
Percent Real Return in S&P 500	-23.2%	-39.9%	-12.9%	-23.2%	-16.5%	-11.3%	-10.1%
Change in Real Median Home Price (%)	-15.8%	-4.0%	-3.1%	-8.7%	-6.2%	-1.1%	-3.2%
Change in Real After Tax Profit (%)	-13.3%	-30.4%	-12.7%	-6.8%	-12.3%	-8.3%	0.5%
Lowest Consumer Confidence Level (Monthly)	72.4	57.6	62.1	65.7	65.1	88.6	59.1
Change in Housing Starts	-17.5%	-30.5%	-32.7%	-25.1%	-31.6%	2.1%	13.7%
Highest Inflation Rate (Monthly)	6.4%	12.2%	14.6%	11.0%	6.4%	3.6%	4.9%
Highest Unemployment Rate (Monthly)	5.8%	8.3%	6.3%	10.7%	6.8%	4.8%	5.7%

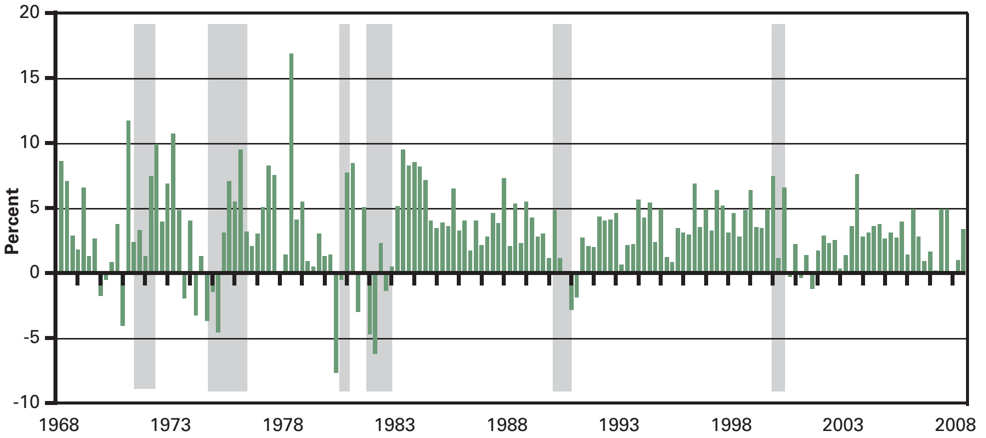
Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Standard & Poors, OFHEO, Linneman Associates

THE EVIDENCE

In order to quantify the severity of the seven events, we focused on fifteen important metrics of economic activity. While these metrics are not definitive, we believe they provide a clear image of each episode. The longest recessions occurred in 1973-75 and 1981-82, each lasting seventeen months. The average recession duration has been eleven months, and the shortest was three months. The shaded areas of our figures indicate recessionary periods.

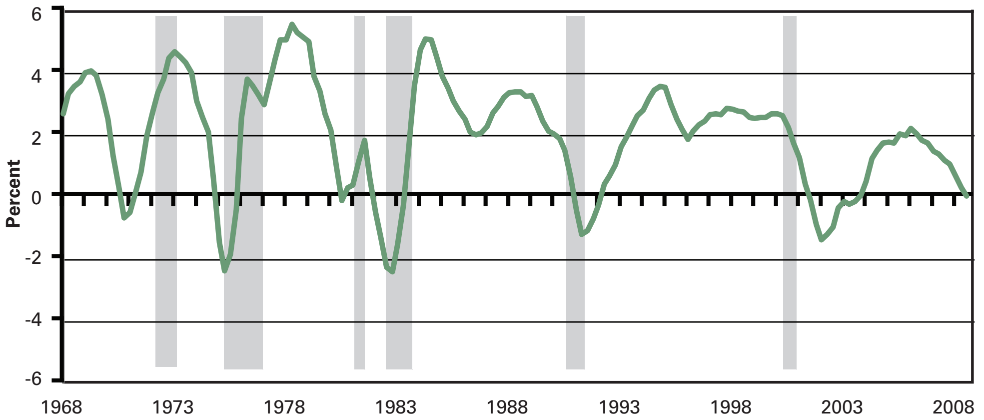
The greatest decline in real GDP was a staggering -3.5 percent, and took place in the 1973-75 recession (Figure 1). Per capita GDP growth was roughly 1 percent lower, or -4.5 percent, due to a 1 percent annual population growth. Through July of 2008 (hereafter referred to simply as "2008"), the current slowdown registered a healthy 1.3 percent real GDP growth. This means per capita GDP is increasing by about 0.3 percent, which belies consumer sentiment reports but reinforces the relative strength of today's economy. In 2008, payroll employment fell by 0.3 percent (Figure 2). This pales in comparison to the 3.1 percent decline registered during the 1981-82 recession. The average decline in payroll employment has been 1.2 percent, with only the brief 1980 recession escaping without a decline in payrolls.

Figure 1: Real GDP growth rate, quarterly annualized growth



Sources: BEA, freelunch.com, Linneman Associates

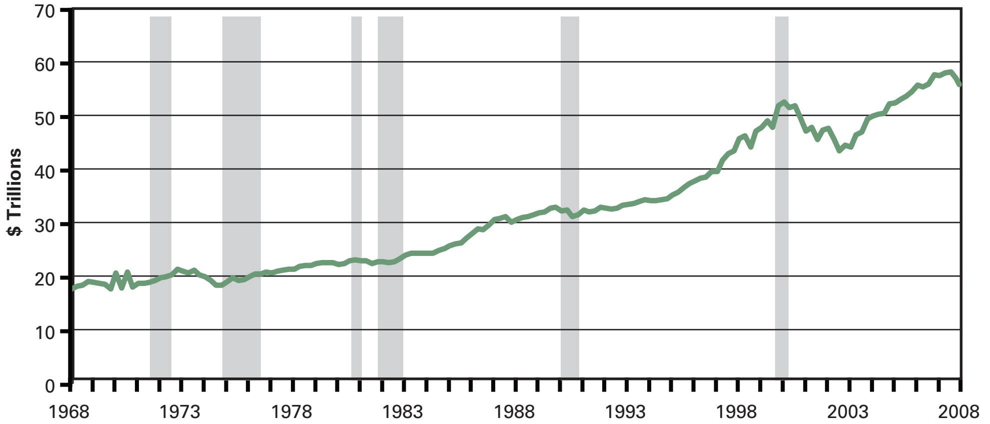
Figure 2: U.S. payroll employment, year-over-year percent change



Sources: BLS, Linneman Associates

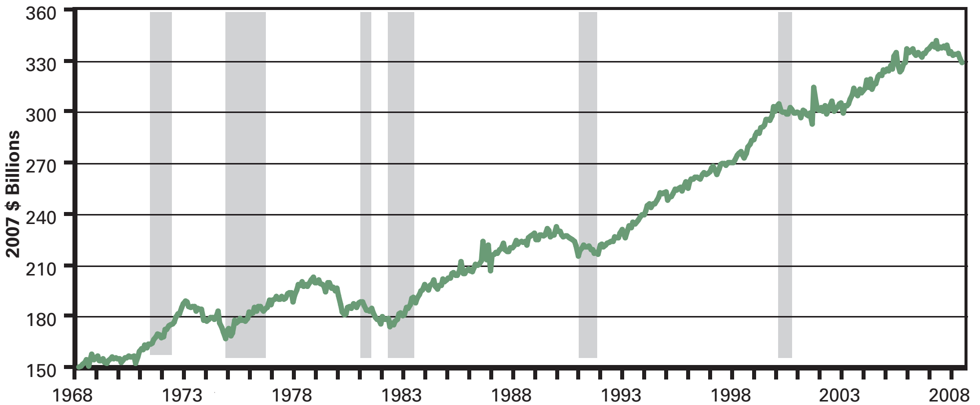
With housing prices tumbling and the stock and bond markets cracking, real household wealth has risen by just 0.2 percent in 2008 (Figure 3). Thus, on a per capita basis, real wealth has fallen by 0.8 percent. In contrast, real wealth fell by a staggering 10.1 percent in the 1973-75 recession (11.1 percent per capita) and by 3.5 percent in the 1990-91 recession (4.5 percent on a per capita basis). The sales of durable goods, particularly autos, generally declined in the face of weak economic conditions, as consumers forestall purchases in the face of credit squeezes and

Figure 3: U.S. household net worth (real–2007 $)



Sources: The Federal Reserve, Linneman Associates

Figure 4: U.S. auto sales

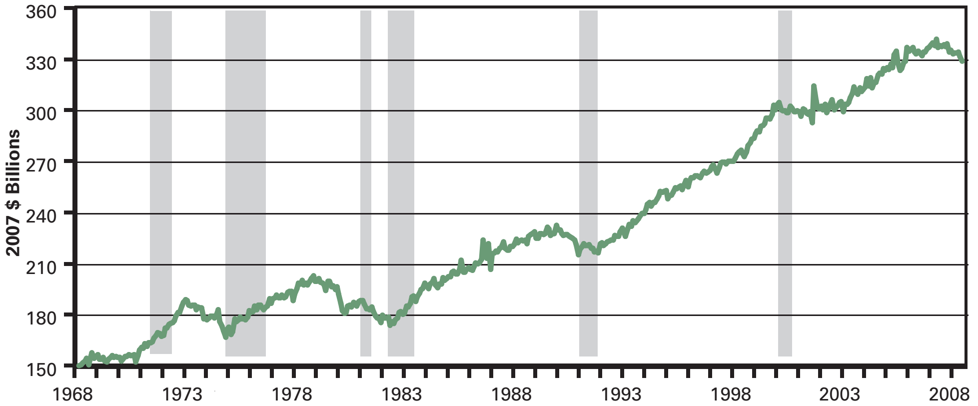


Sources: BEA, freelunch.com, Linneman Associates

uncertain near-term income (Figure 4). The 5.9 percent decline in unit auto sales in 2008 is dramatic and painful, but only about one-fifth of the 29.2 percent and 30.4 percent declines registered in 1969-70 and 1973-75, respectively. And while real sales by retail stores have weakened, the 2008 decline is small relative to the other recessionary periods, with the exception of 2001 (Figure 5).

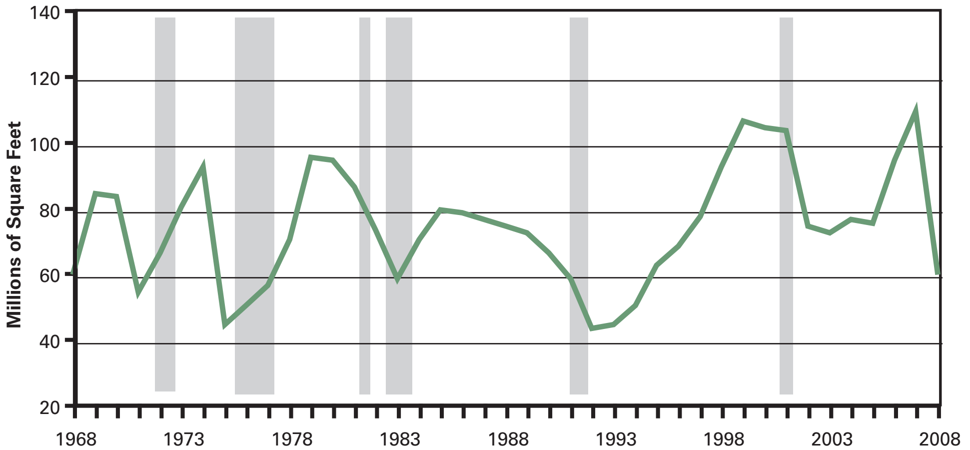
New construction contracts for commercial and office buildings have invariably suffered when the economy weakens and capital market liquidity evaporates

Figure 5: U.S. real retail sales



Sources: BFA, freelunch.com, Linneman Associates

Figure 6: Commercial and industrial construction contracts



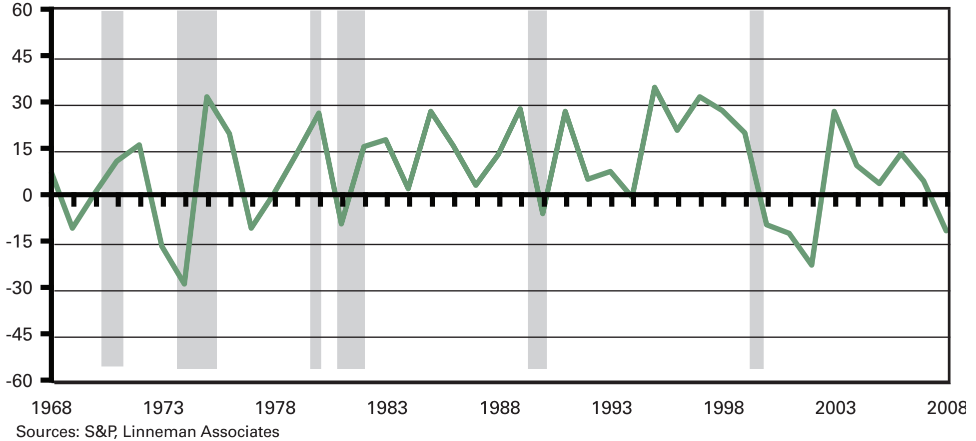
Sources: The Conference Board, Linneman Associates

(Figure 6). The decline of nearly 29 percent in 2008 is no exception. But the 2008 decline is not exceptionally large. In fact, in two recessions, contracts fell by 52 percent (1973-75) and 41 percent (1981-82) in a matter of months due to a complete absence of capital. This serves as a dramatic reminder that the Great Capital Strike of 2007-08 is hardly the first time that capital has disappeared seemingly overnight (and "forever"). The -10.1 percent return on the S&P 500 in 2008 is extremely painful (Figure 7). However, such declines are par for the very difficult

course called recession. The 1973-75 recession registered a negative return four times as large, wiping out 40 percent of its value in just seventeen months.

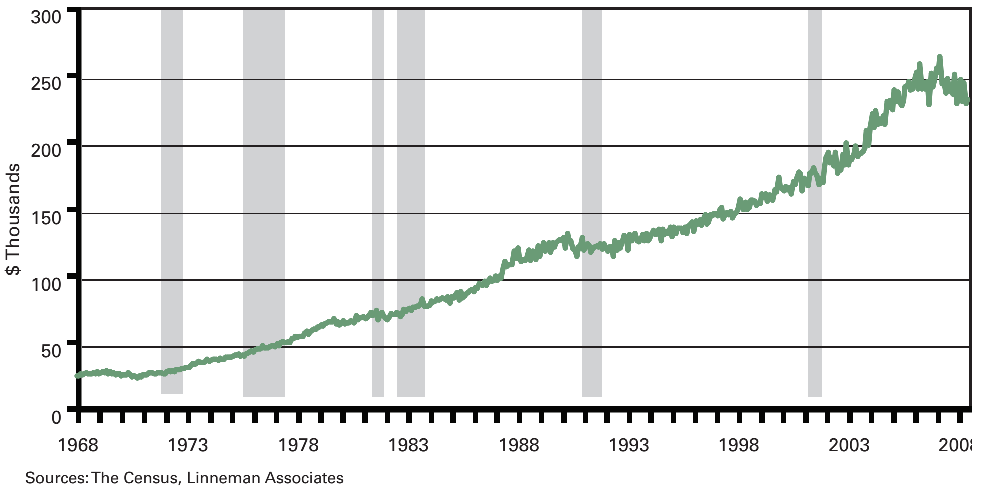
Real median home prices (measured by the Census Bureau's index of new residential sales) have fallen in all of the six previous recessions, with the 1969-70 recession registering double-digit declines (Figure 8). This index is in line with the Office of Federal Housing Enterprise Oversight Housing Price index (OFHEO HPI) but this goes back only to 1975. The current home price decline is "only" 3.2 percent,

Figure 7: Annualized S&P 500 returns



Sources: S&P, Linneman Associates

Figure 8: New single-family home median sale price



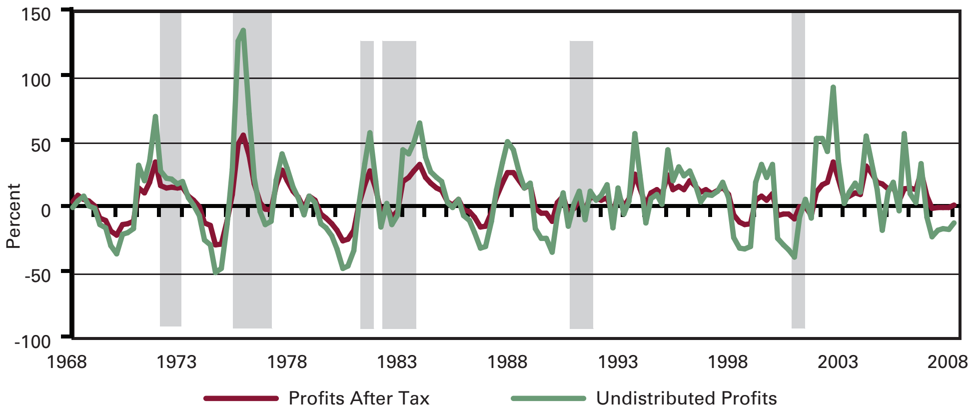
Sources: The Census, Linneman Associates

Table II: Home price changes

Market	Case-Shiller YE 2003-05 % change	Case-Shiller YE 2006-03/08 % change	OFHEO YE 2003-2005 % change	OFHEO YE 2006-03/08 % change	NAR YE 2003-2005 % change	NAR YE 2006-03/08 % change
Atlanta	10%	-7%	10%	2%	10%	-10%
Boston	13%	-7%	18%	-3%	15%	-11%
Charlotte	9%	2%	8%	8%	19%	1%
Chicago	19%	-10%	21%	1%	20%	-9%
Cleveland	6%	-11%	6%	-1%	6%	-24%
Dallas	7%	-4%	6%	5%	7%	-5%
Denver	8%	-7%	7%	1%	4%	-10%
Detroit	6%	-20%	4%	-7%	4%	-20%
Las Vegas	61%	-27%	61%	-12%	70%	-22%
Los Angeles	52%	-23%	57%	-8%	49%	-21%
Miami	63%	-26%	54%	-4%	57%	-14%
Minneapolis	14%	-16%	17%	-2%	18%	-14%
New York	31%	-8%	33%	0%	30%	-5%
Phoenix	75%	-25%	63%	-7%	62%	-17%
Portland	34%	-3%	33%	4%	30%	2%
San Diego	35%	-22%	41%	-11%	42%	-24%
San Francisco	39%	-21%	37%	-3%	28%	-7%
Seattle	32%	-3%	30%	5%	32%	3%
Tampa	56%	-21%	48%	-9%	49%	-19%
Washington, D.C.	49%	-16%	51%	-5%	53%	-14%

Sources: Standard & Poors, OFHEO, NAR, Linneman Associates

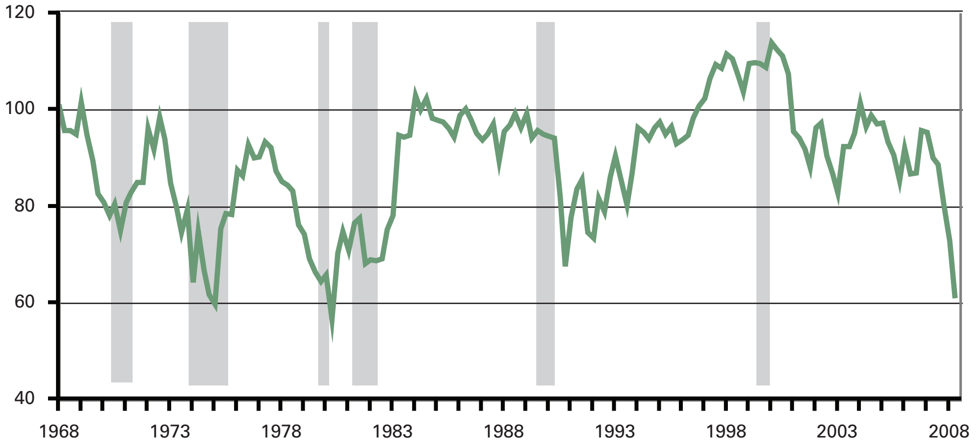
Figure 9: YOY percent change in real after-tax corporate profits



Sources: BFA, freelunch.com, Linneman Associates

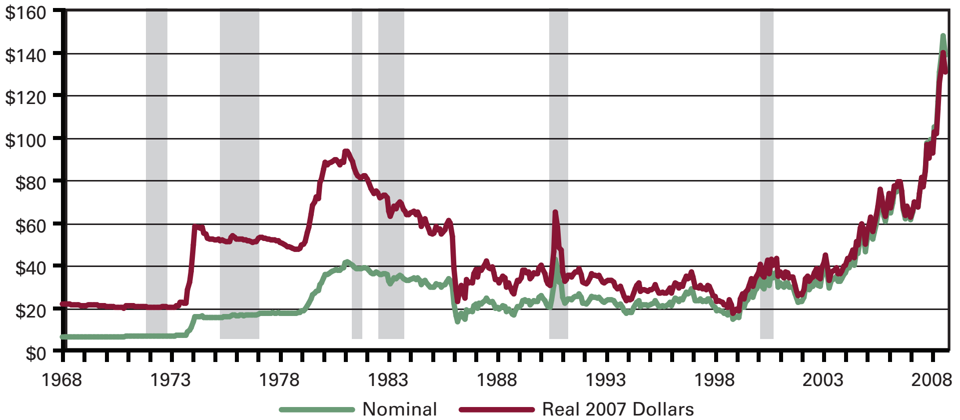
which is much smaller than the decline indicated by the frequently cited Case-Shiller index (Table II). But this latter index, like the NAR index, is unrepresentatively loaded with sales of foreclosed empty and speculatively owned homes, and focuses primarily on the most overbuilt housing markets. The corporate sec-

Figure 10: University of Michigan consumer sentiment, 1968 = 100



Sources: University of Michigan, Linneman Associates

Figure 11: Historical crude oil price per barrel



Sources: Global Financial Database, International Energy Agency, Linneman Associates

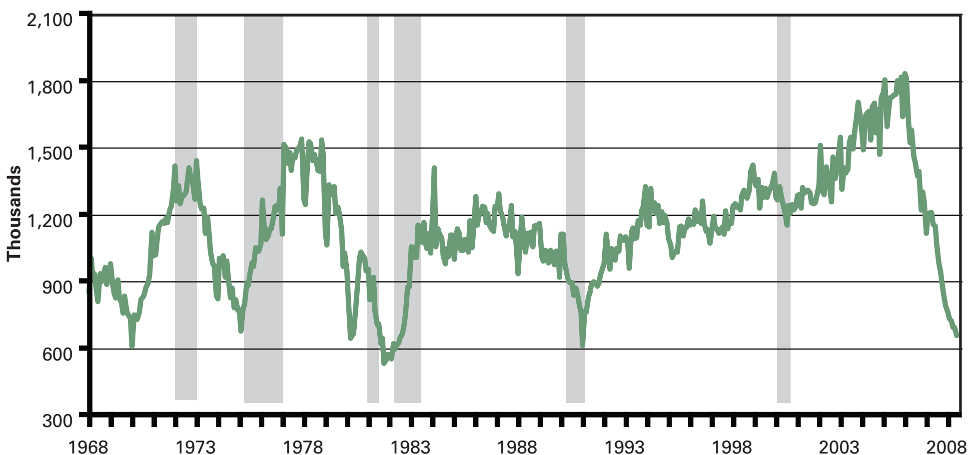
tor as a whole registered a modest real after-tax profit increase of 0.5 percent in 2008, in spite of staggering losses in the financial sector (Figure 9). This is in contrast to the 30 percent and 13 percent real declines in after-tax profit witnessed in the 1973-75 and 1969-70 recessions, respectively. Consumer confidence in 2008 plummeted to levels not seen since the recessions of 1973-75 and 1980 (Figure 10). Interestingly, all three periods share abnormally high oil and gasoline prices,

serious geo-political disturbances, domestic political uncertainty, and constipated capital markets (Figure 11).

In many ways, the prolonged presidential campaign of 2007-2008, combined with the chaos in post-war Iraq and Afghanistan, echo the collapse of the Nixon-Agnew administration amidst the Vietnam War, and the global ineptness of the Carter administration (remember the Iranian hostage crisis?). Today's anemic rate of housing starts is breathtaking, particularly after the giddy starts registered just two years earlier (Figure 12). However, the percentage declines in 2008 are similar to those registered in the 1969-70 recession, and about half or more of the declines in 1973-75, 1980, 1981-82, and 1990-91. Only the 2001 recession witnessed an increase in housing starts.

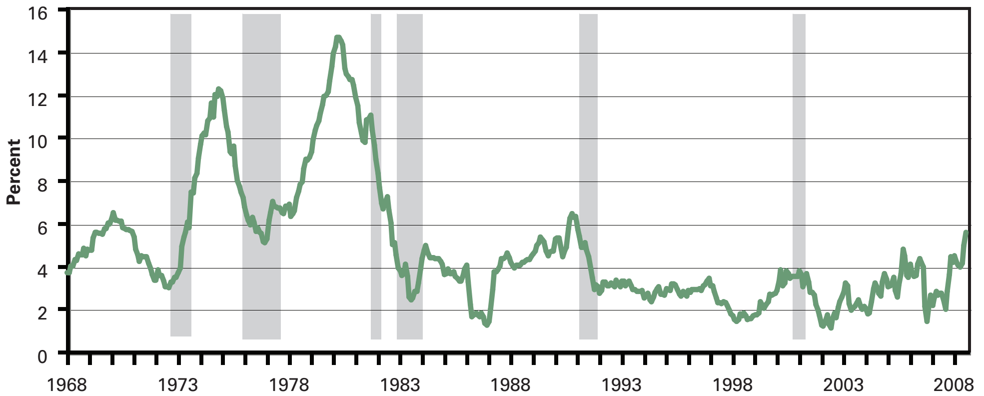
Inflation, once again, has reared its ugly head in 2008, with annual inflation reaching 4.9 percent as measured by CPI including food and energy (Figure 13). But this rate is just one-third of inflation registered in the 1980 recession, and well below the double-digit rates of 1973-1975 and 1981-1982. How quickly we forget what real inflation looks like. The U.S. unemployment rate rose to 5.7 percent in 2008: high, but well below rates seen during previous recessions (Figure 14). Particularly noteworthy in this regard are the continental European-like 8 percent unemployment rate registered in 1973-1975, and the double-digit unemployment rate registered in 1981-1982.

Figure 12: Single-family home starts



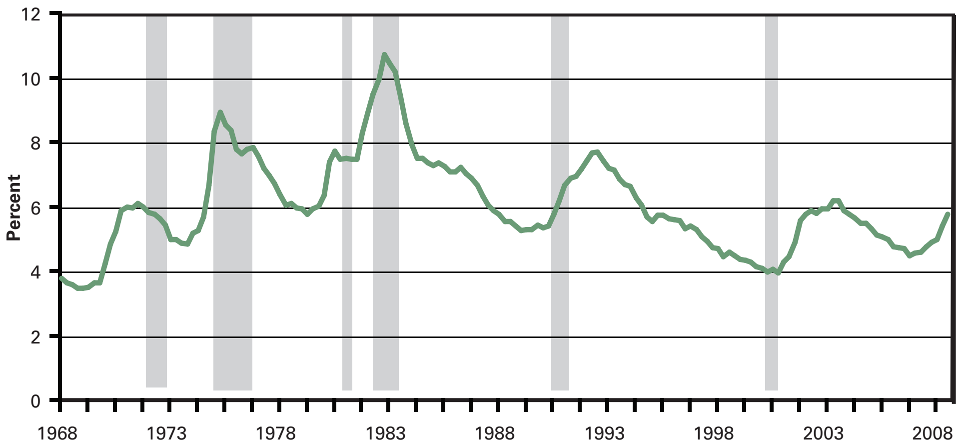
Sources: The Census, Linneman Associates

Figure 13: All items consumer price index, YOY percent change



Sources: BLS, freelunch.com, Linneman Associates

Figure 14: Unemployment rate



Sources: BLS, freelunch.com, Linneman Associates

When viewed as a whole, how does the current U.S. economic situation (which may still worsen) compare to past recessions? Clearly things are not good, and the Great Capital Strike merits a position on the list of worst U.S. economies of the past forty years. But it is very clearly (at least so far) far from the worst. To demonstrate this, we ranked each of the seven episodes on a scale of one to seven (seven for the worst, six for the second worst, etc.) for each of the selected fifteen metrics. The worst possible score is 105 (the worst score for each of the selected 15 metrics), while

Table III: "Worst ever" U.S. recessions over the past 50 years

	12/69-11/70	11/73-03/75	01/80 03/80	07/81-11/82	07/90 03/91	03/01-11/01	01/08 07/08
	RANK ORDER (7 is Worst; 1 is Best)						
Duration in Months	5	6.5	1	6.5	3.5	3.5	2
Change in GDP (%)	3	7	4	6	5	2	1
Change in Payroll (%)	4.5	6	1	7	3	4.5	2
Change in Real Household Net Worth (%)	1	7	4	3	6	5	2
Change in Auto Sales (%)	6	7	5	3	4	2	1
Change in Industrial Output (%)	5	7	1	6	4	3	2
Change in Real Sales by Retail Stores (%)	3	7	4	5	6	1	2
Change in Construction Contracts for C&I Builidings (%)	5	7	1	6	2	4	3
Percent Real Return in S&P 500	5.5	7	3	5.5	4	2	1
Change in Median Home Price (%)	7	4	2	6	5	1	3
Change in Real After Tax Profit (%)	6	7	5	2	4	3	1
Lowest Consumer Confidence Level (Monthly)	2	7	5	3	4	1	6
Change in Housing Starts	3	5	7	4	6	1	2
Highest Inflation Rate (Monthly)	3.5	6	7	5	3.5	1	2
Highest Unemployment Rate (Quarterly)	3	6	4	7	5	1	2
Total Rank Score	**62.5**	**96.5**	**54**	**75**	**65**	**35**	**32**
Number of Worsts	**1**	**10**	**2**	**3**	**0**	**0**	**0**
Number of Bests	**1**	**0**	**4**	**0**	**0**	**6**	**4**

Sources: BEA, S&P, OFHEO, NAR, Linneman Associates

the best possible score is fifteen (the least bad on each of the fifteen selected metrics). The total score for each of the seven episodes is displayed at the bottom of Table III.

Far and away, the worst recession of the past forty years appears to have occurred in 1973-75, with the second-worst taking place in 1981-82. The 96.5 rank score for the 1973-75 recession is reinforced by the fact that it was ranked the worst in ten out of fifteen selected metrics, and was never the best in any category. In contrast, the Great Capital Strike is (so far) the mildest, with a score of 32. Though it is ranked sixth in consumer confidence, it is not the worst in any of the categories. The current period has exhibited the strongest growth in GDP, auto sales, S&P returns, and after-tax profits (all in real dollars), compared to the previous six recessions.

COMMERCIAL REAL ESTATE

Turning to commercial real estate markets, it is impossible to compile the data necessary to fully compare across these seven episodes. However, as long-time observers

and participants, we offer our views. First, consistent with the sharp declines previously documented in commercial and industrial contracts, each episode was painful for developers. We lived through our first real estate recession in 1969-70. In some ways, it was just a "blip on the radar screen," in that there was "only" a short-lived 37.6 percent decline in construction activity, and no substantial change in lending activity.

Atlanta offers an interesting example of the effects of recession on real estate. In 1969-70, if you asked developers in Atlanta about the recession, most would have responded: "What recession?" Of course, things were not as rosy in the Midwest and Northeast, but all in all, it was not a deep decline. This cockiness left most developers ill-prepared for the deep recession of 1973-75. Atlanta experienced a huge construction boom post-1970, with 40,000 apartments permitted in 1972 alone. Many were condominiums and townhome developments. Then, seemingly out of nowhere, the recession of 1973-75 struck. It was such a disaster that it was 1979 before there was any appreciable construction activity in the Atlanta area for all building types. And Atlanta, Texas and California were the "boom" markets in these dark times. More than one-half of the real estate developers and home builders went bankrupt or left the business; the Atlanta condominium business was so damaged in this period that there was no appreciable condominium development until the mid-1990s. Commercial real estate values plummeted by 25 percent to 30 percent, and foreclosures and workouts (especially for condo projects) were the program du jour. There was no capital available for new construction, except for build-to-suit projects. In 1976, Post Properties permitted and closed on a 276-unit apartment development (Post Woods) financed by Manufacturers Hanover Bank—the only multifamily permit issued over a three-year period in metro Atlanta.

Economic conditions in 1980-82 were unique for the commercial real estate industry in that the recession was entirely due to monetary policy and had nothing to do with supply and demand fundamentals. There was solid pent-up demand for space on the heels of the slowdown of the mid-1970s. Unfortunately, rampant inflation caused Fed chairman Paul Volker and the Federal Reserve to use a sledgehammer in the battle against inflation. Bank interest rates for construction loans were based on a 16 percent prime rate.

Post Properties did a transaction for a small apartment project with 50 percent debt at a 19 percent interest rate. The good news was that because there was so little development and so much demand, the project worked.

In 1987, there was a change in the tax treatment for commercial real estate that

set the stage for a disastrous real estate downturn nationally. Absent tax benefits and in the teeth of a difficult financing market, real estate "suddenly" became very illiquid. The savings and loan industry literally disappeared, and most banks and life companies abandoned the real estate market. Capital for commercial real estate completely evaporated. We view July 1990 through March 1991 as the second-worst recession as it pertains to commercial real estate. This recession heralded the end of an era of commercial real estate financing, requiring the evolution of entirely new sources of capital.

Like many real estate owners, Post Properties went public as a REIT in 1993 simply because there was no viable alternative capital source at that time. For many real estate owners, it was as Stan Ross once stated: "Do you want to file a Chapter 11 or an S-11?" It took some seven to eight years for a new era of real estate capital to evolve, characterized by REITS, CMBS, and private equity funds. The 2001 recession had only a limited affect on most real estate markets, primarily affecting the travel and lodging sector, Silicon Valley, SOMA in San Francisco, and New York City real estate. However, capital flows remained plentiful and real estate sales abounded.

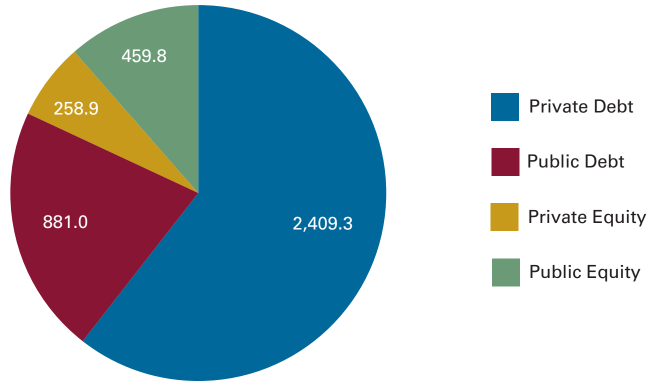
The current episode has affected the for-sale housing markets in a way that was predictable. The generous availability of financing to home buyers (including "investment" purchasers), no-document loans, and customers walking out of closings with large sums of money clearly foreshadowed the current depression in the for-sale business. It will be many years before the for-sale markets, particularly for condos, regain such giddy heights. In fact, we suspect it will be another decade before we again have a healthy condominium business. However, thus far the Great

Table IV: Commercial real estate comparison

	1991	2008
Office vacancy	19%	13.20%
Office pipeline	4.50%	1.50%
Hotel occupancy	61.90%	63.10%
Hotel pipeline	4%	2.50%
Apartment vacancy	7.30%	8.0%
Apartment pipeline	2.50%	1%
Mortgage delinquency	7-14%	0.03-0.50%
Real cap rate spread	200 bps	300 bps
Mortgage availability	None	Cash flow only
Equity availability	None	Substantial but waiting
Sales activity	Only distressed	Limited

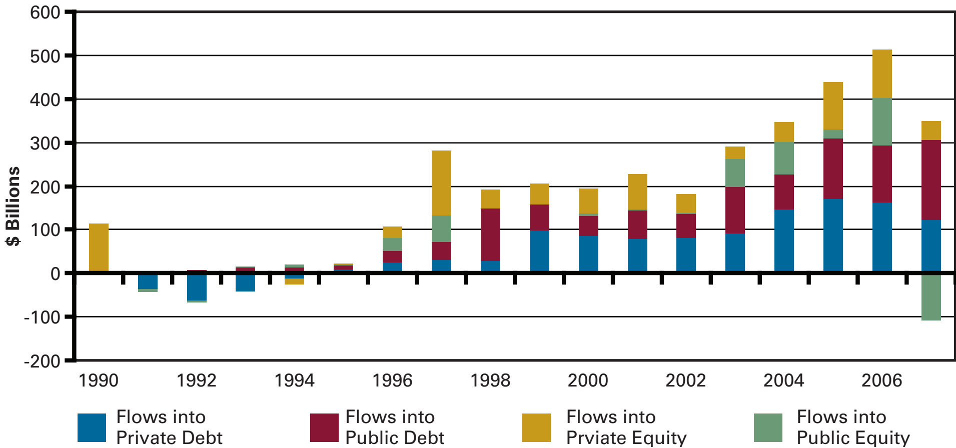
Sources: CBRE, Smith Travel Research, Lodging Econometrics, NCREIF, Census, HUD, Linneman Associates

Figure 15: Real estate capital sources, 2007 ($ millions)



Sources: Roulac Global Places, ADLI, CMSA/Trepp Database, CMA, the Federal Reserve, FannieMae.com, IREI, NAREIT, PricewaterhouseCoopers, Real Capital Analytics

Figure 16: Annual flows to real estate, real - 2007 $

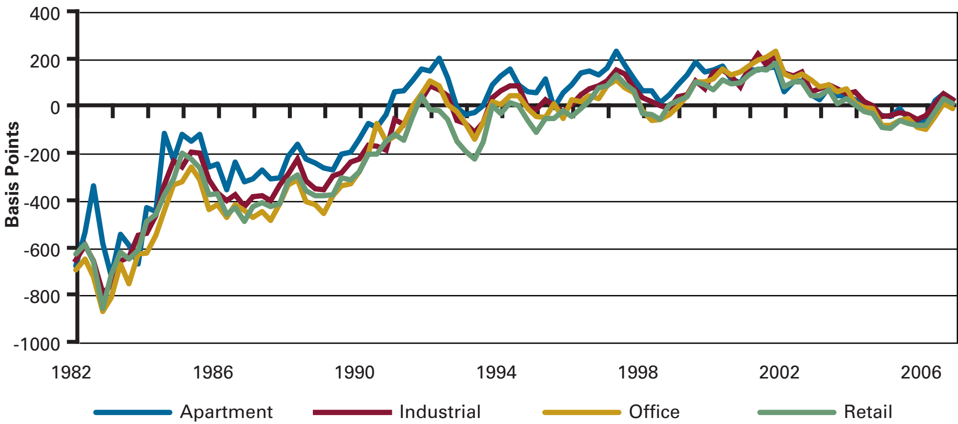


Sources: Roulac Global Places, ADLI, CMSA/Trepp Database, CMA, the Federal Reserve, FannieMae.com, IREI, NAREIT, PricewaterhouseCoopers, Real Capital Analytics

Capital Strike has largely caused development to be put on hold as people wait to see how things evolve. Also, cap rates have increased by 5 percent to 20 percent, and there are few transactions. The apartment business remains solid, but we suspect we have yet to see the end of this cycle.

Table IV compares the early 1990s real estate depression and the Great Capital Strike. While real estate fundamentals weakened in 2008 as the economy slowed, the run-up in construction costs during the previous two years have kept construction pipelines conservative. As a result,

Figure 17: Cash flow cap rate spreads over 10-year Treasury, 18-month lag



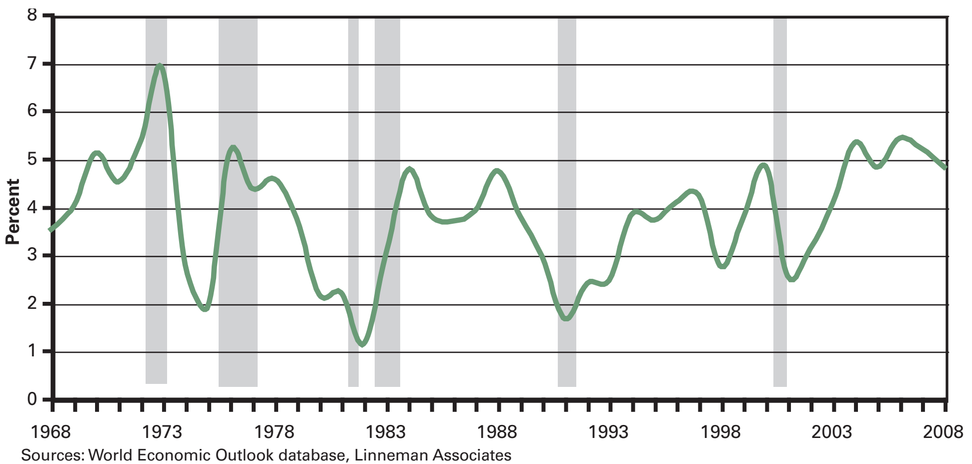
Sources: NCREIF, Linneman Associates

although vacancies have risen, vacancy spikes will be relatively muted due to limited new supply. And development plans are being scuttled everywhere, particularly in the hotel sector, due to greater market transparency. In almost every way, at least so far, the early 1990s was objectively much worse than today for commercial real estate. Real estate capital markets are very difficult today, with limited debt availability and wide debt spreads the norm. However, debt remains available for cash flow properties today, although at much higher coverage ratios, while equity remains plentiful, particularly at private equity firms (Figures 15-16). While it is not pretty today, it stands in stark contrast to the early 1990s, when neither debt nor equity was available at any price.

We are optimistic that the commercial real estate market will fare better during the Great Capital Strike than in either the 1970s or 1990s, as the usual culprit for prolonged real estate problems is overbuilding (Figure 17). But other than single-family and condominiums, there has been relatively modest supply growth. Therefore, the market observers who predict that there is yet a "second shoe to drop" in the commercial area similar to the early 1990s appear to be either misinformed or lack an understanding of the source of commercial real estate woes. In both 1973-75 and 1990-96, we had substantial overbuilding and a severe capital shortage, which accentuated liquidity problems, and the length of and severity of these downturns. Today, we have little excess supply, and we have some liquidity to prevent widespread defaults and bankruptcies.

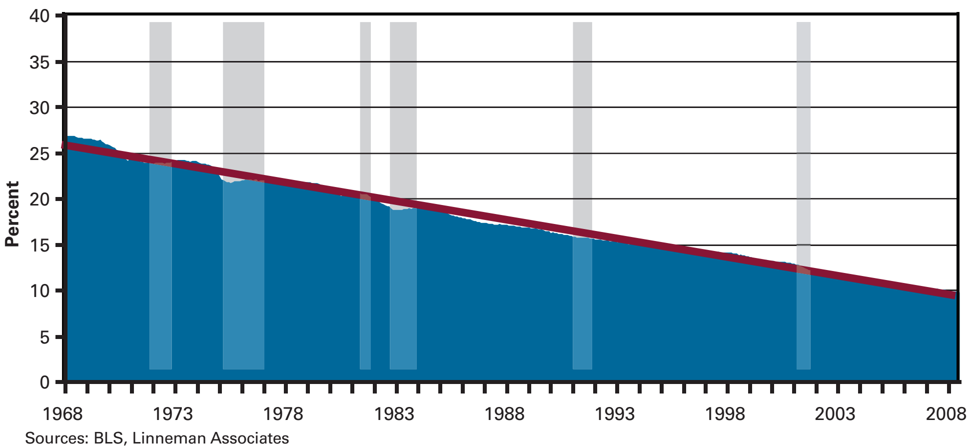
It is tough out there, and may get tougher. But we have survived much worse economies and commercial real estate markets over the last forty years. In fact, we not only survived, but we subsequently soared to undreamed-of new heights. Simply stated, tough economic times end, and the economy grows again, as capital creates new channels through which to flow. As domestic demand in India and China evolves, the world economy is performing better than during past U.S.

Figure 18: Increase in world GDP



Sources: World Economic Outlook database, Linneman Associates

Figure 19: Manufacturing as a percentage of total employment, with trendline



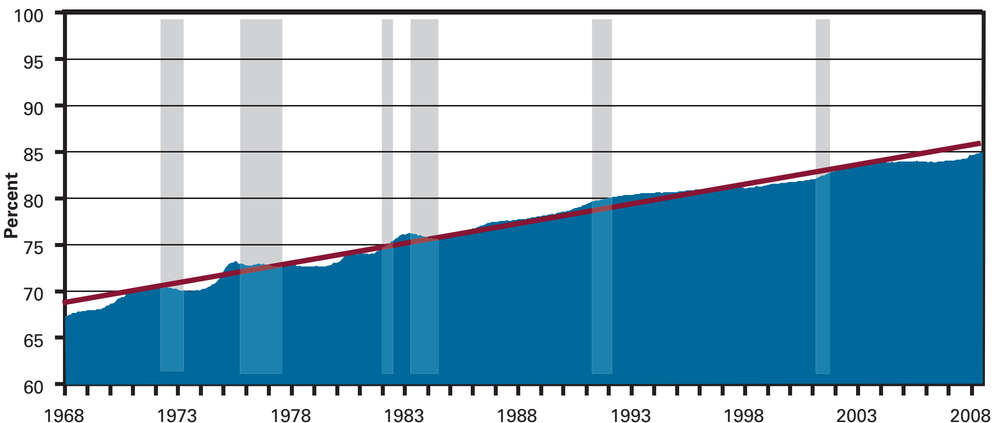
Sources: BLS, Linneman Associates

downturns (Figure 18). This continued foreign growth is a mild buffer to our slowdown. Also of relevance is the fact that the United States (and the world) is ever less-dependent on manufacturing.

In the worst recessions of the past forty years, manufacturing accounted for 20 percent to 25 percent of U.S. employment (Figure 19). Today, it accounts for less than 10 percent. As the importance of manufacturing declines, so too does the magnitude of the economy's cyclical ups and downs (Figure 20). This is because it is far easier to incrementally expand and contract service employment (more or fewer lawyers) than it is to incrementally expand and contract manufacturing activity, where the norm is one more (or less) shift (or one more or less plant). This makes incremental increases in employment less tenuous today, and the downs less dramatic.

Another important lesson from the past is that recessions end well before most observers realize they are over. In particular, media accounts of unending recessions and downward spirals regularly appear as much as eighteen months after the next recovery is actually under way. In the end, "our" troubles always seem worse than problems that happened to "them" back in the long-forgotten days of yore. After all, many observers never experienced the 1973-75 or 1981-82 recessions. And most of those who did retain distorted memories. Combine this with an unhealthy dose of Boomer narcissism ("What happens to me is always the most intense") and you grasp why people today think the Great

Figure 20: Services as a percentage of total employment, with trendline



Sources: BLS, Linneman Associates

Capital Strike is the worst ever. But it is not. It is not even close to the worst of the past forty years. For example, while observers fret that the Great Capital Strike will hurt New York City employment, they forget that the recessions of 1970, 1973-75, 1980, and 1981-82 effectively wiped out New York City's largest employer: manufacturing.

History suggests that unless you think that the Great Capital Strike will yet evolve into a repeat of the Great Depression, it is a sucker's bet to bet against the U.S. economy. The United States is fueled by too much entrepreneurship and innovation to stay down for long. So stay liquid, be patient, and focus on long-term growth.