

MARKET MONITOR FEBRUARY 2, 2009

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GLOBAL FINANCIAL CRISIS AND THE 2009 OUTLOOK

This outlook focuses on discontinuous changes in the economy and the markets that require investors to shift their focus to the role of government in combating the current financial crisis and deep economic recession.

In 2008, broad equity markets melted down, declining between 38% (domestic) and over 50% (emerging markets). Fixed income markets bifurcated into two categories: higher-return U.S. Treasuries and other bonds as investors avoided credit markets, which experienced low-to-negative returns. Commercial real estate turned down for the first time since the early 1990s, while natural resources first rose over 20% and then fell by even more by the end of the year. Other asset class returns, such as private equity, were hurt as well.

The global economy fell into recession. In the U.S., real economic growth (GDP) for all of 2008 rose by about 1%, brought down by a decline of -3.8% on an annual basis in the fourth quarter. Our forecast is for GDP to drop 2%–4% in 2009. The U.K., Euroland, and Japan suffered a similar fate, and in leading developing countries economic growth dropped from nearly double-digit increases in past years to low single-digits by the end of the year. Overall, 2009 global GDP growth is forecast to be less than 3%, the minimum rate needed to avoid global recession.

The outlook for 2009 is a difficult one. In general, residential housing markets in the U.S. and some other developed countries will continue to deteriorate, investors will continue to unwind excessive leverage (borrowing), credit markets will be less than fully liquid, and emergence of a sustained equity rally could be some months away as volatility continues. Highly rated corporate bonds could become attractive if Treasuries lose some of their appeal.



Investor and consumer confidence could bottom out and begin to rise in 2009, depending on the role of government, which is in a position to experiment with massive tax cuts and short-term (food stamps, unemployment benefits) and longer-term (infrastructure, health care) spending increases. It is also in a position to enact significant financial services oversight reforms. Done right and quickly, these programs could help to ameliorate some of the pain and get economies and markets moving again. In any event, we believe investors should reexamine their portfolios and long-term asset allocation plans to position them for future growth, when it arrives.

GLOBAL FINANCIAL CRISIS AND THE 2009 OUTLOOK

INTRODUCTION

In any era, government policymaking for financial markets and the economy provides both a foundation and a set of constraints for investment, trading, and other capital market activities. In most periods, investment strategy largely takes government's role as a given or, at most, considers the possibility of incremental policy changes. In "normal" times, economic and market forecasts are based primarily on analysis of recent trends.

In the current environment, trend-based forecasting has broken down. After the past few months, when a series of cataclysmic events and discontinuous changes threatened financial markets and economies around the world, governments everywhere are now being asked to go far beyond their foundational and constraining roles to actively rescue the system. Recognizing the current condition, this outlook breaks with tradition to focus directly on significant and potentially fundamental changes in the role of government that are likely to shape financial markets and the economy for the foreseeable future.

Looking to the future, the critical question of when the economic and major asset markets recovery will begin depends on what governments do and how much. Actions are needed on a broad front, including monetary, fiscal, and regulatory policy. In any event, 2009 will be a difficult one for economic growth and for a broad range of financial markets. The U.S. economy, which we estimate to have

fallen over 5% in real terms in the fourth quarter of 2008, could decline another 3% or more in the first quarter of 2009. The latter half of 2009 is likely to be less grim, but even with considerable fiscal stimulus, the year is likely to end with an overall decline of 2%–3% or more.

Many other countries are in recession and their markets have fallen even more than here, particularly those in China and other leading developing nations. As a whole, global economic growth is slipping under 3%, widely regarded as the minimum growth rate needed to avoid a worldwide recession. Even with stimulus plans totaling nearly \$3 trillion already announced by governments in the U.S., U.K., China, Japan, and other countries, there is considerable risk that global economies and markets could slide further.

The outlook for global asset markets is similar. The fundamental underpinnings of a sustainable market rally—fully lubricated credit markets, rising consumption, positive company earnings growth, and growing investor confidence—are unlikely to appear during 2009. Highly rated corporate bonds and municipals could buck this trend, as might certain industry sectors, such as transportation and others that could benefit from federal stimulus spending.

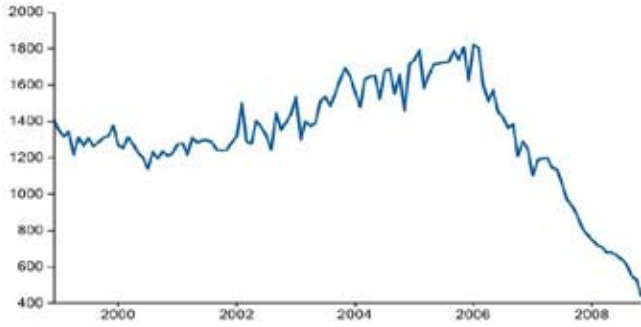
2008 FINANCIAL CRISIS AND GLOBAL RECESSION

Today, the stock market bubble of the 1990s and the home price bubble of the 2000s seem long ago and far away. In comparison, 2008 was like something out of a Stephen King novel, where bad news just keeps coming.

In 2008, despite massive spending for financial rescue packages in the U.S. and many other countries around the world, global financial institutional losses on U.S.-originated loans and asset-backed securities totaled nearly \$1 trillion and were expected to continue rising in 2009.¹ In residential housing, the immediate source of many of these securities, prices headed south, mortgage defaults and foreclosures rose rapidly, and housing starts and new mortgage lending hit their lowest level since tracking began in 1959.

¹ International Monetary Fund. *Global Financial Stability Report*. October 2008.

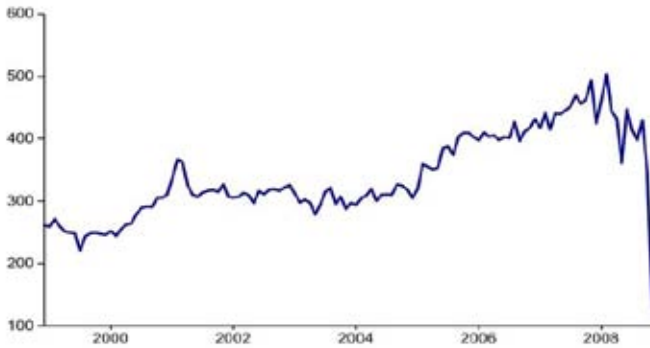
**THE DECLINE OF NEW CONSTRUCTION ACCELERATES
 U.S. PRIVATELY OWNED RESIDENTIAL HOUSING STARTS**
 (In Thousands)



Source: Global Insight

**RESIDENTIAL MORTGAGE LENDING ESSENTIALLY
 CEASES**

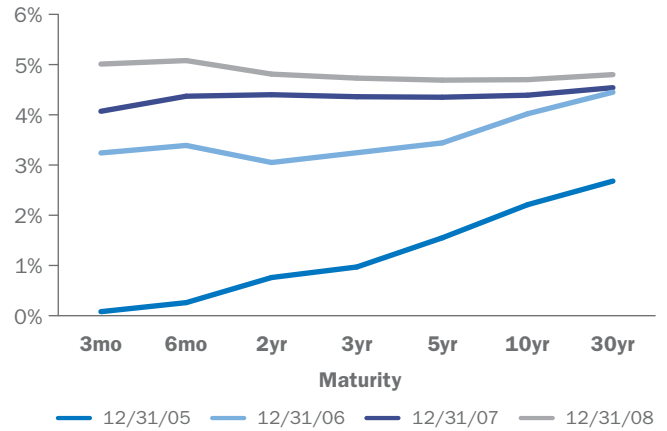
Residential Mortgage Loan Closings



Source: Global Insight

Many investors fled a variety of risky assets for the relative safety of U.S. Treasuries, driving down the yields on short-maturity U.S. bills nearly to zero. The government yield curve steepened, but even yields on longer-term Treasuries fell to the lowest levels since the 1950s.

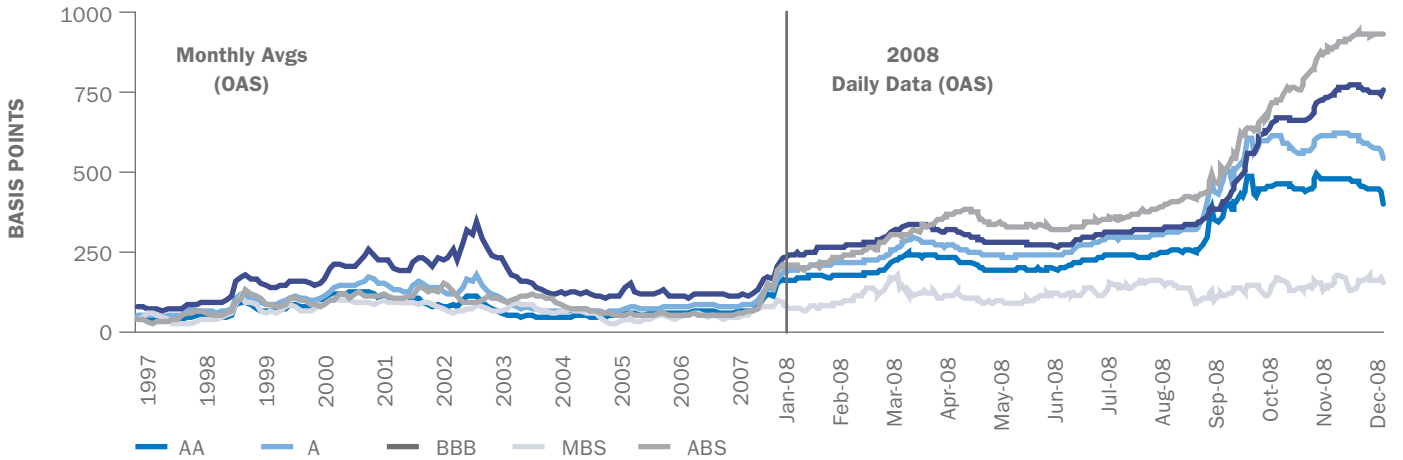
TREASURY YIELD CURVE



The exception was U.S. TIPS, or inflation-linked bonds, which investors abandoned in mid-year when they stopped worrying about inflation and began to fear potential deflation as prices and nominal interest rates declined. Investors also abandoned credit-related assets (i.e., corporate, emerging, and municipal bonds) in the face of worries over a potential rise in fixed-income defaults. Credit spreads over U.S. Treasuries skyrocketed as prices fell dramatically.

INVESTMENT-GRADE CORPORATE BOND SPREADS

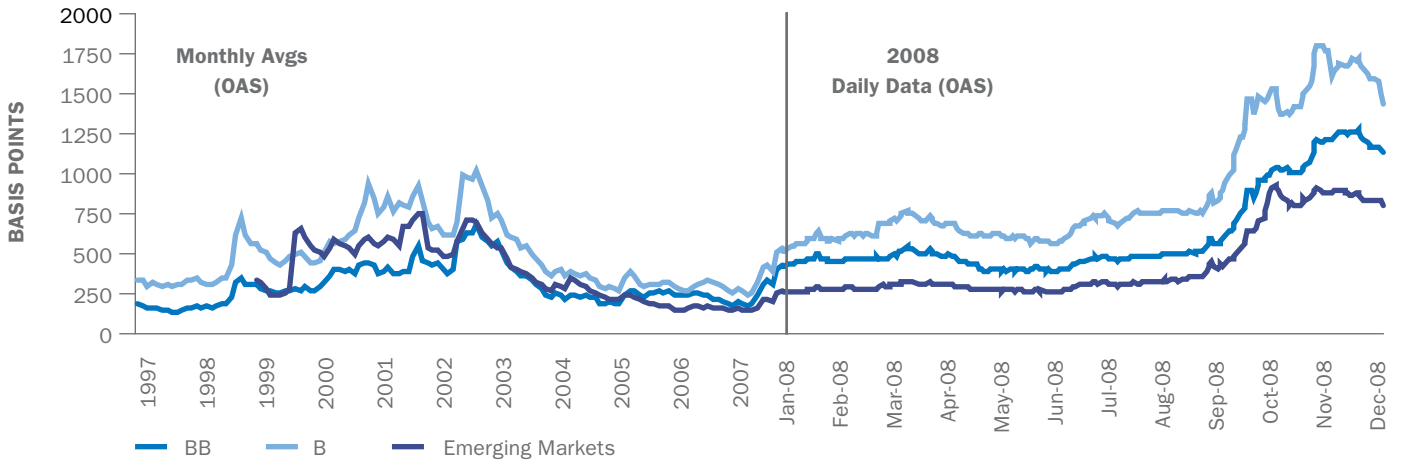
Merrill Lynch Indices—Corporate Bond Option Adjusted Spreads



Source: Merrill Lynch

BELOW INVESTMENT-GRADE CORPORATE BOND SPREADS

Merrill Lynch Indices—Corporate Bond Option Adjusted Spreads



Source: Merrill Lynch

With the September collapse of Lehman Brothers' investment bank, credit markets virtually froze. Needing liquidity, hedge funds and other types of investors sold equities. Prominent U.S. equity indexes were down nearly 40% in calendar year 2008 and about 45% from peak (October 2007) to trough (November 2008), rivaling the worst bear markets since the Great Depression.² Over the past ten years, equities returned 0.80% per year (annualized),³ well below bond returns during that same period⁴

U.S. EQUITY MARKET TOTAL RETURNS		12/31/08	
RUSSELL INDICES	QTD	YTD	
Russell 3000®	-22.78%	-37.31%	
Russell Midcap®	-27.27%	-41.46%	
Russell 2000®	-26.12%	-33.79%	
S&P 500®	-21.94%	-37.00%	
Dow Jones Industrial Average	-18.39%	-31.93%	
Nasdaq Composite	-27.14%	-42.21%	
DJ Wilshire Real Estate Securities	-40.40%	-39.83%	
FIXED INCOME MARKET TOTAL RETURNS		12/31/08	
BARCLAYS CAPITAL INDICES	QTD	YTD	
U.S. Aggregate	4.58%	5.24%	
U.S. Government	8.05%	12.39%	
U.S. Credit	4.03%	-3.08%	
U.S. Corporate High Yield	-17.88%	-26.16%	
Municipal Bond 10-Year	2.72%	1.52%	
U.S. TIPS	-3.48%	-2.35%	
Global Emerging Markets	-9.86%	-16.16%	
GLOBAL EQUITY MARKET TOTAL RETURNS		12/31/08	
MSCI INDICES*	QTD	YTD	
USA	-22.40%	-37.57%	
Europe	-22.79%	-46.42%	
Pacific	-13.87%	-36.42%	
Pacific ex Japan	-25.03%	-50.50%	
EAFE	-19.95%	-43.38%	
Japan	-9.01%	-29.21%	
Emerging Markets	-27.60%	-53.33%	

* Returns are in U.S. dollar terms.

Markets around the world suffered similar fates in 2008. Overall, international equities performed more poorly than U.S. equities during the year. Emerging market stocks fell by over 50%, as did Asian equities in developed markets (excluding Japan, which did better than most countries), while European stocks declined a little less than that.

² Russell 3000® Index of U.S. stocks; S&P 500®; etc.

³ Russell 3000® Index of U.S. stocks.

⁴ Barclays Capital U.S. Aggregate Bond Index.

Other asset classes were also affected by the downturn in markets and economies. Apparently, many hedge funds suffered as they were forced to sell relatively liquid assets in order to reduce leverage (borrowing). With the retail sector leading the way, commercial real estate declined for the first time since the early 1990s. The multiyear commodity bubble, which was fueled by a robust global economy earlier in the decade, headed south in the latter half of 2008. Oil prices, for example, which hit \$146 per barrel in July, finished the year at less than a third of that price.

On the economic front, the U.S. and global economies started the year modestly positive but finished 2008 in a downward recessionary spiral. In the U.S., the first two quarters' real GDP growth was below the long-term 3% annual trend, but positive, and the consensus forecast early in the year called for more of the same in the second half. Instead, as the dimensions of the financial crisis manifested themselves, our internal forecast for GDP growth in the last two quarters turned significantly negative. Third-quarter economic growth was reported to be negative 0.3%, while the initial fourth-quarter estimate was a drop of 3.8% (Note: This estimate did not include the effect of inventory growth, which will likely depress the final figure to -5.0% or worse).⁵ Overall, 2008 U.S. economic growth is expected to be an anemic 1.0%.

The NBER, focusing on continuing job destruction in the U.S. economy, announced in the fall that a U.S. recession had begun back in November 2007.⁶ Similarly, global GDP, which contains both low expected-growth developed countries and high expected-growth developing countries, also tailed off in the latter half of the year.⁷

BEHIND THE GLOBAL DOWNTURN

All in all, the U.S. and global financial and economic system is in serious disrepair after being hit by a solid wall of hurricane-force winds. Battered and bruised investors, taxpayers, and investment professionals all want to know when the pain will end. To better understand the outlook, it is important to look at key factors behind the downturn.

⁵ U.S. Bureau of Economic Analysis.

⁶ NBER Business Cycle Dating Committee.

⁷ Global GDP growth under a 3% annual rate is considered to be a global recession.

Financial system evolution outpaced the regulatory response. In the 1990s and early 2000s, several events and trends⁸ significantly increased financial flows across national boundaries and stimulated major changes in financial markets as financial services firms merged or grew organically, expanded their product and services lineups, and spread geographically as well as functionally. A new herd of global megafirms introduced or expanded the use of structured securities, including Mortgage-Backed Securities (MBS), which package thousands of individual mortgages into a single entity from which shares are then sold to investors, and Collateralized Debt Obligations (CDO), which similarly package other types of smaller fixed-income instruments (credit card debt, auto loans, etc.). They also pioneered the use of Credit Default Swaps (CDS), which are derivatives that promise to insure purchasers against a specific corporate bond default. National and international financial policymakers failed to respond fully to the regulatory implications of both the new financial instruments and the megafirms that created and traded them.

The rise of risk management offered dangers as well as comfort. Over the last 15 years, financial firms adopted formalized risk management policies due partly to new regulations, increased scale, and new products based on derivatives and structured securities. Well-applied, sophisticated quantitative analytical techniques can offer considerable comfort to managers of assets with complicated structures, which may not behave like traditional equities and fixed income.⁹ And they can help managers understand what these new assets—many of which aren't traded on public exchanges—are worth.

However, depending on how it is used, risk analysis can also miss or underestimate the frequency of unlikely, but highly consequential losses. For example, prominent financial firms and credit rating agencies underestimated the risks inherent in securities linked to mortgages.

⁸ These include elimination of the 1930s Glass-Steagall Act that had erected barriers between commercial banks, investment banks and insurance companies in the U.S.; London's Big Bang, which welcomed foreign investment banks and brokers into the U.K.; and other regulatory changes (e.g., prohibitions against interstate banking).

⁹ Risk management is both qualitative and quantitative, in the latter instance employing models and measures based on value-at-risk loss estimation, scenario analysis, options pricing, Monte Carlo simulation, and other analytical techniques.

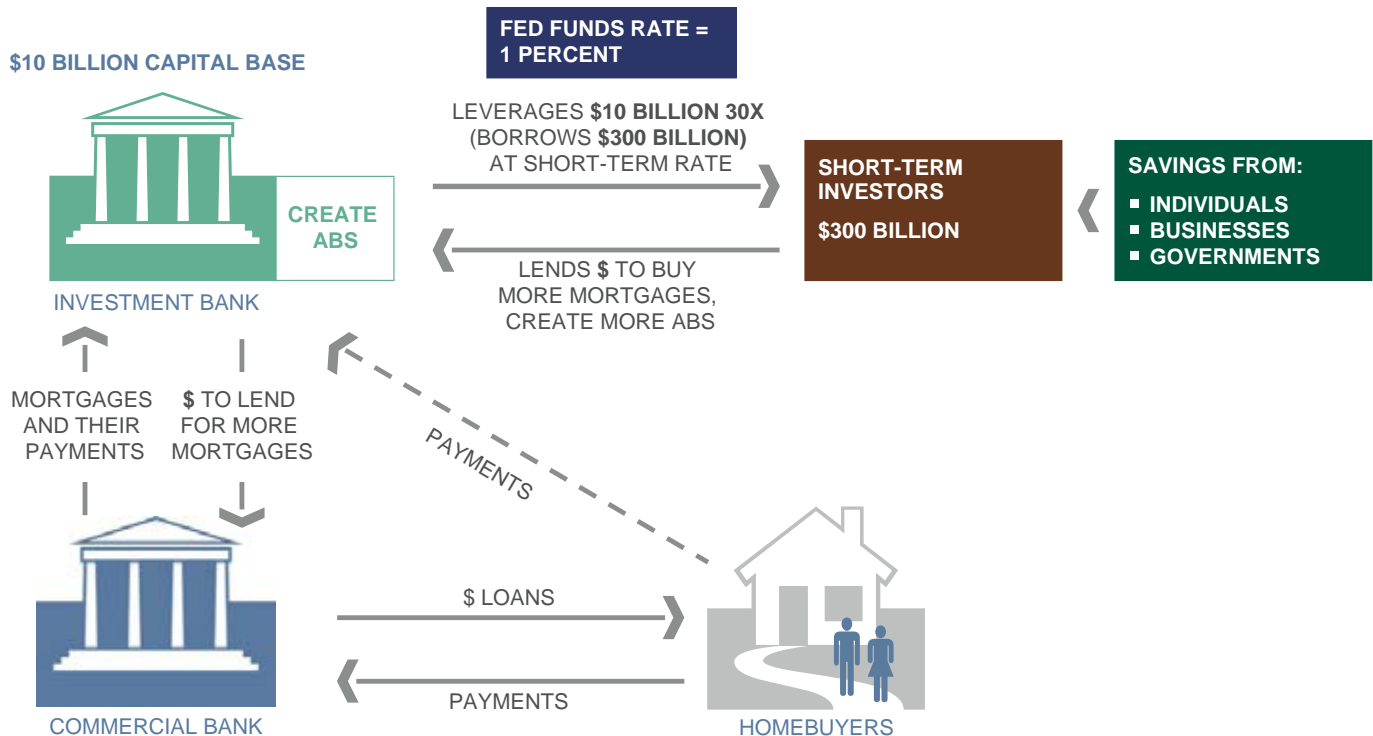
A world awash in liquidity pumped up leverage and inflated asset prices. In this decade, U.S. household and government savings rates fell nearly to zero or went negative in this decade, but high savings rates outside the U.S. created an ocean of money looking for places to invest. Following the bursting of the equity bubble in 2000, Federal Reserve-driven low interest rates, government fiscal stimulus, and rapid global economic growth put more money into the hands of consumers and investors.

In this environment, individuals and institutions found they could borrow at very low interest rates in order to consume or to invest in risky assets. With deregulation of the portions of the financial system and the availability of structured securities, investment dollars flowed to housing in the U.S. and other countries.¹⁰ For some consumers, housing price increases fueled by easy money allowed them to continue spending, despite low-to-negative overall income growth, by withdrawing equity through home equity loans. Likewise, with low interest rates and credit spreads, investing in more traditional stocks and bonds seemed less attractive to investment banks and insurance companies than “levering up” (borrowing) in order to seek higher yields associated with structured securities, such as CDO and Residential Mortgage-Backed Securities (RMBS).

¹⁰ Why housing? One argument is that capital flows to places where it can be easily deployed or somewhere besides where the last crisis occurred. Equities had melted down beginning in 2000, and commercial real estate had done likewise in 1989–91. Each of these crises attracted new regulation and created bad memories. With mortgage originations and structured securities lightly regulated, it is not surprising that capital flows found these markets.

BOOM CYCLE

2001–2005



Leveraging increased household consumption and institutional investment, which further supported economic growth, commodity prices, and stock returns. To many investors, global investment risk seemed to decline as asset values rose. Mortgage lenders and their backers, such as Fannie Mae and Freddie Mac, loosened their lending standards and extended loans to less and less qualified borrowers—the subprime and “Alt A” segments of the market—as home values rose.

Residential housing market troubles appeared and multiplied. The Federal Reserve, which had loosened its monetary policy beginning in 2000, began to tighten it, beginning in 2003 in response to rising economic growth. By 2005, higher short-term interest rates began to squeeze asset-backed security margins and put pressure on home loans, especially in the subprime area, as the flow of funds into housing finance began to abate. With a turn in borrowing, housing prices declined significantly in the U.S. (from its 2006 peak, close to 20% on average across 20 major regional markets), the U.K., and some other

European countries. Housing sales and starts continued to fall throughout 2008 and construction employment followed. Residential loan markets began to experience rising default and foreclosure rates, concentrated in nontraditional mortgages issued to less-qualified borrowers. The effects cascaded into the credit markets through the MBS that had packaged these loans into structured securities.

Credit markets came to a standstill and investment banks collapsed. Earlier in this decade, big investment banks became enamored of “negative basis trades.” They borrowed at then-prevailing low short-term rates in order to invest at much higher mortgage-related rates. This involved buying or creating long-dated securities such as CDOs or residential MBS, which package together thousands of underlying retail or commercial loans. They hedged these structured securities by buying credit default swaps (CDS) from insurance companies and then even purchasing insurance on the CDS. This worked well as long as the CDO and MBS were healthy, but many of the credit agency ratings

on these securities were overly optimistic, as were the quantitative models that were used to assess risk thereby understating the risk to the insurance issuers. Many CDOs and MBS contained a number of subprime mortgages, which began to infect these structured securities as default rates soared. As a result, the value of the CDO and RMBS declined, and investors began to avoid them.

Investment banks, along with Fannie Mae and Freddie Mac—the institutions most heavily invested in such securities—were caught in a squeeze, unable to sell and unable to borrow to make up for the disabled debt. These institutions were also highly extended (“levered up”), having borrowed 30 or more times their available capital in order to invest.¹¹ So any initial losses, while a small part of outstanding loans or investments, could quickly become greater than the institution’s capital base.¹² The institutions most affected by falling or frozen asset values tried to raise new capital by selling other types of securities, some of which also froze up. The rumor market intervened in several cases, and customers stepped back and became more reluctant to do business with these institutions.

Bear Stearns was the first investment bank to experience a leverage and asset-backed securities crisis. The federal government stepped in to guarantee its assets and force a sale to JPMorgan Chase. However, when Lehman Brothers got into trouble in late August and early September, it proved impossible to arrange a similar rescue and the investment bank was allowed to fail. Similarly, insurers who issued CDS were forced to raise capital as they had to make good on some of this “insurance” they had issued. In particular, AIG, a leader in the CDS market, nearly failed until the federal government stepped in with at least two rounds of massive support.

As a result of Lehman’s failure, AIG’s near failure, and the infection in the structured securities market, investors lost interest in risking capital at prevailing prices and in some cases at any price. As investors continued to sit on the

¹¹ In 2004, the SEC, which had restricted securities firms to no more than 12 to 1 leverage, allowed them to increase their leverage to 33 to 1.

¹² Consider a hypothetical investment bank with a capital base of \$10 billion that “levers up” by borrowing 30 times its capital base, or \$300 billion to invest in asset-backed securities based on mortgages. If only 4% of the underlying mortgages go into default, the bank is effectively bankrupt.

sidelines, the demand curve for risky assets shifted to the left, with the result that falling prices and returns affected a wide range of asset classes, from commodities to credit markets, equities to real estate. Another effect was a flight to less-risky, high-quality assets, causing prices on U.S. Treasury bonds to rise and the yields on T-Bills to fall to nearly zero. These events further pressured banks, insurance companies, and nearly all borrowers and lenders operating in the real economy of goods and services.

Taken together, the forces of globalization, new investment options, increased leverage, and the housing bubble collapse led to a financial and institutional crisis unlike anything seen since the 1930s.

THE GLOBAL DOWNTURN HITS HOME

Consumption and GDP growth fall. In response to the forces described above, consumers, whose spending typically represents over 70% of U.S. Gross Domestic Product (GDP), began to rein in their spending, a trend that accelerated in 2008. Similarly, job creation in the U.S. turned negative, with over 3 million jobs lost during the year. The rate of GDP growth, which had been above expectations until the third quarter of 2007, showed very little life during 2008, the exception being the second quarter, when a temporary fiscal stimulus from one-time federal tax rebate checks produced positive economic gains, which did not, however, last into the third quarter. Around the world, other economies echoed U.S. trends as U.S. demand for imports declined due to the economic slowdown and the decline in the dollar trade-weighted exchange rate, which fell by about a quarter between 2002 and 2008. (The dollar took an upward turn at the end of 2008).

Unemployment rises; incomes fall. Job destruction cannot continue without eventually showing up in the unemployment figures, particularly in a nation like the U.S., where the population grows by about one percent each year. Unemployment accelerated in the latter half of 2008, rising from well under 6% to over 7% at the end of the year. Employment earnings fell as well, as expected during a recession. Less expected, employment income fell from 2000 to 2007, much of that time during an economic expansion, which usually raises incomes. U.S. workers entered the recent severe downturn with little slack in the way of income increases and savings.

Corporate profits picture turned negative. Led by enormous losses in the financial services sector, as well as the housing, autos, retail and other sectors, realized corporate earnings growth turned negative at the end of 2007 (leaving 2007 with virtually zero overall earnings growth) and stayed in negative territory through 2008. In the U.S., year-over-year first-quarter 2008 earnings growth declined 30%, the second quarter was down 36%, and third-quarter earnings fell 61%.¹³ Preliminary results indicated that earnings could be down well over 70% for the fourth quarter of 2008, led by declining profits in consumer goods and services, real estate, energy, autos, and trucks. Relatively brighter spots included health care, utilities, telecommunications, and basic materials. A similar, gloomy picture is evident for global corporate earnings in both developed and developing economies.

GOVERNMENT INTERVENTION

In 2008, especially after the middle of the year, governments in many countries acted, in some cases repeatedly and decisively, to shore up financial institutions, markets, and economies. First, central banks around the world began, for the first time, to coordinate monetary policy by working together to ease short-term interest rates. In the U.S., by the end of the year the Fed lowered the funds rate charged to banks for overnight borrowing, effectively to zero—something it had never done before, and other central banks lowered rates as well. The Fed also rapidly expanded its ability to loan funds to commercial banks, investment banks, and other financial institutions.

Together with the U.S. Treasury, the Fed proposed and Congress eventually approved a plan to spend \$700 billion on financial sector stabilization (the TARP program), including injecting capital into and/or restructuring banks and other financial institutions not part of the traditional banking system (e.g., investment banks, insurance companies, Fannie Mae and Freddie Mac). By the end of the year, \$350 billion of the total rescue package had been obligated, with plans to spend the remaining money in 2009. Other governments also acted to stabilize financial institutions. In the U.K., for example, there were capital infusions for distressed financial institutions and, in some cases, virtual nationalization.

¹³ All figures are from the Wall Street Journal Market Data Group, based on reports from approximately 4,000 businesses.

All of these ad hoc actions were undoubtedly helpful in preventing a financial system meltdown in the short run, but there is widespread recognition that the problems are truly systemic and sustained.

2009: GOVERNMENT INTERVENTION AND STIMULUS

To get global markets and economies moving again, more will be needed in the way of time and public policy, so the role of government is critical both in the U.S. and abroad.

Large stimulus packages around the world. The new Obama administration and other national governments have announced new plans and have begun to take actions to stimulate the U.S. and other economies.

U.S. \$825B	CHINA \$586B	U.K. \$730B	EUROPEAN UNION \$250B	JAPAN \$426B
Tax Cuts	Infrastructure	Loan Guarantees for Small- and Mid-Sized Companies	Infrastructure	Tax Cuts
Highways	Low-Income Housing	Banking Sector Capital Injections	Schools	Highway Toll Reductions
Schools	Environmental Protection	Mortgage Relief for Homeowners	Consumer Incentives to Buy Cars	Cash Rebates
Health Care	Technological Innovation		Tax Reform	
Energy	Energy			
	Food Stamps			
	Unemployment Insurance			

For example, the Obama administration proposes spending a total of more than \$800 billion, divided roughly into thirds: tax cuts, short-term spending (unemployment insurance, health care) and longer-term spending (largely infrastructure projects). The new administration has outlined a set of goals for these funds over the next two years:

- Create or save 3–4 million jobs;
- Spend at least 75% of the allocated funds over the next 18 months;
- Increase energy efficiency by doubling clean electric generation, weatherizing homes and government buildings, and modernizing the national electric grid;

- Improve health care by raising support for state Medicaid and child health care programs, providing insurance coverage for 8.5 million Americans, increasing vaccination rates, and computerizing all health records;
- Support education by modernizing schools, increasing college scholarship funds, and providing tax cuts or rebates to students;
- Increase spending for highways, mass transit, bridges, waterworks, and ports;
- Cut taxes for workers and children (child tax credit);
- Increase spending for food stamps, school lunches, and other assistance programs;
- Prevent residential home foreclosures;
- Purchase distressed asset-backed securities (e.g., MBS, CDOs, etc.).

To put this proposed stimulus in perspective, it is important to understand that some of it is directed at multiple policy goals (e.g., expanding health insurance coverage, clean energy, and education support, as well as economic stimulus).

In addition, spending would be spread over a number of years, and more than half of the increased spending would be channeled through state governments in order to shore up their balance sheets, which have been deeply affected by falling tax revenues. This will take time, and the Congressional Budget Office (CBO) estimates that the bulk of the new spending and tax cuts will occur in fiscal years 2010 and 2011 (October to October), with a ramping up process beginning this year (FY 2009) and additional spending past 2011 at progressively lower levels until 2019.¹⁴ Taxes, after falling initially, would actually begin to increase in 2012. The peak year of stimulus would be 2010, when CBO estimates new spending and tax cuts, respectively, at \$225 billion and \$130 billion.

So, during the peak year of 2010, stimulus spending plus tax cuts would increase federal government outlays (about \$2 trillion in fiscal year 2008) by about a quarter

and it would just about double the 2008 federal deficit (\$455 billion). This figure would represent about 4% of U.S. GDP (GDP = \$14 trillion) and 5% of the national debt (debt = \$10.7 trillion).¹⁵

In addition, the federal government has announced plans for additional assistance to the housing sector, including an effort to drive down mortgage rates to the 4.5% range. It would also use the remaining TARP money (approx. \$350 billion) to prevent residential foreclosures (\$40–\$100 billion) and purchase distressed asset-backed securities (MBS, CDOs etc.). Existing home sales recently took an upward turn in some of the most adversely affected states in the western U.S. Federal assistance, it is hoped, will accelerate this trend, as well as restore confidence in the mortgage market, the housing industry, the overall financial system, and the major institutions that participate in it.

Economic growth will be negative in 2009. Chances are good for enactment of the U.S. and foreign country stimulus packages. Specific features and amounts will be clarified in the next few weeks. However, optimism about the ultimate effect of such a massive stimulus must be tempered by the current evidence on economic growth, unemployment, and the markets, all of which indicate that we are more likely in the midst of the crisis than near the end. Based on assumptions about spending rates and eventual effects, we forecast that a full stimulus package of \$825 billion as generally outlined above could boost the U.S. economy by 2%–3% above the track it is on now over the next three years or more, raising real GDP growth by between two-thirds of a percent and 1% per year.

Nevertheless, since the stimulus will have little to no effect until later in 2009, our forecast for the first quarter of 2009 is for another significant drop in U.S. GDP (3%–4% on an annual basis). The U.S. and global economies will likely continue to suffer through 2009, more or less depending on the size, nature, and speed of the stimulus.

¹⁴ Congressional Budget Office, January 26, 2009.

¹⁵ All figures are for 2008.

NEAR-TERM ECONOMIC GROWTH PROSPECTS DIM

The U.S. Recession is Expected to Last Approximately Another 12–18 Months

U.S. OUTLOOK

	2009 (est.)	2008 (est.)	2007
GDP	-2.0 to -4.0%	-1.0%	2.0%
Unemployment	9.3%	5.7%	4.6%
Inflation	0.1%	4.1%	2.9%

GLOBAL OUTLOOK

	2009 (est.)	2008 (est.)	2007
World GDP	2.2%	3.0%	5.0%
Advanced Economies	-1.5%	1.0%	2.6%
Developing Countries	5.0%	6.3%	8.0%

Sources: TIAA-CREF Investment Strategy Group estimates; IMF—U.S. GDP and Global, Advanced & Developing Economies data; CBO—U.S. Unemployment & Inflation.

Note: Economic statistics for developing nations are less reliable & subject to significant revisions due to inconsistencies in methodologies

For the full year 2009, U.S. economic growth could decline about 3%, less if a significant government stimulus takes effect and more if it doesn't. This implies that additional future stimulus beyond what has already been proposed may be needed to push the economy up toward sustained 3% annual growth, the number needed to provide for population growth and income increases for American workers. Consequently, unemployment, a lagging indicator, will also keep rising through 2009 and could hit 9% by the end of the year as the U.S. economy continues to lose jobs. High unemployment will likely persist into 2010.

Outside the U.S., the outlook is remarkably similar, in large part because of the importance of trade and financial flows among countries. Both of these have turned downward as the ability of the U.S. to absorb imports of goods, services, and investment capital diminishes. Even with country-specific stimulus packages, most leading economies cannot expect to climb out of recession until the U.S. does. Global GDP growth, which needs to be north of 3% in order to avoid recession, is likely to be below that for 2009 as foreign trade and domestic consumption fall worldwide.

Sea change in financial services regulation. Government's role over the next couple of years will not be confined to economic stimulus. The depth and breadth of the downturn focus our attention squarely on financial industry regulation.

Regulators and policymakers recognize that there has been a mismatch between the philosophy of the free market—perfect information, smooth price adjustments, and no one entity's having the ability to move the market by itself—and the reality, where information is limited and huge institutions have enormous influence on prices and quantities. As we have seen, serious underlying problems associated with these markets include excessive leverage, lightly or unregulated assets and institutions (e.g., subprime mortgages, over-the-counter asset-backed securities, credit default swaps, hedge funds, and private equity firms), and misaligned risk management and credit ratings. Above all, fragmented regulatory oversight in the 1990s and in this decade did not take into account the growth of international megafirms and their implications for the financial system.

The appointment of University of Chicago law professor Cass Sunstein as head of regulatory reform within the U.S. Office of Management and Budget (OMB) and of former FINRA head Mary Shapiro as head of the SEC are early signs that there could be a number of new approaches to financial services regulation in the offing. Efforts may be made to consolidate regulatory agencies in the banking and securities arenas, to bring over-the-counter securities and hedge funds into the regulatory fold, to reduce leverage limits, and to reform credit ratings and risk management techniques and practices.

Specifics are far from clear at this point, and the eventual effects on the financial system are difficult to predict, but there are already calls for comprehensive reforms. After a lively debate, it is likely that steps will be taken to increase transparency and limit risk-taking by institutions and individuals, with the goal of restoring markets and institutions to financial health and building a foundation for sustainable economic growth.

What economic signs to watch for. Although any economic recovery is months away and likely to be slow, investors should watch for several signs, including increased lending; turn-ups in housing starts, prices, and sales; and narrowing fixed-income credit spreads. Changes such as these could signal an improvement in consumer and investor confidence and result in further positive feedback.

THE MARKET OUTLOOK

Restoration of economic growth and market growth will take time. The downturn during the latter half of 2008 was as deep and as broad as any experienced since World War II. There is little prospect of sustained market rallies in 2009, so investors should be taking a long-term view rather than leaping at what could be short-lived upticks. At a time when many investors have pulled out of the markets or would like to, providers of liquidity (those able to purchase downtrodden securities) who are able to take a longer-term perspective may be in the best position.

For **equities**, sustainable market rallies are most often supported by the expectation of significant future corporate earnings growth. In turn, corporate earnings are closely associated with consumption and investment, which have been falling. Government stimulus will have a modest initial effect on consumption and investment and a larger impact in 2010 and 2011. Consequently, earnings growth will appear in selected sectors in 2009, but more broadly not until 2010.

In the shorter term, equities around the world could experience continued volatility, ending 2009 not far from where they began at the beginning of the year. Positive exceptions could include companies that do much of their business in the U.S., such as the defense industry, some transportation companies, some restaurants, some technology firms, and consumer discretionary firms, all of which have been hard hit up to this point, as well as companies that will benefit directly from the stimulus package (infrastructure construction, small-cap stocks) or continued defense spending. Particularly hard hit could be sectors where stocks have outperformed during the market meltdown, including health care, consumer staples businesses, and utilities.

In the **fixed income** arena, corporate bonds and other credit instruments are unusually low priced, while U.S. Treasuries are unusually high-priced. Here, if government policies to support credit markets as well as investor confidence improve, investors could release Treasuries, pushing down prices in favor of renewed interest in certain highly rated corporate bonds. Economic stimulus proposals include help for state governments, which could assist hard-hit municipal bonds and, if there is any hint of inflation, TIPS

could outperform. On the other hand, low-rated corporate bonds could continue to be shunned for the foreseeable future. Some, but certainly not all, asset-backed securities (some MBS, for example), could prove attractive, depending on the details of any federal plan to support this market.

For **real estate**, commercial real estate, which is in the middle of a slowdown, could present some attractive buying opportunities as prices decline, but retail malls will lag office space, which was not as overbuilt in this decade as it was prior to the last significant downturn at the end of the 1980s. Naturally, residential real estate will take much longer to recover in terms of prices, jobs, and new construction, especially in the most hard-hit areas, such as Michigan, Ohio, Florida and inland California.

The outlook for **alternative assets** is mixed. The long-term prospect for commodities is good but depends heavily on when the global economy heats up again. Some natural resources, such as timber, continue to do well despite the economic downturn. In the hedge fund arena, new financial industry regulations could constrain certain strategies and tactics, so investors should carefully differentiate among them. Many are still suffering from forced selling in order to support short-term loan and margin calls, while a few are positioned well to take advantage of new market opportunities as they emerge. Private equity will continue to experience capital calls for a number of months, but certain areas, such as energy and environment-related investments, could be positively affected by new government spending programs.

What could affect the market outlook? On the positive side, government stimulus and regulatory changes in the U.S. and other countries that are swift, massive, and well-implemented could accelerate economic and market recoveries, if they can reverse the decline in consumption and raise investor confidence. Challenges to this outlook include the risk of government inaction or misdirected action, geopolitical tensions that deepen wars or hasten new ones (e.g., Middle East), inability to get the housing sector moving again because of homeowner or investor fear, and the paradox of thrift.

In the latter case, it is in the long-term interest of individuals and the country to increase household savings to support future investment and economic growth. In the

short run, however, a significant increase in the savings rate reduces consumption, which is needed to provide an immediate stimulus and multiplier effect. Managing the delicate balance between savings and consumption, alongside the implementation of the stimulus package, and geopolitical issues, will challenge government policymakers, who are well aware of this issue.

WHAT INVESTORS SHOULD LOOK FOR

Experienced investors will want to be patient and look at the fundamental factors that influence growth rather than to speculate on which asset classes will outperform in the short run. Investors who stayed with a diversified portfolio allocation that included equities, fixed income, real estate, and a guaranteed portion have felt considerable distress over the past year but have experienced far less pain than with a portfolio that placed all of its assets in equities, where returns rose rapidly in the middle of the decade and then fell even more rapidly in 2008.

In anticipation of better times, investors should be looking to position their portfolios to take advantage of sustained market upturns. The last few months have, at the very least, altered the asset mix in most portfolios (i.e., reducing exposure to equities as stock values decline). If so, the market, rather than the investor, has determined the current asset allocation. It might be an ideal time for any investor to ask whether (1) his or her circumstances have changed (Am I nearing retirement, starting a new job, or preparing to pay for college, etc?); (2) his or her attitude toward risk is different than it was before (Am I more, or less, risk tolerant now?); and (3) something about the markets has changed (How might the fundamental risks of certain assets be different now?).

With careful consideration, thoughtful answers to these questions could encourage an investor either to rebalance back toward the original portfolio mix or to choose a new diversified asset mix. For example, some investors may have overreacted in shunning certain securities and asset classes, such as equities, and favoring others, such as U.S. Treasuries. In these cases, investment opportunities can be found by rebalancing in measured steps by selling some of the recent portfolio winners and gradually buying back into some of the recent losers.

As you go through this process of reconsideration, you can rely on TIAA-CREF's commitment to helping its participants develop long-term investment plans that stress diversification, asset allocation, and rebalancing. TIAA-CREF can assist investors with these important activities on its website, over the phone, and in person.

The course of the last year has highlighted the strength and stability of the TIAA-CREF group of companies, including the positioning of its accounts and funds to avoid or mitigate some of the problems that have hurt other financial institutions.¹⁶ TIAA-CREF's investment approach, which seeks consistent growth for long-term investors, recognizes that unexpected events do occur. As a result, it actively monitors its funds and accounts in order to anticipate and reduce the effects of volatility associated with any single company or security. (Of course, all current and future portfolio holdings are subject to risk.)

Similarly, TIAA-CREF takes a sober approach to risk management. In general, pursuing consistent growth requires strategies that filter out short-term market noise and concentrate on the fundamental factors that can make a stock, bond or real estate property add value to a portfolio over the long term. TIAA-CREF's decades of experience in the retirement market underscore its adherence to sound fundamental principles—in both stable and volatile markets—for the benefit of its participants over the long run.

Experienced investors will recognize that the special dynamics of the financial services industry can produce difficult challenges from time to time. Knowing this can take the edge off the panic during these admittedly hard times, just as it may temper over-enthusiasm during euphoric markets. With a long-term investment plan serving as a map, these investors will rebalance or change course based on their life circumstances and tolerance for risk and avoid market timing. They will weather the storm of the current market corrections and will look forward to the potential for calmer seas ahead.

¹⁶ For more information on TIAA-CREF's strength and stability see Roger W. Ferguson and Scott C. Evans' remarks (http://intranet.ops.tiaa-cref.org/news/articles/2008/091608_tctw_call.html) and *Financial Strength in Turbulent Times* (http://intranet.ops.tiaa-cref.org/news/articles/2008/091708_tctw_eestrength.html).

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