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FINANCIAL MARKET TURMOIL AND INSTITUTIONAL CHANGE: THE END OF THE BEGINNING

Financial markets and economies around the world are in turmoil based on a series of cataclysmic events that have unfolded over the past few months. This week the markets roiled as a result of distressed sales, bankruptcies, and federal takeovers involving some of the world's biggest financial services and insurance firms—Fannie Mae, Freddie Mac, Lehman Brothers, Merrill Lynch, Washington Mutual and AIG. A 500-point, one-day drop in the Dow Jones Industrial Average, followed two days later by an additional 450-point decline, added to the misery in September. And the beat goes on.

- What's behind these events?
- How are they affecting investors and the financial system as a whole?
- Where do we go from here?



Today, the stock market bubble of the 1990s and the home price bubble of the 2000s seem long ago and far away. As of the middle of September 2008, losses reported by global financial institutions totaled over \$500 billion and were expected to continue rising. At the same time, one prominent index of U.S. financial sector stocks was down about 40% in 2008.¹ A broader measure of U.S. equity market returns declined more than 15% in 2008 through the middle of September and had returned only about 5.5% per year (annualized) since 1998;² similar to the ten-year return on a broad fixed-income market index.³ The U.S. and global financial system is arguably in a state of disrepair, perhaps a scene that investors have not seen or experienced since the Great Depression. Battered and bruised shareholders, taxpayers, and investment professionals all want to know if the pain is nearly at an end.

Recall some of the reasons we have given previously for financial system woes that were gathering force over the past couple of years and have now hit us with a solid wall of hurricane-force winds:

Waves of deregulation and globalization swept through the financial system. In the 1990s and early 2000s, financial services deregulation in the United States and United Kingdom broke down many of the barriers that had been erected in the 1930s between commercial and investment banks, between banks and brokers, and between banks in different states. Along with the increasing globalization of financial flows, services deregulation (e.g., London's "Big Bang" deregulation) stimulated significant changes in financial markets as some financial services firms merged or grew organically, expanded their product and services lineups, and spread geographically as well as functionally. This was the era of the financial megafirm, with niche players filling in the rest of the landscape. In turn, these firms introduced or expanded the use of new types of securities, particularly 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 thousands of other types of smaller fixed-income instruments (credit card debt, auto loans, etc.). ("Update on Recent Global Economic Developments," *Weekly Market Monitor* 01/28/08)

1 S&P 500® Financial Sector Index (SPSY).

2 The Russell 3000® Index of domestic U.S. equities.

3 The Lehman Brothers U.S. Aggregate Index.

The rise of risk management offered comfort as well as danger. Over the last 15 years, financial firms have adopted formalized risk management policies due partly to deregulation, increased scale, and new products based on derivatives and structured securities. Risk management is both qualitative and quantitative, with the latter employing models and measures based on value-at-risk loss estimation, scenario analysis, options pricing, Monte Carlo simulation, and other analytical techniques. These approaches can offer considerable comfort to managers of assets with complicated structures that may not behave like traditional equities and fixed income. 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 they are used, these techniques run the danger of missing altogether or underestimating the probability of unlikely, but highly consequential losses. When the models suggest that a bad market event would be six standard deviations from the mean, what they mean is that the likelihood of something occurring is one in millions. When several such unlikely events actually occur in a year, then the models may be underestimating the chances of bad market events. ("Managing Risk Effectively," *Weekly Market Monitor* 08/18/08) For example, some risk managers at the firms and at the credit rating agencies charged with overseeing structured securities may have underestimated the probabilities or the consequences of the risks inherent in securities containing mortgages. ("Why Should Ratings Be Important to You?" *Weekly Market Monitor* 07/21/08)

A world awash in liquidity, pumped-up leverage and inflated asset prices. Following the bursting of the equity bubble in 2000, low interest rates, fiscal stimulus, and rapid global economic growth put more money into the hands of consumers and investors, and with deregulation and limited understanding of structured securities, a large portion of it flowed to housing.⁴

4 Why housing? One argument is that capital flows to 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 1989–1991. Each of these crises attracted new regulation and created bad memories. With mortgage originations and structured securities being lightly regulated, it is not surprising that capital flows found these markets.

Both individuals and institutions found they could borrow at very low interest rates in order to consume or to invest in risky assets. For example, housing price increases fueled by easy money allowed consumers to continue spending despite low overall wage 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 MBS (RMBS). Both of these activities increased consumption and investment, which further supported economic growth, commodity prices, and stock returns. To many investors, global investment risk seemed to decline as asset values rose. One example is that mortgage lenders and their backers, such as Fannie Mae and Freddie Mac, extended loans to less and less qualified borrowers—the subprime and “Alt A” segments of the market. And finally, the Federal Reserve, which had loosened its monetary policy beginning in 2000, began to tighten it up beginning in 2003 as it saw the growth of easy money. By 2006, higher interest rates began to put pressure on home loans, especially in the subprime area. (“Giving Markets Credit,” *Weekly Market Monitor* 8/13/2007)

Residential housing market troubles appeared and multiplied. After enormous increases in this decade, beginning in 2007, housing prices declined significantly in the United States (over 15% on average across 20 major regional markets), the United Kingdom, 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. (“What a Further Dwindle in Housing Could Mean to the Economy and Financial Markets,” *Weekly Market Monitor* 06/25/2007)

Credit markets came to a standstill, triggered by problems created by the trading practices of big banks and other packagers of mortgage securities. Earlier in the decade, big investment banks increased their interest in doing “negative basis trades.” They borrowed at short-term rates in order to lend long, i.e., buying or creating long-

dated securities such as Collateralized Debt Obligations (CDO) or Residential Mortgage Backed Securities (RMBS), which package together thousands of underlying retail or commercial loans. They hedged this structured security risk by buying credit default swaps (CDS) and then even insurance on the CDS from insurance companies. This worked well as long as the CDO and RMBS 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. Many CDOs and RMBS contained a few or many subprime mortgages, which began to infect these structured securities.

As a result, the value of the CDO and RMBS declined and investors began to avoid them. The banks, Fannie Mae, and Freddie Mac—those most heavily invested in such securities—were caught in a squeeze, unable to sell them as the credit markets froze and unable to borrow to make up for the disabled debt. These institutions were also highly extended (levered up), having borrowed 20–40 times their available capital in order to invest. So any initial losses, while a small part of outstanding loans or investments, could quickly become greater than the institution’s capital base. And when they tried to “de-lever” by selling securities to raise capital, they often found few buyers. 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 also intervened in several cases, and customers stepped back and became more reluctant to do business with these institutions.

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 addition, the infection from the structured securities market spread to other types of assets, which began to experience losses. Investor interest in credit instruments dried up, further pressuring banks, insurance companies and other borrowers and lenders. (“The Credit Crisis: Beginning of the End or End of the Beginning?” *Weekly Market Monitor* 06/23/08)

The economy began to crumble. Consumers, whose spending habits typically represent over 70% of U.S. Gross Domestic Product (GDP), began to rein in their spending in 2007. Similarly, as housing and related businesses began to feel the pinch, job creation in the U.S. turned negative. The rate of GDP growth, which had been above expectations

until the third quarter of 2007, showed very little life after that, with the exception in the second quarter of 2008, when a temporary fiscal stimulus produced positive economic gains that did not last into the third quarter. Around the world, economies in developed countries echoed some U.S. trends, such as declining housing prices and significant pressure on major financial services firms that purchased CDO and RMBS. For the most part, major developing countries experienced brisk, but somewhat less robust economic growth. ("Quarterly Economic and Market Commentary," *Weekly Market Monitor* 07/28/08)

The corporate profit picture remained gloomy. Wall Street's future U.S. corporate earnings estimates, while always rosy, took on an effervescent glow with respect to the fourth quarter of 2008 and on into 2009. Analysts' estimates of price versus earnings ratios (P/E ratios), which over the long run have been in the low to mid teens, remained over 20 through the first eight months of 2008. While falling stock prices tend to lower the forward-looking P/E ratios, the prospects for robust earnings growth continued to recede, as growth in several industrial sectors was offset by rapid declines in financial services and consumer durables. ("Quarterly Economic and Market Commentary," *Weekly Market Monitor* 07/28/08)

Global assets experienced a major repricing of risk. All around the world, risk is being repriced as investors were no longer willing to put capital to work at prevailing prices. As investors continue to sit on the sidelines, in effect, the demand curve for risky assets has shifted to the left, with the result that falling prices and returns are affecting a wide range of asset classes, from commodities to credit markets, equities to real estate. Another effect is a flight to less-risky, high-quality assets, where the prices on U.S. Treasury bonds are rising and the yields on T-Bills fell to nearly zero at one point. ("Markets Repricing Risks Globally," *Weekly Market Monitor* 08/20/07)

Taken together, the forces, globalization, increased leverage and new financial investment options, the housing bubble, and declining profits have led us to a financial and institutional crisis that has not been seen since the 1930s.

What is being done? The Federal Reserve's responsibility is to limit unemployment and inflation in order to maintain economic growth. Traditionally, it has done this by pulling or

pushing one major lever, its power over short-term interest rates. It is interesting to note that the Federal Reserve recently chose to keep the Fed Funds rate steady at 2.0%. Many investors expected a rate cut that would further increase liquidity in a time when credit was disappearing worldwide. But keep in mind that in late 2007 and into 2008, the Fed cut rates by over half (3.25%). It also took some unprecedented steps to increase liquidity and, together with the U.S. Treasury, worked to restructure major financial services institutions that were not part of the traditional banking system (e.g., investment banks, insurance companies, Fannie Mae and Freddie Mac). The Fed may have believed that further rate cuts might only fuel inflation while not making much of a dent in the liquidity crisis.

The Fed, in partnership with the U.S. Treasury, has recently developed new tools and determination to address the financial crisis. The Fed took some unprecedented steps to increase liquidity (e.g., lending to non-banks and accepting new types of collateral) and the Fed and the Treasury together intervened and restructured major financial services institutions that were not part of the traditional banking system (e.g., investment banks, insurance companies, Fannie Mae and Freddie Mac). These ad hoc actions were helpful, but investors and many others have perceived that the problems were becoming systemic as the financial services infection began to spread throughout the economy.

Most importantly, the Fed and the Treasury announced a systemic bailout plan, which would create a federal facility to purchase impaired loans and mortgage securities at cents on the dollar in order to get them off the books of financial institutions. These assets would then be sold in an orderly fashion. The effect of this action, it is hoped, will be restored confidence in the mortgage market, the housing industry, the overall financial system, and the major institutions that participate in it.

Is this enough? Probably more will be needed in the way of time and public policy. Distressed mergers, acquisitions, virtual nationalizations, and outright bankruptcies are all extremely unusual in the financial services industry, but not unprecedented. As we have seen, when they do occur, they are a manifestation of the special cyclical and structural dynamics of the financial services sector, which is noted for rapid changes in products, services, and sources of revenue.

Many of us are familiar with regular investment cycles, where different asset classes rise and fall depending on interest rates, economic growth, inflation, investor sentiment, and other factors. But the financial services sector also faces complex and sometimes rapid structural developments, such as the rise of new markets in mutual funds, derivatives, structured securities, international investing, changes in regulation, etc. This combination of cyclical and structural forces can also have a significant effect on institutional and investor (e.g., “counterparty”) confidence, which plays a special role in the financial arena.

In the past, financial services firms of all sizes have come and gone in response to cyclical, structural, and even customer perceptions, all of which almost inevitably pose challenges for firms and their regulators. As in past periods of volatility and heightened uncertainty, it isn’t surprising to see that some firms are better equipped than others. The institutional landscape in financial services is changing rapidly—strong firms will eventually emerge.

Where, or rather how, will it all end? No doubt there is more pain ahead, since the evidence indicates that we are really at the end of the beginning of the crisis rather than the beginning of the end. The U.S. and global economies will likely suffer further and, whether or not a formal recession is declared, it already feels like it to most consumers and investors. Little-to-no-to-negative economic growth could persist for at least another year, before we see positive signs of economic growth. Similarly, prospects for corporate earnings and other fundamentals do not suggest any basis for a sustained stock rally for the coming year or so. Interest rates, which we had expected to come down, have already done so and could remain down, while credit and other spreads could remain quite high. Internationally, the leading developing countries and their investments could fare somewhat better and be a bright spot in a sea of gray.

On the government side, regulators and policymakers are beginning to recognize that there has been a mismatch between the philosophy of the free market—perfect information, smooth price adjustments, and no one entity can move the market by itself—with the reality, where information is limited and huge institutions have emerged with enormous influence on prices and quantities. The current challenges are unusual, even unprecedented, and

regulators have moved carefully to contain the turmoil and to begin rebuilding customer and consumer confidence. It is quite possible that calls for a new approach to financial services regulation could lead to improvements in the current system, which has remained fragmented and lacks comprehensive policies for some key financial markets, such as over-the-counter securities and hedge funds.

What should investors look for? Experienced investors will need to be patient and look at the fundamental factors that influence growth rather than speculation. Investors who stayed with their portfolio allocations have felt considerable distress as the value of their risky assets declined. But if they are committed to a broadly diversified portfolio, then they should watch for signs of life in the asset markets. One of the first places they should look is for the revival of corporate profits and earnings, or at least realistic expectations of earnings growth. Right now there is little to indicate that earnings growth will increase significantly in the next couple of quarters. But when signs do develop, they can often presage or accompany positive equity market returns that might not fizzle out.

Another place to look might be at some economic fundamentals, because long-term asset returns are linked to long-term economic health. Increased savings and investment, consumption growth, job creation, and other factors that lead to a renewal of economic growth will provide a good foundation for asset returns, which both anticipate such growth and are sustained by it.

Still another place investors should look is to public policy. Federal intervention and some state assistance (notably New York) are improving odds that the financial crisis will be dealt with in a more orderly fashion. These actions, while welcome, may not be enough. Congress and the new administration may consider additional fiscal stimuli in order to limit the decline in consumer spending and begin to invest in long-term infrastructure. And they may also wish to work with the states and other nations to reform the fragmented regulatory system to better align regulatory authority and practice with the current structure of the global financial services industry. If steps in these areas receive sufficient political and public support, it could help to restore confidence in financial services and to make it easier for investors to increase their interest in riskier assets in hopes of positive future returns.

It will take time for these signs of better times to appear.

One thing the events of the last few weeks and days highlight is the strength and stability of the TIAA-CREF organization and that our portfolios are positioned to seek to avoid or mitigate the types of problems that have hurt other financial institutions.⁵

An important part of TIAA-CREF's investment approach, which seeks consistent growth for long-term investors, is to recognize that unexpected events do occur and to position the portfolios we manage in a way that seeks to minimize the effects of problems at any single company. While some TIAA-CREF funds and variable annuity accounts have been adversely affected by their holdings in specific financial companies, exposure to these companies has generally been limited. TIAA-CREF takes a sober approach to risk management and investing for the long term. 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 have taught us that adhering to sound fundamental principles—in both stable and volatile markets—benefits our participants over the long run.

Experienced and wise investors will recognize that the special dynamics of the financial services industry can produce difficult challenges from time to time. This understanding can take the edge off the panic during these admittedly hard times, just as it may temper over-enthusiasm during euphoric markets. (“Asset Allocation in Volatile Markets,” *Weekly Market Monitor* 06/11/08) 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. (“Market Timing or Swing Betting,” *Weekly Market Monitor* 09/08/08) They will weather the storm of the current market corrections and will look forward to the potential for calmer seas ahead.

⁵ For more information on TIAA-CREF's strength and stability see Roger W. Ferguson and Scott C. Evans' remarks and *Financial Strength in Turbulent Times*. Both can be found in the News section of TIAA-CREF's website (tiaa-cref.org).

You should consider the investment objectives, risks, charges and expenses carefully before investing. Please call 877 518-9161, or go to tiaa-cref.org for a current prospectus that contains this and other information. Please read the prospectus carefully before investing.

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