



25. [Beyond participating in and engineering rescues of large financial services companies, have governments done anything else to try to settle the markets?](#)
- 26.\* [Have government actions had any impact on the credit markets?](#)
- 27.\* [What is LIBOR and why is it important?](#)
- 28.\* [What has been the effect of the financial crisis on hedge funds?](#)
29. [Is it only financial services companies that are being impacted by current market conditions?](#)
- 30.\* [What makes some industries more vulnerable to the crisis than others?](#)
- 31.\* [How is the credit crisis affecting the financial strength of governments?](#)
- 32.\* [Is it likely that we will see the crisis spread to loans other than mortgage loans?](#)
- 33.\* [Are banks tightening their underwriting standards?](#)
34. [Have there been any governmental actions directed at assisting companies outside of the financial services industry?](#)
- Legislative and Regulatory Actions**
35. [Why did the U.S. government nationalize Fannie Mae and Freddie Mac?](#)
36. [What is a conservatorship?](#)
37. [What is administration?](#)
38. [What is the form of support the U.S. government offered to the GSEs?](#)
39. [Does the business of the GSEs change under the conservatorship?](#)
40. [Why did the U.S. government rescue Bear Stearns but not Lehman Brothers?](#)
- 41.\* [Why did the U.S. government rescue AIG, which is not a "traditional" banking or investment banking firm?](#)
42. [Why did Morgan Stanley and Goldman Sachs convert to bank holding companies?](#)
43. [Did the financial services regulatory system fail?](#)
44. [What type of regulatory reform is being suggested to address the financial crisis?](#)
45. [Are changes needed in existing capital rules to protect banks?](#)
- 46.\* [Will Solvency II, which is still in the making, need to change in light of recent events?](#)
47. [Are the actions that have been taken by governments around the world a bailout of the financial services industry and the individuals who managed these companies?](#)
- 48.\* [How was U.S. legislation intended to help address the current financial crisis?](#)
49. [Does TARP authorize or require anything other than the asset purchase/guarantee program?](#)
50. [What oversight will there be of the U.S. Treasury's activities under TARP?](#)
51. [How do the provisions of TARP apply to U.S.-based operations of foreign banking organizations?](#)
- 52.\* [Since the initial focus of TARP was on the purchase of troubled assets, why has the U.S. Treasury Department now decided to use available TARP funds for other purposes?](#)
53. [Is participation in the TARP Capital Purchase Plan voluntary for U.S. banks?](#)
54. [How will the preferred stock acquired by the U.S. Treasury Department in U.S. banks be treated for capital adequacy purposes?](#)
55. [How have the main European public bodies and regulators reacted to the crisis?](#)
56. [Should we expect additional legislation related to the financial crisis?](#)
57. [Why did the U.K. government decide to inject capital directly into the U.K. banking system?](#)
58. [What conditions did H.M. Treasury impose on the U.K. banks that opted into the government's capital plan?](#)
59. [Is the crisis likely to impact the application of the Market in Financial Instruments Directive \(MiFID\) in Europe?](#)
60. [How will we know if the various actions taken by the United States and other governments are working?](#)
- Next Steps**
61. [What additional steps can we expect regulators to take to deal with the current crisis or prevent such disruptions in the future?](#)
- 62.\* [How will government intervention affect consolidation in the financial services industry?](#)
- 63.\* [How will the International Financial Reporting Standards \(IFRS\) impact the current situation?](#)
64. [What should companies be doing in the current environment?](#)
65. [Is it only financial institutions that need to be taking the steps outlined above?](#)

\* Indicates new or additional information.

## Overview

### 1. What has caused the meltdown in the financial services industry?

The financial meltdown had its origin in the U.S. mortgage market of the early and mid-2000s. At the time, the economy was booming, the U.S. government was intent on making home ownership affordable to more people, financial institutions were awash with liquidity, and real estate values were rising endlessly. Competition among mortgage lenders led to innovation – teaser-rate adjustable mortgages and other nontraditional mortgage terms such as no- and low-documentation loans – that opened up the real estate market to borrowers who previously would not have qualified for credit, i.e., subprime borrowers.

All was well, provided that interest rates did not rise and housing prices continued to escalate. In 2004, however, the Federal Reserve began to raise interest rates. In 2006, housing prices started to taper off after rising nearly 50 percent between 2000 and 2006.<sup>1</sup> As the market declined, borrowers who had expected to refinance their mortgages when their loans re-priced to higher interest rates coupled with higher monthly payments found they were not able to do so. Consequently, these borrowers were unable to meet payment requirements, leading to defaults that escalated as real estate values continued to decline.

Concurrent with the growth in mortgage lending, significant financial innovation was occurring in the financial markets. Pools of mortgage loans, including those extended to subprime borrowers, were aggregated into portfolios of structured products based on the cash flows of the underlying assets – in other words, these loans were securitized. These securities/investments/derivatives were marketed to both institutional and retail investors. To enhance the marketability of these instruments, credit default swaps (CDS) were issued, and the growth in the CDS market paralleled the growth in the underlying mortgage market. While some of these financial instruments ended up in hedge fund portfolios, due to the significant volume of this market and the underlying assets as well as considerable investor appetite, these instruments became widely distributed throughout the global financial system to buyers ranging from government sponsored enterprises (GSEs) and financial institutions to mutual funds/money market funds, pension funds and retail investors.

Given the sponsorship of instruments and retention of key risk components by a number of the large financial firms and the retention of key risk components of these products, concerns over the safety, soundness and credit worthiness of a number of key market participants (including Lehman Brothers, AIG and Merrill Lynch) began to impact the market negatively as the crisis began to unfold. Since many of the instruments involved are complex and lack transparent market pricing, they not only are hard to price, but illiquid, further exacerbating the funding and capital issues of a number of financial organizations.

A similar picture then emerged in other developed countries as the combination of competition, innovation, readily accessible credit, and the ballooning of securitization and resulting leverage created a massive systemic susceptibility to falls in global residential property values and mortgage defaults, in addition to huge losses incurred on exposures to the U.S. subprime market. News of massive losses by institutions most exposed to such risks evolved and escalated, eventually creating a crisis of confidence among lending banks in the money markets and increasing difficulty among banks that were most affected to raise or refinance the short- and medium-term borrowing they needed to fund their long-term assets. That lack of confidence quickly turned into a “credit crunch” in which some banks could not fund existing loans and most banks were unwilling to extend new credit either at all or at least on any terms resembling those on which they had previously extended credit.

### 2. How are “subprime” borrowers defined?

While there is not one standard definition, subprime borrowers typically are described as borrowers who have weakened credit histories that include payment delinquencies, and possibly more severe problems such as charge-offs, judgments and bankruptcies. These borrowers also may display reduced repayment capacity as measured by such considerations as lower credit scores or higher debt-to-income ratios.

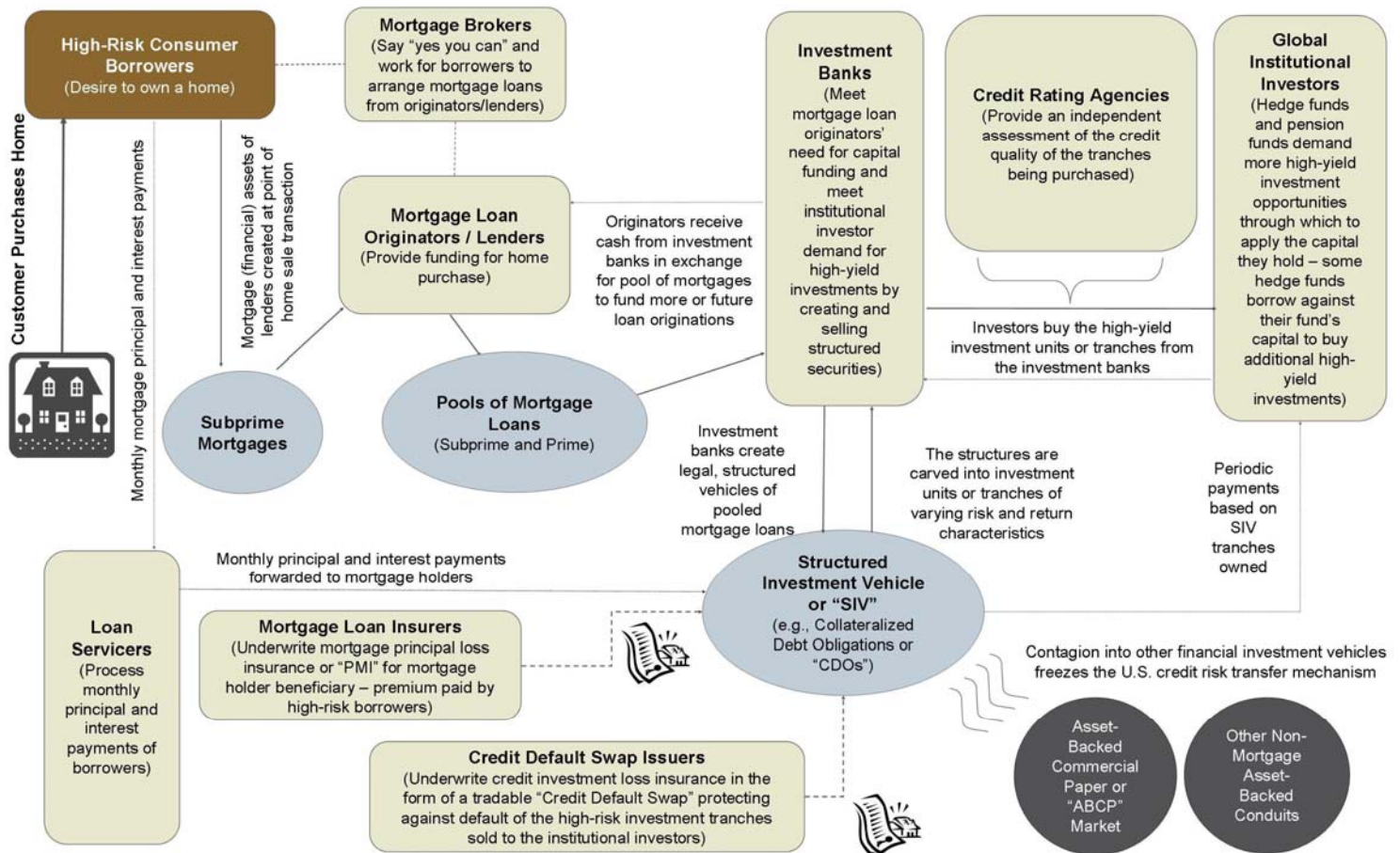
### 3. Who are the major players in the subprime market?

It is the very complexity of the subprime market that has made resolving the problem so difficult. Apart from borrowers, the other major players in the process include:

- Mortgage brokers
- Mortgage originators/lenders
- Mortgage insurers
- Loan services
- Investment banks
- Rating agencies
- Credit default issuers
- Institutional investors

The following chart depicts how all of the various players interact.

## Subprime Mortgage Market



#### **4. Why were financial institutions and rating agencies not able to forecast the performance of the loans?**

Subprime loans originated between 2000 and 2005 did evidence a predictable pattern. Borrowers generally kept their loans current for one year or more after origination, so performance in the early years at least was considered low risk, especially when coupled with the view that even if there were a default, the collateral value would more than offset the loan balance. This all began to change in 2006, when anecdotal evidence now suggests that weaker borrowers began to enter the market in growing numbers at the same time that real estate prices started to decline.<sup>2</sup> From 2006 on, predicting the performance of subprime loans became much less reliable.

#### **5. How did leverage contribute to the crisis?**

Some argue that excessive use of leverage is the root cause for the current crisis. For example, in the United States, prior to 2004, the U.S. broker/dealer net-capital rules limited firms to a maximum debt-to-net-capital ratio of 12 to 1. In 2004, the U.S. Securities and Exchange Commission (SEC) granted an exemption to five firms that allowed them to exceed this leverage rule. Goldman Sachs, Merrill Lynch, Lehman Brothers, Bear Stearns and Morgan Stanley were granted this exemption and they levered up 20, 30 and even 40 to 1.<sup>3</sup> Over-leveraging throughout the U.S. economy has, in fact, become a major theme and the United States is entering a period of significant de-leveraging.

In addition, the “originate and distribute” model that characterized the market is generally seen as magnifying the risks and the reach of the exposures. Under this model, we saw the rapid growth of off-balance-sheet vehicles and securitization practices designed to improve returns on constrained capital resources substituting for the capital-intensive holding of mortgage-backed and other assets.

#### **6. What makes this credit crisis different from those we have experienced in the past?**

Credit crises in the past tended to be confined to the commercial banking and direct lending sectors. With the growth of the securitization market, investment banking firms became big players in the mortgage market, as well. This allowed the risk to spread far and wide, making this crisis that started with subprime lending in the United States both a bank and nonbank, as well as a global, problem.

#### **7. How does the current credit crisis compare to others we have seen?**

Even before the events in September and October 2008, former Federal Reserve Chairman Alan Greenspan, whom some have argued did not recognize the severity of the developing problems as they were unfolding, described the financial crisis in the United States as “the most wrenching since the end of the second world war.” Others, like the well-known investor George Soros, said that there has been nothing like the events of late since the Great Depression.<sup>4</sup> As time goes on, more and more people are agreeing with these assessments.

#### **8. When were the first signs of the current crisis apparent?**

While there were signs of the problems to come toward the end of 2006, the real magnitude of the problem began to surface in the first half of 2007, with such events as the bankruptcy filing of New Century in April 2007 and Bear Stearns' June 2007 \$3.2 billion rescue of two of its hedge funds that were invested in subprime. Many would say that “crisis level” was reached in August-September 2007, when the money market sector that is critically important to banking and financial operations temporarily froze and the Federal Reserve Bank and European Central Bank added \$100 billion in liquidity into the system, which calmed the market for a short period.

#### **9. How has the crisis unfolded since Fall 2007?**

Even when the crisis began to unfold, few would have predicted the events that have occurred to date in the financial markets. The following timeline<sup>5</sup> highlights some of the major developments and also illustrates the global impact of the crisis:

##### **September 2007**

British bank Northern Rock is besieged by worried depositors as its wholesale funding sources dry up; the British government and Bank of England guarantee the deposits; Northern Rock is subsequently nationalized.

The U.S. Federal Reserve starts a series of interest rate drops to ease the impact of the housing slump and mortgage crisis.

#### **October 2007**

Profits at U.S. financial giant Citigroup drop sharply. The International Monetary Fund (IMF) lowers its 2008 growth forecast for the European region to 2.1 percent from 2.5 percent, in part because of spillover from the U.S. subprime mortgage crisis and credit market crunch.

#### **December 2007**

U.S. President Bush unveils a plan to help up to 1.2 million homeowners pay their loans.

World central banks agree to inject at least \$100 billion into the interbank markets.

#### **January 2008**

Swiss banking giant UBS reports more than \$18 billion in writedowns due to exposure to the U.S. real estate market.

Citibank writes down \$18 billion; Merrill Lynch sells a \$6.6 billion stake to foreign investors, including the Korean and Kuwaiti governments.

In the United States, Bank of America acquires Countrywide Financial, the country's biggest mortgage lender. The Federal Reserve slashes the interest rate by three-quarters of a percentage point to 3.5 percent following a sell-off on global markets. Another cut at month's end lowers it to 3 percent.

#### **February 2008**

Fannie Mae, the largest source of money for U.S. home loans, reports a \$3.55 billion loss for the fourth quarter of 2007, three times what had been expected.

#### **March 2008**

On the verge of collapse and under pressure by the Federal Reserve, Bear Stearns is forced to accept a buyout by JPMorgan Chase. The deal is backed by Federal Reserve loans of \$30 billion.

In Germany, Deutsche Bank reports a loss of 141 million euros for the first quarter of 2008, its first quarterly loss in five years.

The Federal Reserve spearheads a coordinated push by world central banks to bolster global economic confidence by announcing moves to add \$200 billion into markets.

Carlyle Capital falls victim to the U.S. credit crisis as it defaults on \$16.6 billion of indebtedness.

The United States frees up another \$200 billion to back troubled Fannie Mae and Freddie Mac.

#### **April 2008**

The IMF projects \$945 billion in losses from the financial crisis. The G7 ministers agree to a new wave of financial regulation to combat the protracted financial crisis.

Deutsche Bank reports a \$4 billion writedown.

Citigroup, Merrill Lynch and Washington Mutual, among others, sell shares to boost capital.

#### **June 2008**

Home repossessions more than double as the U.S. housing crisis deepens.

S&P cuts ratings of Morgan Stanley, Merrill Lynch and Lehman Brothers.

## **July 2008**

California mortgage lender IndyMac collapses. Troubles for Fannie Mae and Freddie Mac continue to grow and the U.S. Treasury and Federal Reserve move to guarantee the debts of Fannie Mae and Freddie Mac.

The U.S. Congress gives final passage to a multibillion-dollar program to address the mortgage and foreclosure crisis.

Spain's largest property developer, Martinsa-Fadesa, declares insolvency.

*Beginning in September 2008, the financial landscape began to change so quickly, with so many financial institutions impacted, that the events described below for September, October and November do not begin to convey all that transpired.*

## **September 2008**

The U.S. government seizes control of Fannie Mae and Freddie Mac in a \$200 billion bailout.

Lehman Brothers investment bank declares \$600 billion bankruptcy. The bulk of its U.S. business (without "toxic" assets) is bought by Barclays Bank. Its U.K. business is put into administration.

Merrill Lynch is acquired by Bank of America.

The United States bails out insurance giant AIG for \$85 billion. (In October, the Federal Reserve extended AIG another \$38 billion in additional credit.)

The last two standing major U.S. investment banks, Morgan Stanley and Goldman Sachs, convert to bank holding companies.

U.S. regulators seize Washington Mutual in the largest-ever U.S. bank failure. JPMorgan Chase acquires the assets, assumes the qualified financial contracts and makes a payment of \$1.9 billion. Claims by equity, subordinated and senior debt holders are not acquired.

The British government intervenes to save major mortgage lender Bradford & Bingley.

The Netherlands, Belgium and Luxembourg announce the takeover of substantial parts of Belgian-Dutch banking and insurance company Fortis. The State of the Netherlands subsequently nationalizes Fortis Bank Nederland, Fortis Insurance Netherlands, Fortis Corporate Insurance and the Fortis share in ABN AMRO Holding.

The German Finance Ministry announces that the government and top banks are moving to inject billions of euros into troubled mortgage lender Hypo Real Estate.

The Iceland government and Glitnir Bank announce a state takeover of a 75 percent stake in Glitnir. The government subsequently seizes Landsbank and Kaupthing Bank, the country's largest lender, effectively completing the nationalization of the banking system and pushing the country itself to the verge of bankruptcy.

Citigroup announces it has reached an agreement to purchase the banking assets of Wachovia Corp. in a transaction that would involve Federal Deposit Insurance Corporation (FDIC) protection of losses above \$42 billion in a \$312 billion pool of loans, in return for which Citicorp would grant the FDIC preferred stock and warrants. (Subsequent to this, Wells Fargo & Company announces that it will acquire all of Wachovia Corp. with no FDIC assistance and this deal transpires.)

## **October 2008**

The largest (\$700 billion) intervention in the capital markets becomes law in the United States.

The U.K. government agrees to commit up to £500 billion to the U.K. banking system in a combination of equity injection into and partial nationalization of a number of the United Kingdom's biggest banks, underwriting of interbank lending, and liquidity injection.

The U.K. businesses of Icelandic banks are either put into administration or have their assets frozen amid concerns that the many U.K. depositors in Icelandic banks will otherwise lose their money.

Major government capital injections are subsequently agreed upon with leading U.K. retail banks Royal Bank of Scotland, HBOS and Lloyds TSB, in return for (in addition to the financial terms) commitments of certain bonus and dividend restrictions/prohibitions and lending practice commitments to individuals and small businesses.

Government capital injections into major banking groups are announced in France, Germany and the United States.

Central banks across the world cut rates to stimulate the market and mitigate recessionary impacts as the crisis appears to be spreading.

Despite government actions worldwide, the markets remain unconvinced. On Friday, October 10, the Dow Jones suffers its largest-ever point swing and the S&P 500 concludes its worst week since 1933. In Japan, the Nikkei falls almost 10 percent, its biggest drop in 20 years. The FTSE drops more than 10 percent, its worst fall since 1987.

Finance officials from the Group of Seven meet in Washington, D.C., and issue a five-point plan.

In Paris, 15 European Union leaders meet for an emergency summit on the financial crisis.

Regulators in the United States and Europe announce new measures to stabilize the market, including direct capitalization of financial institutions, guarantying interbank lending, and adding or increasing deposit insurance schemes.

The crisis hits the Middle East when the Kuwaiti government is forced to bail out Gulf Bank, which said defaults by counterparties on eurodollar derivatives contracts forced it to seek government intervention.

The Japanese government unveils a ¥5 trillion stimulus package.

Global markets end October with the worst losses in history, despite a strong final week.

## **November 2008**

A Thai government official calls for the creation of an Asian Financial Community for the less-affected Asian financial institutions to help stabilize the global system.<sup>6</sup>

Central banks continue to inject liquidity into the market and to lower rates.

The U.S. government announces a restructuring of its bailout of AIG.

China announces a massive stimulus plan.

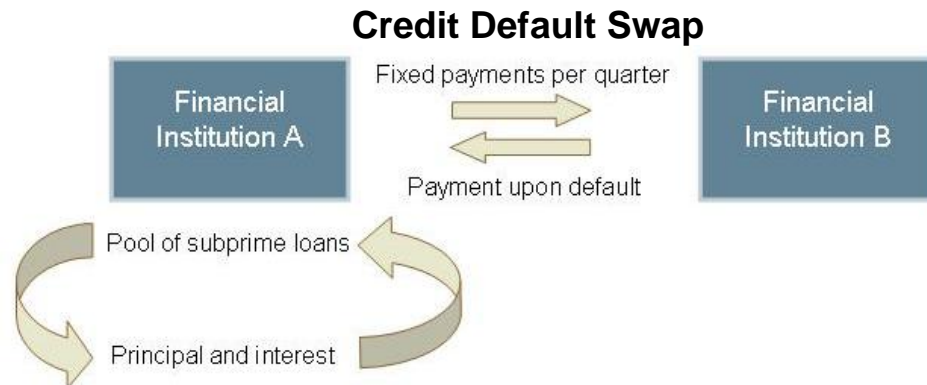
American Express receives Federal Reserve approval to become a bank holding company.

The markets experience dramatic fluctuations on a daily basis.

### 10. What is a credit default swap?

A credit default swap (CDS), as its name suggests, is a transaction in which one party, the beneficiary, “swaps” the credit risk on a specified asset (for the purposes of this discussion, a pool of subprime assets) for a guarantee of another party, the guarantor. CDSs were devised by J.P. Morgan & Co. in the early 1990s to hedge its loan risks; by some accounts, the CDS market now includes \$65 trillion in contracts.<sup>7</sup> CDS transactions are done in the Over-the-Counter (OTC) market.

The following graphic illustrates how a CDS works. Financial Institution A pays Financial Institution B a certain number of basis points on the par value of the reference asset, either quarterly or annually. In return, Financial Institution B agrees to pay Financial Institution A an agreed-upon amount if there is a default, based on a formula delineated in the contract.<sup>8</sup>



### 11. What is the Over-the-Counter (OTC) market?

The OTC market is a market in which market makers negotiate over telephone or computerized networks instead of through an organized exchange. The main participants of the OTC market are investment banks, commercial banks, government sponsored enterprises and hedge funds.

### 12. How did the credit default swap market further strain market conditions?

The credit default swap (CDS) market is estimated to range from \$35 billion to more than \$65 billion in notional or face value. This market has grown massively in the last five to 10 years as market participants sought further derivative financial instruments to use as a means to manage (or exploit) credit risk. The buyer of a CDS generally is looking to mitigate credit risk exposure triggered by a default or other defined negative event. Sellers assume the default risk for a premium generally by executing a transaction in the OTC market (these instruments are not exchange-traded).

With the continuing credit deterioration in the financial markets, CDS spreads continued to widen, with spreads on certain financial services companies moving from basis points in the mid-20s in February 2007 to the high triple digits in late September 2008. This resulted in significant mark-to-market losses for the issuing financial institutions and diminution of capital, as well as a series of margin calls that put further pressure on liquidity positions of affected institutions. These factors, combined with the opaqueness and complexity of these instruments, contributed to further concerns over the creditworthiness and financial wherewithal not only of a number of market-making issuers, but also of those buying institutions that were relying upon those instruments to mitigate credit risk exposure in their own portfolios.

### 13. Is the crisis really all about credit risk?

While credit risk is at the center of the current financial crisis, the more pressing issue for many financial services companies is liquidity, fueled by a lack of trust in the transparency and reliability of information used to assess the condition of companies. This has followed a period in which many banks increasingly have become dependent on wholesale funding as a proportion of their overall funding requirement as leverage has increased. Access to funding has been restricted significantly due to contraction in the interbank lending markets as well as retail depositor concerns that have led

to “runs” on some banks. Governments around the globe have been trying to address these phenomena by injecting large amounts of funds into the market, underwriting interbank lending, guaranteeing deposits or increasing the level of existing deposit guarantee programs.

#### **14. What is systemic risk?**

Systemic risk is the risk that affects an entire financial market or system rather than just specific participants. It results from many factors, including the interdependencies of the players in the financial markets, the flow of capital and funding through central banks and the private sector, confidence (or lack thereof) in the stability and creditworthiness of institutions, and many other factors impacting the safety and soundness of financial markets.

#### **15. How has the crisis impacted European countries?**

The crisis has severely impacted banks in European countries in a number of ways that are not dissimilar to the impact on U.S. banks. The effects include:

- Major writedowns and losses on holdings of U.S. subprime securitizations and other related subprime assets;
- Losses on assets arising from the downturn in property values (residential, in particular) in their own countries; and
- Funding difficulties as a result of the freezing of global interbank money markets, resulting in significant liquidity problems. Many institutions have funding mismatches, which means they have to refinance large parts of their balance sheets every quarter. During periods of market uncertainty, banks are reluctant to lend. As a result, an institution with a large funding mismatch can find it difficult to attract funding.

#### **16. What are the estimates of the cost of the current crisis?**

While it is extremely difficult to identify and measure losses attributable to the credit crisis accurately, in April 2008, the IMF said the worldwide losses stemming from the U.S. subprime mortgage crisis could hit \$945 billion dollars as the impact spreads in the global economy, about half of which would be lost by banks themselves. As of the end of October 2008, the Bank of England said that the world's financial firms already had lost \$2.8 trillion as a result of the continuing crisis. It likely will be some time before we can get a real fix on the true costs.

#### **17. To put the current crisis into perspective, what were the costs of prior credit crises?**

According to an IMF *Global Financial Stability Report* released in April 2008:

- The cost of the U.S. savings and loan crisis of the late 1980s and early 1990s is estimated to have totaled \$273 billion.
- The Japanese banking crisis of the 1990s cost approximately \$745 billion.
- The estimated cost of the Asian banking crisis of 1998-1999 was \$404 billion.

#### **18. The savings and loan crisis of the late 1980s and early 1990s involved significant allegations of fraud. How large a role does fraud play in the current crisis?**

Various U.S. regulators, both at the state and federal level and including the Federal Bureau of Investigation (FBI), have revealed the existence of investigations into the collapse of the subprime mortgage market and allegations of market manipulation. The targets of these investigations include, but are not limited to, Fannie Mae, Freddie Mac, Lehman Brothers and AIG. The FBI has reported more than 1,400 investigations into brokers, appraisers, buyers and lenders. The majority of the corporate cases are said to involve accounting fraud, insider trading, and failures to disclose, with criminal intent, the proper evaluation of securitized loans and derivatives.<sup>9</sup>

#### **19. Shouldn't the risk management practices of financial services companies have protected them better?**

For an industry that has prided itself as being at the forefront of risk management, the current financial crisis is almost inexplicable. On the other hand, it is an oversimplification to assert that the current crisis is due solely to poor risk management. Collateralized securities were designed by Wall Street to take advantage of financial accounting and reporting standards and they obscured the

underlying economics. Government and monetary policies, rating agency practices, and the lack of effective and time-honored underwriting standards further contributed to the problem. Most importantly, deficiencies in corporate governance processes obviated the contribution of any risk management processes in place. In many cases, there was a lack of effective transparency, accountability and escalation in the institutions affected, which led directors and senior managers to a position of not knowing the extent of the risks undertaken. Collectively, these issues reach well beyond the scope of risk management and touch upon such areas as corporate governance, executive management, and the role of the board and the audit committee.

The above said, it is important to remember that countless financial services companies – large and small – have been able to weather the crisis successfully.

In March 2008, senior supervisors from five countries (France, Germany, Switzerland, the United Kingdom and the United States) released the results of their evaluation of the risk management practices of a group of large financial services companies and their effectiveness in protecting companies.<sup>10</sup> What the supervisors concluded was that the companies that had fared better through year-end 2007 shared the following firmwide risk management practices:

- Effective firmwide risk identification and analysis
- Consistent application of independent and rigorous valuation practices across the firm
- Effective management of funding liquidity, capital and balance sheet
- Informative and responsive risk measurement and management reporting and practices

By contrast, the supervisors concluded that the companies that experienced more significant problems exhibited the following common characteristics:

- They failed to discuss changing market conditions in a timely manner and left the business areas to make decisions in isolation without creating appropriate incentives for the business areas to manage risk.
- They were content to rely on rating agency valuations despite observable market changes.
- They lacked alignment between their risk management and treasury functions.
- They relied on outdated assumptions that were unchallenged by management, and did not effectively integrate market and counterparty risk to identify the size of their concentration risk.
- They often evidenced a lack of understanding by senior management of the risks, which prevented them from challenging the business units, resulted in frequent and tolerated limit exceptions, and created hierarchal structures that filtered or delayed information flows and/or organizational silos that tended to compartmentalize information.

Some simply ascribe the problems experienced by many large financial services companies to a leadership failure. Others say that in those companies that have been affected most profoundly, risk management failed to identify and support adequately the increasingly complex and risky nature of the business. The message is that the root causes of the crisis do not lie solely with risk management processes. To be effective, risk management requires transparency and effective governance. Unfortunately, both appear to be lacking in many cases.

Since the companies surveyed by the supervisors were not disclosed by name, it is not possible to determine how well the companies the supervisors deemed to have stronger risk management practices have weathered the crisis as it has deepened. At a minimum, those companies that have been most affected will need to re-evaluate how they assess and monitor risk across the organization and the adequacy and effectiveness of the governance arrangements over those individuals who made or agreed to the strategies followed. Where necessary, organizations will need to make appropriate changes to their governance and risk arrangements to address weaknesses and gaps in their current arrangements.

## **20. Why were financial institutions not able to predict the market deterioration through stress testing?**

Stress testing may have failed to give warning of the impending crisis for a number of reasons, including the use of overly optimistic assumptions (e.g., ever-increasing real estate values), and because stress test models may systematically underestimate the effect of extreme situations and the increase in the relationship among variables when volatility spikes.<sup>11</sup>

## **21. Should boards of directors and senior management of financial and nonfinancial companies expect that all of their corporate governance efforts related to implementing the Sarbanes-Oxley Act and similar requirements of other jurisdictions should protect them from being affected by the crisis?**

No. The Sarbanes-Oxley legislation focuses primarily on the reliability of financial reporting. That limited focus falls far short of the scope of the governance and risk management processes needed to reduce the financial risks created by subprime lending and other related practices to an acceptable level. While a strong system of internal control over financial reporting is vitally important, it does not dictate the practices for managing the credit, counterparty and liquidity risks that have led to the current crisis.

## **22. Did accounting rules contribute to the crisis?**

Some people believe that existing mark-to-market rules that require companies to adjust the value of their assets based on current market values and raise capital to address any deficiencies have precipitated the crisis. They argue that when the economy is in the midst of a severe downturn, the use of mark-to-market accounting “reinforces the downward cycle of panic-falling prices-losses-illiquidity-credit contraction-more panic-further falling prices-greater reported losses-no active markets. Fair value accounting adds momentum to a destructive downside overshoot.”<sup>12</sup>

## **Global Reach and Impact of the Crisis**

### **23. How widespread is the impact of the current financial crisis?**

While the effects of the current financial crisis have played out most dramatically in the collapse of large financial institutions in the United States and Europe, the impact of the crisis extends much further. Consider the following examples described in a recent Associated Press article<sup>13</sup>, which demonstrates the reach and depth of the crisis:

- A recruiting agency in Russia is seeing its client base erode because the investment banks that once were seeking Russia’s financial wizards have succumbed to the financial crisis meltdown.
- A homemaker in Hong Kong is having a hard time sleeping and eating lately because last year she and her retired civil servant husband purchased an equity-linked note issued by Lehman Brothers and tied to the performance of two major Chinese banks on the Hong Kong market. She has seen the value of this investment tumble as the Hong Kong market has suffered as a result of actual and rumored losses in the financial services sector.
- A furniture maker in the Philippines has had to slash jobs because its U.S. wholesale distributors are struggling to sell goods and do not want to add to their slow-moving inventory.

### **24. How have regions of the world beyond the United States and Europe been impacted by the financial crisis?**

While the United States and Europe thus far have been most affected by the financial crisis, the impact of the crisis has been far-reaching and liquidity concerns are plaguing many banking systems in, for example, the Asia-Pacific region.

Governments throughout the Asia-Pacific region took steps in October to stabilize their markets. These included but were not limited to the following:

- The Bank of Japan announced that, in a step similar to that taken by various European governments, it would supply banks with unlimited amounts of dollars at a fixed rate against appropriate collateral in an effort to bolster liquidity in the market.
- South Korea said it would use its foreign exchange reserves to help with loans.

- Australia announced it would guarantee all bank deposits for three years and guarantee wholesale funding to Australian banks in an attempt to combat the global credit crisis.
- China announced a major stimulus plan to offset slowing global growth.
- Even the oil-rich Middle East has felt the impact of the crisis.

Even in jurisdictions where, to date, the banking systems have not been impacted significantly by the crisis, there is growing concern about the likely impact of the crisis on exports to the United States and Europe and how that may soon affect these jurisdictions.

**25. Beyond participating in and engineering rescues of large financial services companies, have governments done anything else to try to settle the markets?**

In September 2008, the U.S. Treasury Department announced the establishment of a \$50 billion temporary guaranty program for the U.S. money market mutual fund industry. For the next year, the U.S. Treasury will insure the holdings of any publicly offered eligible money market mutual fund – both retail and institutional – that pays a fee to participate in the program. In addition, the SEC, the U.K. Financial Services Authority and regulatory bodies in other countries took temporary emergency action to prohibit short selling in financial companies (including 799 U.S. and 34 U.K. financial public companies) to mitigate the risk of failure of financial institutions associated with stock price declines driven by short selling, protect the integrity and quality of the securities market, and strengthen investor confidence. Many countries also have adopted or increased deposit guarantee programs.

**26. Have government actions had any impact on the credit markets?**

The financial crisis resulted in a significant slowdown, if not a freezing, of credit markets around the world. Credit spreads widened substantially and hit record levels in October 2008. This, in part, prompted central banks and governments around the world both to inject additional liquidity into the financial system and to cut interest rates. While credit markets continue to remain tight, there are signs of improvement. For example, there were 17 straight declines, for a total of 200 basis points, in the London Interbank Offered Rate (LIBOR) from October 10 through November 4, 2008.

**27. What is LIBOR and why is it important?**

LIBOR, the London Interbank Offered Rate, is the interest rate that the most creditworthy banks around the world charge each other for loans. LIBOR is important because it is used as the base for pricing variable-rate government and corporate loans and derivative-based products such as credit swaps.

**28. What has been the effect of the financial crisis on hedge funds?**

As with every other segment of the financial services industry, hedge funds have been affected by the financial crisis. In fact, there are estimates that as many as half of the 10,000 funds that existed earlier this year could fail or be wound up within a year's time as assets under management by hedge funds continue to decline dramatically.<sup>14</sup>

**29. Is it only financial services companies that are being impacted by current market conditions?**

The current crisis in the financial services industry affects all sectors of the economy. With financial institutions having their own liquidity problems, the availability and cost of borrowing for other companies likewise have been impacted adversely. As a point of reference, it has been reported that investment-grade borrowers are paying interest rates today equivalent to what junk bond issuers paid a year ago. Particularly hard hit have been the retail, airline and automotive industry sectors, which were experiencing some financial problems even before the current crisis unfolded. However, companies in sectors of the economy that have been prospering, such as energy, now find themselves facing significantly increased borrowing costs. In October, S&P reported that it had downgraded a total of 227 issuers, 155 of which are U.S. issuers; this compared to a total of 137 downgrades in the prior quarter.<sup>15</sup>

### **30. What makes some industries more vulnerable to the crisis than others?**

In a recent article, *Forbes* magazine focused on five variables: leverage (i.e., a company's debt-to-equity ratio), interest coverage, sales growth from 2005 to 2007, pretax profit growth for the same period, and cash cushion.<sup>16</sup> The article identified the following 15 industries as vulnerable in the current environment:

- Wood product manufacturing
- Motor vehicle and parts dealers
- Credit intermediation and related activities
- Traveler accommodations
- Gas stations
- Non-Internet broadcasters
- Truck transportation
- Nonmetallic mineral product manufacturers
- Rental and leasing services
- Printing and related services
- Real estate
- Nursing and residential care facilities
- Merchant wholesalers/durable goods
- Transit and ground passenger transportation
- Forestry and logging

### **31. How is the credit crisis affecting the financial strength of governments?**

State and local governments in the United States have been affected significantly by the crisis. California's governor, Arnold Schwarzenegger, reportedly has given warning, in a letter to the Treasury Department, that the state is running out of cash to fund day-to-day operations and may need an emergency loan of \$7 billion from the federal government.<sup>17</sup> Other state and local governments also have signaled that they are experiencing financial problems as a direct result of the crisis.

In addition, we are seeing more and more countries, including Pakistan, Hungary, Iceland and the Ukraine, turn to the International Monetary Fund for assistance as their economies are affected by the crisis.

### **32. Is it likely that we will see the crisis spread to loans other than mortgage loans?**

There is a strong and growing consensus that credit card lending will be the next crisis. Borrowers already having problems meeting their financial obligations are ratcheting up their credit card balances to pay for basic living expenses. Credit card defaults are rising and lenders are moving to increase rates as well as reduce and cancel lines of problem borrowers.

### **33. Are banks tightening their underwriting standards?**

*The October 2008 Senior Loan Officer Opinion Survey on Bank Lending Practices* in the United States recently released by the Federal Reserve (FN #18) noted a tightening of lending criteria for commercial and industrial loans and real estate loans, as well as increasing pricing to such borrowers. Furthermore, 70 percent of the banks responding to the survey indicated they also had tightened their underwriting standards for prime, nontraditional and subprime residential real estate mortgage financing to retail borrowers.

### **34. Have there been any governmental actions directed at assisting companies outside of the financial services industry?**

In early October 2008, the Federal Reserve authorized a commercial paper funding facility (CPFF), which became available on October 27, 2008, and is intended to cease on April 30, 2009. The CPFF is intended to improve liquidity in short-term funding markets and increase the availability of credit for businesses and households.

Under the CPFF, the Federal Reserve Bank of New York will finance the purchase of unsecured and asset-backed commercial paper from eligible issuers through its primary dealers. The CPFF will finance only highly rated, U.S. dollar-denominated, three-month commercial paper.

## Legislative and Regulatory Actions

### **35. Why did the U.S. government nationalize Fannie Mae and Freddie Mac?**

Fannie Mae and Freddie Mac are U.S. government sponsored enterprises (GSEs) that hold more than \$5 trillion in mortgage-backed securities and debt outstanding and have a market share of more than 80 percent of all new mortgages originated this year. After many months of speculation regarding the entities' ability to fund themselves and maintain acceptable capital levels, the Office of Federal Housing Enterprise Oversight (OFHEO), the primary regulator for Fannie and Freddie, along with the Federal Reserve and the Office of the Comptroller of the Currency (OCC), which were brought in to consult with OFHEO, determined that the mortgage giants were unable to operate safely and soundly to fulfill their critical public mission of stabilizing the residential housing market in the United States. Thus they placed the two GSEs into conservatorship. This was the biggest bailout and nationalization in history.

### **36. What is a conservatorship?**

A conservatorship is the legal process by which a regulator gains full control and oversight of a company to manage its business in a safe and sound manner and to preserve asset and franchise values. Under a conservatorship, all of the powers of the company's directors, officers and shareholders are transferred to the designated conservator.

### **37. What is administration?**

Administration is a U.K. process under which the management of a company that may not be able to pay its debts is put into the hands of one or more "administrators" (typically accounting firm partners) who seek to rescue the company as a going concern and will typically try to sell either the business as a whole or parts of it. If this is not possible, the business will be liquidated. The U.K./European operations of Lehman Brothers were put into administration, as was the U.K. subsidiary of Icelandic bank Kaupthing, Kaupthing Singer & Friedlander Limited.

### **38. What is the form of support the U.S. government offered to the GSEs?**

Beyond the general statements of support by the U.S. Treasury Department that confirm the GSEs' viability and their pivotal role in the U.S. mortgage markets, the Treasury also announced two forms of liquidity support through December 31, 2009: a secured credit facility and a commitment to purchase newly issued mortgage-backed securities (MBS). The Treasury also agreed to purchase senior preferred stock (up to \$100 billion, as needed) to provide equity support for the GSEs.

### **39. Does the business of the GSEs change under the conservatorship?**

Fannie Mae's and Freddie Mac's policy role of providing liquidity to the broader mortgage markets will not change under conservatorship. However, under the covenants of the senior preferred stock purchase agreements, the GSEs face restrictions on the growth of their indebtedness and mortgage assets held in the retained portfolio. These restrictions are intended to reduce the size of the GSEs to limit concerns over future systemic risk.

### **40. Why did the U.S. government rescue Bear Stearns but not Lehman Brothers?**

In the Bear Stearns case, the government (1) allowed Bear Stearns to borrow from the Federal Reserve – something that had not been permitted for an investment banking firm since the Great Depression – to avert its sudden collapse and allow time for the sale of the company to JPMorgan Chase, and (2) provided a 10-year loan for \$29 billion secured by \$30 billion of Bear Stearns' assets in a limited liability company established for the purpose of holding these assets. The U.S. government defended this transaction based on the perceived systemic risk a collapse of Bear Stearns would have on the market.

The government decided to leave the resolution of Lehman Brothers to the private sector, apparently believing that the consequences of the failure of Lehman as a predominantly wholesale institution would not affect the overall market in terms of systemic risk as profoundly as Bear Stearns or, certainly, AIG. The Federal Reserve did work behind the scenes to encourage merger talks between Lehman and large global banks. In the end, no other bank reportedly was willing to take on Lehman's problems. Thus the company declared bankruptcy on September 15, 2008. Since that time, Barclays, Nomura Securities and certain private equity firms have purchased some Lehman businesses, and other businesses are being pursued by additional potential investors.

**41. Why did the U.S. government rescue AIG, which is not a “traditional” banking or investment banking firm?**

The U.S. government elected to step in and rescue AIG because the company essentially is the largest and most significant insurer, or backstop, for financial institutions worldwide. The government's rationale for supporting AIG was to prevent systemic risk. Some estimates suggested that the loss to other financial institutions caused by the failure of AIG would exceed \$180 billion.

In this rescue, which was amended in mid-November, the U.S. government is providing more than \$150 billion to AIG in the form of a loan and equity stake. The government also is purchasing tens of millions of dollars worth of distressed securities from AIG. The loan is collateralized by all of AIG's assets and of its primary nonregulated subsidiaries.

**42. Why did Morgan Stanley and Goldman Sachs convert to bank holding companies?**

Conversion to bank holding company status allows Morgan Stanley and Goldman Sachs to access the retail deposit market as well as the Federal Reserve's discount window. Retail deposits are viewed as a much more stable funding than the wholesale funding on which a traditional investment banking firm relies.

**43. Did the financial services regulatory system fail?**

Many parties share blame for the current problems. The objectives of most regulatory frameworks are, among others, to protect customers and ensure stable and orderly markets. Current events suggest the regimes are found wanting. Undoubtedly the actions of governments, central banks and regulators will be scrutinized heavily over the coming weeks and months, but the business and funding models adopted by certain companies in various jurisdictions, their cultures and behaviors of senior management within them also will be the subject of debate and possibly legal action. Reform of the global regulatory system itself will need to be considered carefully in order to avoid further unintended outcomes.

**44. What type of regulatory reform is being suggested to address the financial crisis?**

Suggestions for regulatory reform include, but certainly are not limited to:

- Create a global regulatory body.
- Reform capital rules/revise Basel II.
- Reinstate previously used standards, such as prescribed levels of liquidity.
- Limit dependence on wholesale funding.
- Limit leverage, in various ways.
- Regulate hedge funds more directly.
- Institute limitations on executive and trader compensation.
- Change accounting rules.
- Enact additional consumer protection laws.
- Supervise credit rating agencies.
- Assess the operating model of the industry.
- Broaden use of stress testing and scenario analysis to test the ability of financial organizations to deal with extreme conditions and events regardless of likelihood.

The challenge with any regulatory reform will be to enact changes that will prepare the financial services industry and its regulators for the challenges ahead and not merely attempt to address the circumstances that led to the current crisis. Therefore, we are likely to see further debate on the respective merits of principles-based and detailed rules-based regulation.

#### **45. Are changes needed in existing capital rules to protect banks?**

An article in the *Financial Times* in February 2008<sup>18</sup> suggested several flaws in Basel II:

- Reliance on internal risk models to determine capital requirements in instances where banks may be overly optimistic about their risk exposures
- Lack of non-risk-weighted leverage ratios (The United States, unlike its counterparts in Europe, does limit the leverage ratio.)
- Lack of adequate market discipline, which could be addressed through the issuance of uninsured subordinated debt

Others add that an additional area for improvement would be to take a more forward-looking rather than historical approach to determining risk and to encourage higher buffers of capital (the difference between the “required” and the “desired” level of capital) to provide a cushion in difficult times.

#### **46. Will Solvency II, which is still in the making, need to change in light of recent events?**

Recent events have thrown into doubt key principles underlying Solvency II, such as the fair value of both assets and liabilities, while confidence in the reliability of internal capital models also has been severely undermined. Members of the European Parliament and the European Commission, as well as local regulatory authorities, have gone on record saying that Solvency II foundation principles will not change and that the directive is still on track for implementation in 2012. However, regulatory authorities increasingly are emphasizing the importance of Solvency II ownership at the board and senior management levels within insurance firms, while emphasizing the need to overhaul governance arrangements together with the crucial importance of stress and scenario testing focusing on macro events and not historic data such as the one in a 200-year event. This said, it could be possible that forthcoming Solvency II implementing measures are more rules-based than originally anticipated.

#### **47. Are the actions that have been taken by governments around the world a bailout of the financial services industry and the individuals who managed these companies?**

Many people undoubtedly consider the actions taken to be a bailout of the industry and its management. This concern, for example, was the basis for the U.S. House of Representatives' defeat of the Emergency Economic Stabilization Act of 2008 legislation when it was first considered in late September. However, the U.S. Congress and other governments ultimately believed that the drastic actions taken were necessary to prevent the crisis from spreading further, to dispel depositors' concerns over the security of their money, and to encourage loosening of the credit markets.

#### **48. How was U.S. legislation intended to help address the current financial crisis?**

The Troubled Asset Relief Program (TARP), which is at the heart of the Emergency Economic Stabilization Act of 2008 (EESA), provides \$700 billion (initially \$250 billion) to the Secretary of the Treasury to purchase or guarantee troubled assets (defined as residential or commercial mortgages that were originated before March 14, 2008, any securities or other instruments that are based on or related to such mortgages and were issued before March 14, 2008, and any other instruments as determined by the Secretary of the Treasury after consultation with the Chairman of the Federal Reserve deemed necessary to promote market stability). These assets could be purchased from financial institutions, including banks, savings associations, credit unions, broker/dealers and insurance companies.

Institutions that chose to avail themselves of TARP would be subject to limitations on executive compensation and to requirements giving the Treasury Department an economic interest in the institutions.

The Treasury Department was required to issue implementing regulations to operationalize TARP within 45 days of enactment or sooner if the Secretary exercised his authority to purchase troubled assets. In developing the regulations, the Secretary was required to consult with the Federal Reserve Board, the Federal Deposit Insurance Corporation, the Comptroller of the Currency, the Director of the Office of Thrift Supervision, the Chairman of the National Credit Union Association, and the Secretary of Housing and Urban Development. Ongoing oversight of TARP will be provided by a newly formed Financial Stability Oversight Board, whose members include the Secretary of the Treasury, the Chairman of the Federal Reserve Board, the Director of the Federal Housing Finance Agency, the Chairman of the Securities and Exchange Commission, and the Secretary of Housing and Urban Development.

Shortly after the enactment of EESA, the Treasury also indicated that it might use the funds to invest directly in U.S. financial institutions and, indeed, this was how the Treasury Department first used its available funds. More recently, the Treasury signaled that it was deferring any plans to purchase troubled assets in favor of other strategies that it believes will be more effective.

#### **49. Does TARP authorize or require anything other than the asset purchase/guarantee program?**

In addition to the asset purchase/guarantee program, the following are among the other provisions included in TARP:

- Provides for an increase, until December 31, 2009, in deposit insurance coverage from \$100,000 to \$250,000.
- Authorizes the SEC to suspend the mark-to-market accounting standards of FAS 157 for any issuer or class of transactions if the SEC determines that such suspension is in the public interest.
- Requires the Secretary of the Treasury to submit a report to Congress by April 30, 2009, on the state of the U.S. regulatory system and adequacy of existing public disclosure for financial institutions, along with recommendations for enhancement. A similar report is required to be submitted by January 20, 2009, from a special Congressional oversight panel mandated by the legislation.
- Establishes a new office, “The Office of Financial Stability established within the Office of Domestic Finance in the Department of the Treasury.” This is headed by a new Assistant Secretary.
- Establishes a Financial Stability Oversight Board responsible for “reviewing the exercise of authority under a program developed in accordance with this Act ...”
- Requires the Comptroller General of the United States to study and report by June 1, 2009, on the role of leverage as a factor in the current crisis.

#### **50. What oversight will there be of the U.S. Treasury’s activities under TARP?**

The Treasury Secretary is required to submit periodically to Congress detailed reports on all financial transactions and the “types of parties involved.” In addition, every quarter, a specially appointed inspector general will provide Congress with a report including all purchases made and income received from government’s investments.

#### **51. How do the provisions of TARP apply to U.S.-based operations of foreign banking organizations?**

Based on information currently available, it appears that U.S. branches and agencies, U.S. banks, and U.S. nonbank subsidiaries of foreign banking organizations are eligible to participate in the TARP Asset Purchase and TARP Guarantee programs, but are excluded from the TARP Capital Purchase program.

#### **52. Since the initial focus of TARP was on the purchase of troubled assets, why has the U.S. Treasury Department now decided to use available TARP funds for other purposes?**

Amid continuing market turmoil after the passage of the U.S. legislation, the U.S. Treasury determined that direct investment, through the TARP Capital Purchase Plan, was necessary to

stabilize the market, even though it initially had signaled that this was not a course of action it favored.

Now, although the U.S. Treasury Department has indicated that it will continue to study the possibility of purchasing troubled assets, it has determined that asset purchases are not the most effective or expeditious way to utilize the available funds. Rather, the U.S. Treasury has determined, for now, that the priorities for the TARP funds will be continued capital injections into financial institutions (consistent with actions that have been taken so far), support for the nonbank consumer finance sector, and mitigation of mortgage foreclosures.

**53. Is participation in the TARP Capital Purchase Plan voluntary for U.S. banks?**

In theory, participation is voluntary; however, it has been reported that the U.S. government used moral suasion to encourage the country's nine largest banks to participate in the Capital Purchase Program as a show of support.

The United States' approach differs from that of some other countries. In the United Kingdom, for example, two of the country's largest banks, Barclays and HSBC, have opted, without the objection of the government, not to participate in the government's capital program, instead choosing, as necessary, to raise capital on their own, which they would suggest is a sign of strength. In fact, there now are some stronger, albeit smaller, banks in the United States that are signaling they do not plan to participate in the program.

**54. How will the preferred stock acquired by the U.S. Treasury Department in U.S. banks be treated for capital adequacy purposes?**

The Federal Reserve Board has announced the adoption of an interim final rule that will allow bank holding companies to include in their Tier 1 capital without restriction the senior perpetual preferred stock issued to the Treasury Department under the capital purchase program announced by the Treasury on October 14, 2008. The other U.S. bank regulators are expected to promulgate similar rules.

**55. How have the main European public bodies and regulators reacted to the crisis?**

Reactions to the financial crisis are taking a variety of forms that can be grouped into two broad categories: emergency and structural responses.<sup>19</sup>

Emergency responses typically have been effected on a national level since each crisis was unique to the financial structure of the country, as were the remedies. However, common principles of approach have emerged, with various national variations, based on a combination of injecting equity into institutions in return for various commitments, providing liquidity support, guaranteeing retail deposits and underwriting interbank lending.

On October 1, 2008, the European Commission proposed tightening the rules governing how much capital banks should hold and improving cooperation among various bank supervisors. In the week of October 13, the governments of the United Kingdom, France and Germany announced massive capital injections into their respective banks that were most in need, in return for certain conditions and pledges. In addition, there have been calls for the creation of a single European financial regulator that would watch over the continent's biggest banks, and a pan-European bailout fund to rescue them. Thus far, however, European countries have been unable to agree on a pan-European rescue fund.<sup>20</sup>

**56. Should we expect additional legislation related to the financial crisis?**

In the United States, following the submission of the various reports required by TARP and the arrival of a new administration in Washington in January 2009, it is highly likely that both consumer protection and regulatory reform legislation will be debated. Many other jurisdictions also are likely to consider regulatory reform but it will take some time before draft legislation is produced, particularly if the outcome is a more consistent global framework.

**57. Why did the U.K. government decide to inject capital directly into the U.K. banking system?**

The U.K. authorities determined that the injection of capital directly into the system, along with providing additional loans and loan guarantees to its banks, were necessary to stabilize the market. The U.S. government and other European governments subsequently followed suit.

**58. What conditions did H.M. Treasury impose on the U.K. banks that opted into the government's capital plan?**

The U.K. banks that have agreed to participate in the government's capital plan will grant the U.K. government a capital stake and will commit to limitations on executive compensation and the payment of dividends until the government's capital is repaid.

**59. Is the crisis likely to impact the application of the Market in Financial Instruments Directive (MiFID) in Europe?**

Not directly. MiFID is concerned mainly with enhancing the European single market in securities trading and in ensuring minimum standards of investor protection across Europe in relation to sales and trading practices. It does not cover capital, solvency or liquidity rules, or – in any detail – risk management requirements. These are dealt with by the separate revised Capital Adequacy Directive, based on Basel II. However, the impact of consolidation of major banking and securities players on competition, new perspectives on the suitability and appropriateness of complex securities for investors, counterparty risk as a relevant factor in choice of execution venues, and the MiFID requirements on internal control, compliance management and conflicts of interest are all examples of MiFID issues that will need to be reconsidered in light of the consequences of the current financial crisis.

**60. How will we know if the various actions taken by the United States and other governments are working?**

How close the London Interbank Offered Rate (LIBOR) is to official central bank borrowing rates is one of the key indications of how the credit markets are operating. In early to mid-October, LIBOR was operating with much larger margins than experienced in recent times. There is some small indication that LIBOR is beginning to reduce, but most experts agree it is still too early to say whether the unparalleled intervention is having the desired effect. The same analysis would be relevant for "TED spreads" – the difference between three-month contracts for Treasury bills and eurodollars.

## Next Steps

**61. What additional steps can we expect regulators to take to deal with the current crisis or prevent such disruptions in the future?**

Regulators already have begun and/or are likely to consider a wide range of issues, including but not limited to:

- The operating model of the industry
- Basel II capital and leverage requirements
- Liquidity management
- Stress testing
- Executive compensation
- The role of rating agencies

**62. How will government intervention affect consolidation in the financial services industry?**

Some institutions that received government capital injections may use the funds to target other, weaker institutions. Some may view this as an unfair advantage, though in certain countries this is precisely the outcome that the government intends. Cross-border acquisitions could be impacted by government intervention because it seems unlikely that a government that has provided capital to a financial institution would allow a foreign acquirer to target the institution.

### **63. How will the International Financial Reporting Standards (IFRS) impact the current situation?**

The crisis will lead to asset price declines in financial institutions as well as in other companies. Among the assets affected will be intangibles and goodwill from acquisitions. Under current IFRS rules, companies have to perform periodic tests to determine impairment of assets. These tests could result in significant reductions in book value because of lower cash flow and higher interest rates. However, U.S. generally accepted accounting principles (GAAP) also requires periodic impairment evaluations. The principal difference between IFRS and U.S. GAAP is the level of guidance provided by the accounting standards; IFRS standards on the evaluation of fair value historically have been less proscriptive than U.S. GAAP. As U.S. GAAP and IFRS converge, previous changes have seen U.S. GAAP move closer to IFRS; however, recent actions by the International Accounting Standards Board (IASB) have, in the area of fair value, moved IFRS toward U.S. GAAP and its guidance. Consequently, with regard to fair value, the differences between U.S. GAAP and IFRS, and thus the impact of IFRS, are diminishing.

### **64. What should companies be doing in the current environment?**

There are a number of steps that companies should be taking now to address current challenges and prepare for and withstand future market disruptions more effectively. These include the following actions:

- Undertake a detailed review of the organization's financial condition, with a focus on asset quality, liquidity, capital strength and financing alternatives.
- Re-examine and challenge business and operating models in light of recent events and their expected impact on the future structure of the industry, its regulation and the wider economy.
- Understand and evaluate the options available under various government programs and private sector alternatives and determine the viability of such options.
- Review risk governance arrangements; scope and adequacy of risk identification, assessment and mitigation; and risk capabilities within the business and the boardroom.
- Introduce more extreme scenarios into stress testing of financial models, including resulting credit and market risk exposures, so that management and regulators understand where the breakeven points are on solvency, liquidity and capital adequacy, and also understand the key drivers or causes to those breakeven points.
- Undertake a review of the organization's current risk management practices and opportunities for enhancing them based on the outlook of the operating environment over the next several years.
- Validate with the board of directors the risk/reward trade-off the organization has accepted and understand how it will be affected by different market scenarios.
- Take action to mitigate unacceptable financial risk.
- Review the structure of remuneration of directors and senior personnel in light of regulatory expectations, good practice indications and recommendations issued.
- Assess financing and capital adequacy and options for raising additional capital, if necessary.
- Explore strategic alternatives, including options for mergers, acquisitions and restructuring.
- Review strategic and operating plans and ensure they address all risks and incorporate the lessons learned (and that will continue to be learned) from the current crisis.
- Review internal audit risk assessments and audit plans to determine whether changes are necessary to address the current circumstances.

### **65. Is it only financial institutions that need to be taking the steps outlined above?**

While not every step outlined above applies to companies in every industry, the reality is that most segments of the economy are being impacted by this crisis. Companies in all sectors should, at a minimum, be assessing their cash flow needs in light of the current credit markets and revisiting their strategic and operating plans to determine what adjustments may be necessary to deal with existing conditions.

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## About Protiviti Inc.

Protiviti ([www.protiviti.com](http://www.protiviti.com)) is a global business consulting and internal audit firm composed of experts specializing in risk, advisory and transaction services. The firm helps solve problems in finance and transactions, operations, technology, litigation, governance, risk, and compliance. Protiviti's highly trained, results-oriented professionals provide a unique perspective on a wide range of critical business issues for clients in the Americas, Asia-Pacific, Europe and the Middle East.

Protiviti has more than 60 locations worldwide and is a wholly owned subsidiary of Robert Half International Inc. (NYSE symbol: RHI). Founded in 1948, Robert Half International is a member of the S&P 500 index.

## About the Protiviti Financial Crisis Team

To assist companies with understanding the new landscape and managing the uncertain times ahead, we have formed the **Protiviti Financial Crisis Team**. This cross-disciplinary group is comprised of seasoned professionals with deep industry, financial risk management, restructuring and litigation support experience. Coordinated by Protiviti's global industry and solutions leaders, this strategic team provides clients with advice on responding to these market conditions, as well as updates about market and regulatory changes, and works closely with the firm's client service teams to help clients deal successfully with the unfolding global economic environment.

For more information, please visit [www.protiviti.com/economiccrisis](http://www.protiviti.com/economiccrisis).