The Boston Consulting Group

Collateral Damage

Part 4: Preparing for a Tough Year Ahead: The Outlook, the Crisis in Perspective, and Lessons from the Early Movers

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Part 4: Preparing for a Tough Year Ahead: The Outlook, the Crisis in Perspective, and Lessons from the Early Movers

In the first three parts of the Collateral Damage series, we explained some of the background to the current global financial crisis, reviewed recent government actions, explored likely economic scenarios and the challenges facing companies outside of the financial sector, reviewed the impact of the crisis on some Asian markets, and suggested some actions that companies should be taking in order to respond to these challenges.

In this fourth part of our series, we consider the outlook for 2009 (including the likely effect of the crisis on consumers around the world), revisit the history of the crisis in order to understand why the economic story has developed as it has, describe the very varied assumptions that some major companies are making for 2009, and detail how four major companies responded early to the crisis. We also include three appendixes. The first contains an analysis of the parallels between the current recession and the Great Depression; the second provides a portrait of the recession through a series of statistical graphics; and the third describes some of the seminal events in the crisis.

1. Introduction

We all no doubt feel some relief that 2008 is finally drawing to a close—but this most difficult of years is keeping a sting in its tail: the World Bank has just warned that global GDP growth will decline to a rate of 0.9 percent in 2009. Unquestionably, we are now in the midst of the worst recession since the Great Depression of the 1930s.

And things may get worse. In the United States, the Senate has just rejected a $15 billion bailout of the auto industry, plunging the economy and the markets into more uncertainty. And in the United Kingdom, a leading supermarket executive has talked of a fast-developing "Depression mentality" and the creation of a generation of consumers who will be shaped by the economic downturn. It is not surprising that the International Monetary Fund (IMF) has just issued a warning that it will adjust its forecasts for 2009 downward in its January update.

For financial markets, 2008 has been one of the worst years in history. Stock markets all over the world suffered significant losses (the S&P 500 dropped 41 percent, the Dow Jones Euro Stoxx 44 percent, the Nikkei 43 percent, the FTSE Xinhua China B 35 Index 65 percent, the RTS Index 71 percent, and the MSCI World Index 44 percent). For the U.S. stock market, 2008 was the worst year since 1931 and the second worst since 1825, according to researchers at Yale University.

Meanwhile, interest rates for all debtors but the strongest governments increased, and raw material prices showed extraordinary volatility. For instance, oil reached an all-time high in July, when it was priced at $145.61 a barrel (up 61 percent since the end of 2007); it then fell a staggering 69 percent to just $45.31 a barrel in early December, a level not seen since 2005.

No one doubts that what started as a financial crisis has infected the so-called real economy in the most pervasive of ways. In Appendix (1), we show how some of the key indicators suggest an economic and business climate that is actually worse today than it was during the Great Depression. Inflation fears—so prominent in the summer when the European Central Bank raised interest rates—have given way to fears of deflation. And the speed and scale of the decline in demand, production volumes, and consumer confidence have been remarkable.

Governments and central banks have initiated measures that were quite unthinkable even just a few months ago. Bloomberg estimates that the cost of the U.S. stimulus and rescue programs has reached

$7.7 trillion (when taking into account the amount invested by the U.S. government, the Federal Reserve, the FDIC, and Fannie Mae and Freddie Mac through lending, guarantees, and equity injection).[1] This figure rises to around $8.5 trillion when an additional package announced by the Federal Reserve is taken into account—making the intervention equivalent to 60 percent of U.S. GDP. To put this number in perspective, the cost of the famous New Deal—which helped rescue the U.S. economy from the Great Depression—was in the range of $500 billion, when adjusted for inflation. The balance sheet of the Federal Reserve grew from $890 billion to $2.18 trillion (a 145 percent increase) in just the three months from September to the end of November 2008.

Not all this money is necessarily lost—most has been used to give guarantees and credit. It might be recovered if and when the economic situation improves. Even so, it is clear that the credit markets are concerned not only about the size of the economic stimulus—current estimates of the federal deficit for 2009 are in the range of $1 trillion—but also about the expectation of further measures to come. For instance, the market is asking for higher insurance premiums for government debt: the credit-default-swap rate for U.S. government debt jumped from 15 basis points in the summer of 2008 to 65 basis points in early December, and the price in the United Kingdom soared from 16 basis points in July to 111 basis points in early December.

Meanwhile, investors are clearly hungry for what they regard as low-risk investments. The nominal interest on Treasury bonds and German Bunds has reached the kind of low levels last seen 50 years ago. In early December, the U.S. government was able to raise short-term money (Treasury bills) essentially for free—underscoring the fact that investors are unusually risk averse and signaling potentially deflationary expectations for the United States in 2009.

Although we have been consistently pessimistic about the economic environment, we met with executives at many companies in September and October who felt that their companies would not be affected. As the crisis has unfolded, however, we have found fewer optimists, and over the last four weeks, even companies in previously sheltered countries and sectors have expressed significant concern.

2. Outlook: 2009 Will Be a Year of Many Challenges

While we cannot predict the future, we do know it is important to be prepared. So what should we expect in 2009?

We are facing something of a perfect storm. First, developed economies are, for the first time since World War II, simultaneously entering a recession. Second, there are major imbalances in the world economy: some countries have significant trade surpluses, others severe deficits. For example, whereas the United States needs to finance its current account deficit of 5 percent of GDP, China is enjoying a current account surplus of 11 percent of GDP. Third, there are historically unprecedented levels of indebtedness in several major economies. For example, in the United Kingdom, consumers' debt burden is 186 percent of their disposable income. In the United States, the figure is 141 percent. This has led to a damaging loss of confidence among consumers around the world. (See the sidebar "A Crisis in Consumer Confidence.")

Given this context, we have identified three possible scenarios for 2009:

- *Scenario 1: A Short Recession Followed by a Return to Modest Growth, or a So-Called V-Shaped Recession.* Optimists argue that, given the extreme losses of the past few months, a positive mood in the world financial markets is very likely. In addition, history shows that stock markets have rallied after major losses: eight of the ten biggest daily gains in the Dow Jones Industrial Average actually happened during the bear market of the 1930s. We know that Barack Obama, the U.S. President-elect, will initiate major efforts to try to stabilize the economy and that other countries will do so, too. The measures will be

1. Go to http://www.bloomberg.com/apps/news?pid=20601109&sid=an3k2rZMNgDw&refer=home.

geared to support households and real estate prices, and might lead to a stabilization of the economy. It is possible that these measures will shorten the recession and help return the global economy to a growth path. Lower prices for energy and commodities will also help, freeing up consumer and corporate cash flow. After record inflation in the first half of this year, pricing pressures have been easing, and therefore consumer purchasing power has been increasing. But even allowing for these favorable factors, growth will be much lower than in the recent years of overconsumption and excessive borrowing, with debtors all over the world having to save more and spend less in order to restore their corporate and personal balance sheets.

- *Scenario 2: An Upswing Leading to a Boom.* Some argue that, given the enormous size of the financial stimulus, there might be an unexpectedly large boost to the economy. Consumers would regain their confidence and start spending again (albeit on credit), companies would start to invest again, and governments would support them both with appropriate measures. But since many manufacturing companies are starting to cut back in order to cope with a prolonged recession, there could be a spike in inflation—as more money chases fewer products—and a significant increase in interest rates. In our view, this scenario would increase the scale of the midterm challenges confronting companies, since it would not resolve the fundamental need for higher savings in countries with unsustainable levels of credit and indebtedness.

- *Scenario 3: A Long and Deep Recession, but a Depression Averted as a Result of Stimulus Packages.* It is possible that the measures orchestrated by governments and central banks around the world will be insufficient to stabilize the economy and that the process of deleveraging will continue—putting pressure on banks, corporations, and households. Some measures have been aimed at supporting investment (for example, the $586 billion Chinese stimulus program and some parts of the much more modest German program). But we do not believe that such efforts will work. If companies in countries launching stimulus programs try to benefit from these programs, then it is likely that trade imbalances will increase further—with a corresponding increased risk of protectionism and trade wars. And if companies do not make use of the stimulus programs, they will have been ineffective. Other measures are intended to stimulate consumer demand (such as the lowering of the VAT in the United Kingdom or the reduction of mortgage rates in the United States), but these actions merely postpone the necessary rebalancing of household finances. Efforts supporting real estate values could help soften the recession—but not if the measures try to arrest the correction before prices have a chance to settle down around their long-term average. Trying to prevent another economic depression could help avoid a further deepening of the crisis, but it would not necessarily end the recession that is already under way.

Of the three scenarios, we think the third is most likely. Given the fundamental economic problems that we have described in the *Collateral Damage* series, coupled with the hard-to-predict impact of government and central bank intervention, companies need to be prepared for a severe recession. And they need to stay prepared even if the capital markets enjoy a few good months in the early part of next year. There are several factors that increase the likelihood of a prolonged and severe downturn. First, the underlying causes of the current difficulties are the record-high debt levels of households and the private sector in major economies such as the United States, the United Kingdom, and Spain. As households struggle to restore their balance sheets amid deflating asset values, low savings rates, and the increasing risk of unemployment, demand will continue to be weak. Second, the effectiveness of the recent measures to stabilize the financial sector remains to be seen. Open risks in the market for credit default swaps (totaling about $58 trillion) are still unclear. Third, according to Standard & Poor's, some $800 billion of outstanding debt will need to be refinanced by the end of 2009. About 30 percent of this amount is "speculative" grade, and it will be challenging for companies with weaker speculative-grade credits to obtain capital. For investment-grade companies, refinancing should be available, although at significantly higher costs than in the past. This bleak message is reinforced by the Bank of England's *Quarterly Bulletin.* It points out that nonfinancial companies across Europe will need to repay $200 billion of tradable debt over the course of 2009. Add to that the $800 billion owed by financial companies, and you get a number about five times what was repaid in 2008.

A Crisis in Consumer Confidence

The consumer is the backbone of the modern Western economy. In the United States, consumer spending accounts for 70 percent of GDP. Given that the United States generates such a large share of global GDP, this means that around 16 percent of the world's GDP is driven by U.S. consumers. In the past, these consumers could spend their way out of a recession. But not now.

Consumer confidence is falling worldwide. Although there are different ways to measure this, the picture is one of increasing uncertainty. Declines in consumer confidence are not restricted to countries where consumers need to save more in order to rebalance their personal finances, such as the United States (where the University of Michigan's consumer confidence index fell from 75.5 points in December 2007 to 57.6 in October 2008), the United Kingdom (from an already negative –5 to –26.6), or Spain (from –19.3 to –43.9). It is also evident in the consumer confidence indices of countries where consumers are curtailing their spending for fear of financial and employment losses yet to come, such as Japan (from 38.7 to 30.1), Germany (from 4.4 to 1.7), and even Finland (from 14.0 to –4.5).

Although shopping malls were crowded during November's Thanksgiving holiday in the United States, shoppers focused on steeply discounted goods. Sales volumes for that weekend were satisfactory, but margins and total dollar sales were down sharply. In the United Kingdom, sales volumes decreased 0.1 percent for September and October, during what was supposed to be the start of the pre-Christmas upswing.

Andy Bond, CEO of Asda, the second-biggest U.K. supermarket chain and a subsidiary of Wal-Mart, sees the changes as a fundamental shift in consumer behavior. As reported in the *Financial Times*, he sees a "change in buying patterns for a generation." Sales of bottled water and smoothies are reported to be falling as people "drink from the tap and eat fruit." According to an Asda survey, consumers are planning to spend less across a wide variety of categories, such as dining out or visiting the hairdresser—a trend that explains the rise in sales of do-it-yourself hair-coloring products by nearly one-third. "We are moving into an area of the frivolous being unacceptable and the frugal being cool," Bond is quoted as saying.

Other retailers report similar changes. In the United States, the same-store sales at upmarket retailer Neiman Marcus were down 27 percent in October and 12 percent in November. Likewise, mainstream retailer The Gap saw sales fall 16 percent and 10 percent for the same months, respectively. In the United Kingdom, sales at Tesco, the big supermarket chain, have lagged the market and dropped nearly 1 percentage point in August.

But most retailers report high growth rates in their discount and less-expensive private-label ranges. No wonder that Wal-Mart continues to perform well. Its same-store sales were up modestly in October and November, as more shoppers opted for value—a trend that is also benefiting Aldi, the German retailer, and other leading discounters in Europe. In fact, while Tesco suffered, Aldi recorded year-on-year sales growth in the United Kingdom of more than 25 percent in the three months ending November 2008.

In order to gain a deeper understanding of the shift in consumer spending patterns, BCG commissioned a survey in October 2008 of nearly 5,000 adults in households with incomes above $35,000.[1] The results give little hope of a recovery in consumer spending anytime soon.

- A majority of U.S. consumers and nearly one-third of European consumers said they planned to spend less during the 2008 holiday season than they did in 2007.
- As many as 43 percent of U.S consumers and 34 percent of European consumers said that they feel insecure about their jobs. Some 32 percent of U.S. consumers and 47 percent of European consumers expect the economic situation to worsen in 2009. And a significant 39 percent in both regions said that they do not expect the economy to improve for the "next several years" (although most U.S. consumers believe that they will be better off in five years than they are today).
- Consumers in Italy, France, and Germany—where household savings rates were already relatively high before the downturn—said that they will save

1. The Boston Consulting Group has been surveying thousands of consumers about their spending habits for the past six years in the United States and for the past four years in the five largest European countries (France, Germany, Italy, Spain, and the United Kingdom). In addition to asking consumers about their spending plans, BCG asks them about their attitudes toward spending in 108 U.S. product categories and 96 European ones, the emotional and functional benefits they are seeking, and their reasons for trading up and down.

A Crisis in Consumer Confidence (continued)

even more because of the impending hard economic times.

- When times get bad, people retrench: nearly two-thirds of consumers in both regions (many more than last year) said that they are "happiest when at home."

- At least 60 percent of survey participants said they will defer major purchases and eliminate nonessential spending over the next year. When asked in which categories they will most likely cut back, consumers rated leisure, consumer durables, and apparel at the top of their do-without lists. Manufacturers of deferrable big-ticket items—such as cars, furniture, home appliances, and consumer electronics—are clearly feeling the pinch, with double-digit declines in sales for both October and November 2008.

For several years now, BCG has been tracking patterns in trading up and down—an important phenomenon in consumer spending. In recent months, there has been a decisive shift toward trading down in the United States and Europe. If anything, Europeans remain even more eager to downshift than their counterparts in the United States, with an average 53 percent of consumers in Europe saying they intend to trade down, compared with 48 percent of consumers in the United States.

The bottom line is that consumers will certainly work harder to spend wisely in 2009 and beyond. They will go from store to store in search of deals, compare prices, discuss bargains with friends, and strive to make shrewd choices. As the CEO of Asda put it, "Anyone waiting for things to get back to normal is mad."

The current efforts to "reflate" the global economy amount to an unprecedented and historic experiment. Politicians and central bankers are following the lessons of the Great Depression in the 1930s and Japan's malaise in the 1990s. They are applying aggressive measures such as *quantitative easing*—the direct purchasing of financial assets by central banks—and fiscal stimulus. They are following the recommendations of Irving Fisher and John Maynard Keynes. (See the sidebar "Irving Fisher's Debt-Deflation Theory" in Appendix (1).) But this is the first time that some of these measures have been tried in real life, and it remains to be seen whether they will work.

Whatever happens, the economic environment is sure to be extremely challenging next year. We anticipate several major issues:

- *A Deteriorating Real Economy.* The real economy was hit with astonishing speed. In September, many people were still speaking about the financial crisis as if it were unrelated to the real economy. Since the collapse of Lehman Brothers, we have witnessed significant, rapid change across nearly all industries and regions. Many companies have experienced a fast decline in their business. Take the case of Rio Tinto. In early December, it announced 14,000 job losses, investment cuts, and a reduction in leverage in the face of a downturn that had appeared, as its announcement said, with "unprecedented rapidity and severity." Meanwhile, China reported a steep drop in imports and exports—the first decrease in exports since 2001. The decline in imports (down 17.9 percent, year-on-year) suggests that the Chinese will not be able to assist the world as a consumer of last resort.

- *New Troubles for the Financial Sector.* In the past, recessions started in the real economy and led to subsequent write-offs in the financial sector. This time, it is the other way around. But as the real economy worsens, there will be a ricochet effect, and banks and investors will continue to be affected by the developing crisis and losses in the real economy.

- *Deleveraging and the Access to Finance.* The process of deleveraging still has some way to go. Most financial institutions still need to continue to unwind their debts and restrict their lending practices: this will have a negative knock-on effect on the real economy as companies and consumers struggle to get access to funds. In the United States, *The October 2008 Senior Loan Officer Opinion Survey on Bank Lending Practices* showed that 80 percent of domestic respondents tightened standards for commercial and industrial loans. This finding suggests trouble ahead. Not all companies will manage to renegotiate their financing deals—and so they will have to cut costs, lay off employees, and reduce investment in order to conserve cash and live within their newly constrained means.

- *Negative Earnings Surprises.* Stock markets are already assuming that there will be a deep recession and significantly lower earnings in 2009. Even so, the combination of a strong drop in earnings, potential write-offs of goodwill on past acquisitions and idle capacity, and funding gaps for pension liabilities poses the risk of major earnings disappointments. This, in turn, will lead to further selling pressure in financial markets (both stocks and bonds). There are some large companies for which goodwill represents a significant proportion of book equity.

- *Risk of Deflation.* Central banks in Europe and the United States increasingly see a rising risk of deflation for Western economies, similar to the deflation experienced by Japan in the 1990s. Although deflation may seem to be good news for consumers, it creates the risk of a further decrease in consumption as consumers wait for lower prices. For debtors, deflation would magnify the real debt burden and make debt service even more difficult. This explains why central banks have taken aggressive measures over the past few weeks, lowering interest rates in unusually large increments (in Sweden, the lending rate dropped from 3.75 percent to 2.0 percent in one go) and increasing the supply of money.

- *Trade War and Protectionism.* In the current crisis, the cooperation of the world's leading economies is needed more than ever before. Nevertheless, there is a serious risk of mounting trade tensions. Earlier this December, China devalued the renminbi in order to boost exports to the United States. But "beggar thy neighbor" policies will not work.

There is an outside chance that the world economy will escape recession during the coming year. The measures taken by governments and central banks might work, the reduced cost of energy and commodities (which have an effect not unlike a tax cut) might stabilize the situation, and the arrival of a new U.S. president in January might inject a new and positive spirit. Overall, we believe that companies should prepare for a severe downturn—and hope that they find themselves pleasantly surprised. But as we describe later on in this paper, there are significant numbers of companies that are not even preparing a contingency plan to deal with the damaging effects of the economic turmoil.

3. Where We Are—and How We Got There

A. The Crisis in a Nutshell

We all know that a crash in U.S. property prices triggered a leverage crisis in the subprime-mortgage securitization market. This in turn triggered a global liquidity crisis, which itself contributed to a solvency crisis among some banks and an increase in the pressure to deleverage. When this led to further declines in asset prices, the whole cycle repeated itself. It was inevitable that such enormous financial dislocation would lead to significant collateral damage in the real economy. Falling asset prices and the prospect of an economic slowdown dented consumer confidence. Lower demand and a shortage of credit—because of the liquidity squeeze—combined to drive companies toward conserving cash, reducing output, lowering capital expenditures (which had been very high for many years anyway), and laying off workers. The bottom line: the subprime crisis caused a recession in the real economy that is now turning into a wave of bankruptcies and defaults. (See Appendix (3): Seminal Events in the Crisis.)

B. The Real Cause of the Crisis

If there is one piece of data that captures the irrational behavior that underpins the crisis, it is the history of home values in the United States. Adjusted for inflation, U.S. house prices in any given year had always been within about 30 percent of house prices in 1890. But in 1997, U.S. house prices started to rise dramatically. In just ten years, the inflation-adjusted price of a U.S. house doubled.

The increases in U.S. house prices were underpinned by the ready availability of debt, particularly after interest rates were cut to 1 percent in order to stimulate a faltering economy in the wake of the 9/11 terrorist attacks. From 2005 to 2007, additional impetus was provided in the form of aggressive risk taking by highly leveraged financial institutions that funded the unsustainable rise in house prices.

Underlying all this were three widely held misconceptions: that the creditworthiness of borrowers was strong, that investors were sophisticated, and that credit risk was widely distributed.

Indeed, credit losses had been relatively limited for years, so borrower creditworthiness appeared to be strong. There was, however, a dangerous circularity to this logic. Both lender and investor perception of healthy homeowner credit drove spreads lower, causing marginal borrowers to appear more financially attractive than they were and making it easier to justify giving them loans. Many also believed that financially constrained borrowers would be covered by ever-rising home prices through home-equity release products that allowed them to treat their homes as if they were ATMs. The unintended result was highly imprudent lending to people who could not afford the homes they were buying—the so-called subprime market. The data were there for all to see: the doubling of U.S. house prices in real terms over just ten years; the fact that consumer debt doubled as a percentage of GDP between 1974 and 2007; and the collapse in U.S. savings rates from around 11 percent in the late 1980s to close to zero today.

The second belief—that investors were sophisticated—provided even more false comfort. With unprecedented access to data and analytics, lenders and investors were assumed to be exceptionally adept. Advanced financial technology meant that risk could be finely tailored to their specific needs. Bolstered by credit insurance and endorsed by rating agencies, this risk was assumed to be negligible. Consequently, the capital applied against it was minimized. This modus operandi ignored both the poor quality of the underlying collateral and the enormous increase in bank leverage needed to make money from increasingly thin-margin business.

Third, market participants believed that risk was widely distributed among global investors. Even if credit worsened and analytics failed, so the logic went, the absence of concentrated risk would prevent systemic problems. This belief, more than any other factor, explains why—instead of being wary of a market bubble—people were under the impression that this time, things were different.

Unfortunately, not only was homeowner credit suspect, but the market had misread this risk. In the ensuing panic and resulting liquidity crisis, the safety net of risk analytics and ratings was revealed to be an illusion. When investors realized that the risk was largely concentrated on bank balance sheets, their confidence in the financial system eroded rapidly.

Yet a critical related question begs to be asked: Why did global capital markets grow as fast as they did and why were they able to absorb all this—in retrospect—risky borrowing? The answer lies as much in investor demand for fixed-income securities that offered good returns as it does in the insatiable appetite of consumers for debt to fuel their spending. In the early part of the decade, with U.S. Treasury bonds offering low returns for the foreseeable future, Wall Street filled the void by packaging higher-yielding mortgage debt into (apparently) AAA-rated securities. But the incentives driving the mortgage originators and securities distributors created a moral hazard: their rewards were not aligned with sound credit-underwriting principles or the distribution of assets backed by sound collateral. Credit was granted to noncreditworthy individuals, packaged into securities, and pushed out into the market. And seemingly unlimited investor demand inflated this bubble further.

When the asset bubble burst, broker-dealers and many banks found themselves with a significant exposure to assets that they thought were sitting off the balance sheet in special-purpose vehicles. Having leveraged up some 30 to 40 times on cheap debt in order to make the numbers work on thin profit margins, they had minimal equity cover for the significant (unrealized) losses caused by marking the investments down to market value. Counterparty alarm set in and money markets froze as banks panicked about creditworthiness and liquidity exposures. This led to a race to deleverage, to reduce exposures to the interbank markets, and to secure balance sheets. While banks were the original victims, the contagion spread to the corporate finance markets.

Ultimately, the real problem for banks is the deteriorating left side of their balance sheets—the over-leveraged consumer and corporation. Indeed, the credit crunch is taking place against a backdrop of an enormous long-term increase in consumer indebtedness not only in the United States but also in several European countries, such as the United Kingdom and Spain. Curbing this debt-fueled growth will have a significant impact on economic prospects worldwide. With consumers overburdened with debt and suffering from declining home and equity values, many have no capacity to borrow. And even if they do have some borrowing capacity left, looming job insecurity—witness the massive layoffs announced by many corporations in recent weeks—and deflating asset prices will make them less willing to do so. Lending to businesses will be equally challenging because companies facing lower demand will also be less inclined to borrow.

Just how bad will the credit crunch be? As of December 11, total losses at banks and insurance companies had risen to $726 billion on a global level in 2008: about $429 billion in the Americas, $268 billion in Europe, and $29 billion in Asia. Taking into account the mark-to-market losses on related securities with the losses on U.S. consumer and corporate loans, the IMF now estimates crisis-related losses of nearly $1.5 trillion on the worldwide holdings of U.S. assets alone. According to the Bank of England, total mark-to-market losses across the dollar, sterling, and euro currency zones have risen to around $2.8 trillion. This is equivalent to about 85 percent of banks' pre-crisis Tier 1 capital of $3.4 trillion globally, though only some of these market-value losses are directly borne by banks.

C. A Joined-Up World

As the crisis developed over the past few months, some pundits thought that it would be limited to the United States, the United Kingdom, and a few other Western economies. They argued that many Western economies would be relatively unscathed and that, in any event, Asia and the West could certainly be "decoupled" because Asian banking systems were not exposed to the toxic debt originating with U.S. subprime mortgages. But this view has proved to be overly optimistic. Although there is no doubt that Asia and some Western economies have not been affected as quickly or to the same extent as those countries suffering direct hits, economies are slowing across the world as the global downturn continues.

Global trade flows mean that the world's economies cannot be decoupled. Moreover, everyone is affected by the plight of the U.S. consumer. The U.S. economy represents 24 percent of global GDP. The U.S. consumer, in turn, represents 70 percent of the U.S. economy—or more than 16 percent of worldwide GDP. Overburdened by debt, worried about job security, and owning a rapidly depreciating home, the U.S. consumer was never likely to come to anyone's economic rescue.

The knock-on effects are enormous. If the U.S. consumer stops spending, the Chinese exporter must stop producing. This means that Chinese exporters do not invest in new industrial machinery from Germany, where workers are laid off and consumer confidence (which has dropped by 75 percent during the crisis) takes a further hit. Chinese government statistics show that 67,000 factories of various sizes were closed in China during the first half of 2008. According to an estimate from an industrial economics researcher at the Chinese Academy of Social Sciences, this number is likely to increase to more than 100,000 by the end of the year. Over half of all the toy factories in the Pearl River Delta have already closed.

Across Europe, economies previously thought to be relatively immune to the crisis are reporting massive drops in consumer confidence and are now projecting economic contraction for next year. In the Nordic countries, for example, where banks are generally well capitalized and not badly exposed to the liquidity crisis, the region's exporters now find themselves vulnerable to the slowdown in their overseas markets. This situation is having repercussions throughout the region.

In Asia, the powerhouse economies are all slowing. With the yen at a 13-year high, the export-reliant Japanese economy is suffering from higher price sensitivity on the part of buyers as well as lower overall demand. Equally troubling, Japan's overall ability to respond effectively to the current crisis is limited. Interest rates are already close to zero, and high levels of public spending during the 1990s have led to a very large national debt of 178 percent of GDP.

As for China, growth is slowing, dragged down to a large extent by lower growth in exports—from a high of 26 percent in the third quarter of 2006 to 11 percent in the second quarter of 2008—of which approximately 50 percent are to North America, Europe, and Japan. China's leaders have rapidly launched a portfolio of stimulus measures amounting to about $586 billion. The problem for China is that its growth is falling below the level necessary to generate the new jobs required for the 25 million workers entering the work force each year. And the IMF keeps revising downward its expectations for China's growth. On December 15, Reuters reported a speech given in Madrid by Dominique Strauss-Kahn, the IMF managing director, in which he said that the IMF's forecasts for China's growth in 2009 had dropped from 11 percent originally to about 8 percent last month (the level necessary to sustain the shift from a rural economy and to create the new jobs China needs each year) and now down to 5 or 6 percent.

It is also clear that the crisis is not just a hiccup for India, either. Its construction industry, for instance, employs 35 million people, while the auto industry employs 14 million. Both are severely affected. Unless mitigated by policy actions, the expected contraction in these two sectors alone could affect the overall employment rate significantly. And there is no time to lose: jobs are being lost already, with an extraordinary 700,000 layoffs in the textile sector over the past six months.

As 2008 closes, then, the world is faced with the first economic pandemic since the Second World War.

4. Companies Are Acting—but Not with Equal Urgency

A. Major Companies Are Preparing for 2009 with Widely Ranging Expectations

Business confidence is falling across the world. In the United States, the ISM purchasing manager index, which had stood at around 50 at the start of 2008, fell to around 36 by mid-November. Comparable shifts in other countries reflect a similar story: the equivalent index in Germany fell from 103 to 86, in Spain from around –4 to –32, in France from –2 to –69, in the United Kingdom from –16 to –60, in Japan from –4 to –14, in Brazil from 62 to 53, and in China from 141 to 124. This universal loss of business confidence is reflected in the month-on-month changes in national production reported by the same countries.

Given what we described earlier in this paper regarding consumers' view of the world, it is clear that the collective attitude of both producers and purchasers suggests significant belt-tightening and a redirection of spending power.

You might think that all this negative sentiment would be reflected in companies' planning assumptions for next year. And to some extent, it is. However, the picture varies significantly, even within industry sectors.

In early December, BCG conducted an informal survey across more than 60 major companies worldwide. In discussions with these companies, it became clear that most of them still have somewhat fluid planning assumptions for next year. It is also true that many of the companies in our sample have used very broad planning assumptions, choosing not to de-average by category or customer segment. But what is striking is that, outside of the construction and auto industries, many companies are assuming that the crisis will have a very modest impact in 2009.

Our survey also shows that few have conducted a comprehensive scenario-planning exercise in order to establish what more serious volume or price shortfalls could mean for their company. It is true that a small number have begun thinking about additional downside plans, but these are typically not very different from their central planning assumptions. It is also true that as December has progressed, we have heard of more and more companies preparing for a less favorable 2009 than they were expecting even four weeks ago.

Very few companies in our sample are planning for any significant volume growth in 2009, a far cry from the planning rounds of the last few years. Of our sample, only eight companies are currently planning for growth in 2009. (They include food, sporting-goods, pharmaceutical, and medical-device companies, as well as—surprisingly—one premium-department-store group.) Outside of construction and automotive-related industries, the typical range is a plus 5 percent to minus 10 percent change in volume over 2008. With few exceptions, most companies are planning for little change in pricing. This is somewhat surprising, given contracting demand and falling raw-material prices. The exceptions are in construction and (not surprisingly) in mining.

Automotive and construction-related companies are the most pessimistic. Common scenarios for volume reductions among automotive-supply companies are 20 to 30 percent down over 2008, with some companies now planning for a 50 percent reduction (and not just in North America). Construction companies in our sample are planning downside scenarios of –20 to –40 percent in volume and prices down by as much as 20 percent. As one company pointed out, with major construction projects being delayed even in the Gulf region, the sector is in for a very tough year. It is interesting that while construction and automotive companies are very negative, some of their suppliers (such as raw-material and steel producers) are operating on the basis of a smaller falloff in 2009.

Four sectors from our sample illustrate the range of planning assumptions at work, sometimes even within the same sector.

- There are four major airlines in our sample. In Europe, one airline is planning no change in passenger kilometers, while another is planning for about a 20 percent reduction. While the airlines' home countries may account for part of this difference, some of the explanation lies in very different expectations for 2009. In North America, the expectation is for a modest reduction in passenger miles flown.

- Manufacturers of two similar brands of consumer durables have declared quite different budget numbers in spite of operating in similar markets. One is planning a volume decline of around 10 percent accompanied by a slight price decrease; the other is planning for slight growth and a small price increase.

- The least affected industries appear to be those related to pharmaceuticals and groceries. In the pharma sector, the volume assumptions favor small increases or no change over 2008—but many expect tougher price negotiations to kick in, particularly for 2010. Unsurprisingly, related sectors such as medical devices are also projecting growth, although it is entirely possible that health care spending in many countries could be reined in.

- In the grocery sector, the planning assumptions typically call for growth but with lower prices. But it is important to de-average the effects of the crisis. Companies in this sector are planning for strong growth in so-called trading-down categories such as soups, and in "indulgence" categories such as ice cream, chocolate, and beer ("the man's lipstick"), as consumers prepare to pay more for "everyday delights." Companies are also planning for steep declines in luxury categories, such as bottled water, and for strong price declines in commodity categories, such as toilet paper, as retailers promote their cheaper private-label products.

Companies have already planned for a challenging 2009. But, as we observed above, many have not prepared contingency plans for the day when there is a significant deterioration in their businesses.

The consequences of delaying action are obvious. As one major manufacturer explained, some people within the company started to raise their voices regarding a potential downturn as early as the spring of 2008. However, most senior managers believed that there would be no severe downturn—and, even if there were, that their businesses would barely be affected. Only in October did they start to realize that some of their businesses, especially those supplying the automotive industry, would be greatly affected. Now they have announced massive cost-reduction programs. They realize that they need a significant part of the cost savings to be effective in 2009 to prevent negative effects in their financing (to compensate for low equity cover and poor cash flow). As a result, a large proportion of the savings will be short term and will not contribute to an improvement in the long-term position.

B. Reminder: A Plan for Action

In our second *Collateral Damage* paper, we laid out a set of actions that we believe well-prepared companies need to take. We describe the actions of four such early movers in the case studies in Section C (below).

But first, a reminder of our action plan, which constitutes a series of practical steps that we organized into a comprehensive three-step approach. In our view, companies need to act rapidly and systematically to:

1. Define the size of the problem

2. Understand where and how to address the problem

3. Take action

We think that well-run companies should reach step 3 in the space of around three to six weeks, taking a series of "no regrets" actions from the start. (See the exhibit "From Diagnosis to Action in Three to Six Weeks.") For some companies, the outcome will be a program of immediate actions that can be regarded as business as usual. For others, it will be a painful realization that nothing short of an urgent corporate turnaround will suffice.

The first objective is to protect the business from downside risk and to ensure liquidity. The mantra is that cash is king. After ensuring stability, the best companies will look for ways to capitalize on the downturn for longer-term success.

Of course, none of this process should be carried out in a vacuum. It is critical to understand your own strengths and weaknesses relative to those of your competitors. Your direct competitors will have different cost structures, financial positions, sourcing strategies, product mixes, customer focus, and so on. It follows that the downturn will have varying impacts on competitors across any given industry. To emerge in a leading position, you must challenge the actions that you plan to take in the light of the actions that your competitors are likely to take.

From Diagnosis to Action in Three to Six Weeks

~ 1–2 weeks

1 **Size the problem**

Identify the full range of downturn scenarios—including the most damaging set of circumstances

Simulate financial outcomes for the company and business units, worst case first
- Including key sensitivities

Stress-test against severe outcomes
- Business health (especially sales, EBIT)
- Financial health (especially balance sheet, cash flow, covenants)
- Quick assessment relative to key competitors (financial ratios, metrics)

Agree with management about where to act first

Identify quick wins/"no regrets" actions early

~ 2–3 weeks

2 **Understand where and how to address the problem**

Protect financial fundamentals
- Protect cash, manage credit risk
- Debt structure/refinancing

Protect existing businesses
- Cost, organizational efficiency, and outsourcing
- Top-line revenue protection, product portfolio, and pricing
- Capex and divestment

Manage for the long term
- Prioritize long-term investment portfolio: protect, delay, ditch
- Adapt business model
- Opportunistic M&A

Optimize relative valuation
- Valuation drivers, market and internal messaging

Roll out quick wins/"no regrets" actions

~ 1 week

3 **Take action**

Prioritize areas for action
- Urgency/ease of implementation
- Timing of benefits
- Risk to long-term business fundamentals

Resolve outstanding issues for final prioritization

Create a crisis monitoring team to lead the work and continually reevaluate initiatives and response

Align on action plan and execute

Ensure that company leadership is clear about its role and what is required
- Create rapid decision loops

Source: BCG analysis.

C. Tackling the Crisis: Four Case Studies

Case Study (1): A Major U.S. Industrial Company

"People don't realize how fast they can go broke." This is the view of the chief executive of a major U.S. diversified industrial company with sales of more than $20 billion in 2007. Managers look at their balance sheet and cash reserves and think they are safe, he says, "but they are very surprised by how little time they have once demand drops like a rock."

The first signs of the recession were already visible to the management team of this company in the spring of this year. More and more of its businesses were beginning to show slowing sales-growth figures, and some had already turned negative. By September, it became clear that this was not a normal downturn. Some businesses were reporting sudden drops in demand of between 15 and 25 percent compared with the year before.

The management team embarked on an in-depth analysis of the current cycle. Starting with various measures of asset values versus historical norms and the indebtedness of households and consumers, the team concluded that a depression of the kind last witnessed in the 1930s could not be ruled out. "We analyzed all asset classes from real estate to stocks and raw materials; we found that every asset class was at the top end of historical levels," the CEO says. "Consumer balance sheets were stretched as never before—at least since the Great Depression. It was clear to us that this might not be a normal recession—it is going to be severe and it might even be deflationary."

Based on this insight, the management team proceeded to take the following steps:

- *Conduct a simulation of the likely impact of the crisis.* The management team analyzed how different product groups were affected during the Great Depression. (See the table "How The Great Depression Affected Different Product Categories" in Appendix (1).) This revealed that all business areas could be severely hit. In response, a stress case of a 20 to 50 percent reduction in sales (volume and margin) was set up as a challenge to various business units (the extent of the drop depended on the category of goods).

- *Create awareness.* The top executives of the company engaged in a variety of sessions to discuss possible scenarios and appropriate measures to tackle each one. As a result, leaders across the company started to realize the seriousness of the crisis. The recent boom fed by easy credit and the fundamental imbalances that it had caused were discussed in detail. The CEO says that, for many, this was an "eye-opening event."

- *Define actions.* The leadership teams of the different businesses had to devise strategies for coping with a 20 to 50 percent drop in sales. This was not straightforward, and it took several meetings before a strategy was formulated. "It is not possible to master this scenario with 'easy' measures," says the CEO. "We had to insist on everyone going back to the fundamentals—and it takes more time to work out how to do fundamental change."

- *Manage inventories.* It became clear that the process of de-stocking inventories varied by industry but that it generally had not yet begun in earnest. Given its role as a supplier, the company had to be prepared to act quickly in order not to be surprised by a steep drop in orders over the next six months. Managing inventories became a top priority.

- *Evaluate production plans and alternatives.* Given that the company anticipated a cut in demand, it recognized the possibility that production plans might have to change if demand fell materially. Alternatives were developed and evaluated. The challenge to the business leaders was this: How do you best respond to a rapid decline in demand while retaining flexibility in the event that demand exceeds expectations?

- *Evaluate profitability under changed conditions.* The company routinely measures the profitability of its products, plants, services, and customers. But in order to identify those areas that should receive the greatest scrutiny, it evaluated prospective profitability assuming new margins and costs of working capital consistent with a severe downturn.

- *Evaluate service levels.* The company did a thorough analysis of existing and required service levels. The optimal level of service for many customers and products needed to be reevaluated in the light of changes in the cost of working capital and margin compression.

- *Reassess investments.* Investments leading to near-term increases in production volumes were placed under scrutiny. Investments focused on improving the company's cost position or enriching the product mix without endangering its liquidity were evaluated to determine whether they might be accelerated.

- *Continue innovation.* Based on its analysis of past recessions and the Great Depression of the 1930s, the company decided to continue investing in innovation. The emphasis shifted somewhat toward more near-term innovation—to take advantage of channels that appear to be more receptive to innovation—and toward high-return mix enrichment.

Going through this exercise proved to be highly valuable for the management team. "We would probably benefit by doing this every year," says the CEO, although he concedes that "it will be a stretch for the organization, and it's a very uncomfortable process."

In order to monitor the progress of the action plan, the company did the following:

- *Established an aggressive cash-management system.* All the company's business units are employing measures and practices to ensure that short-term liquidity is not compromised. This is founded on the belief that liquidity will be the most important feature of the business to monitor over the next three years. "Be your own bank" is the CEO's advice.

- *Identified a series of key indicators.* In order to react to changes in the economic and business environment—for instance, more positive or negative economic development—the company identified some external indicators for each business unit and for the company overall.

- *Created a central team.* This team keeps a watchful eye on the external indicators, supports the business units in the implementation of the various initiatives, and monitors the markets and competitive landscape.

The company now feels better prepared to weather the storm of the recession. To some observers, some of the measures might look severe given the current state of the economy and the business. The company shared the same concerns. So the management team looked not only at the worst-case scenario but also at the best-case scenario: a brief recession followed by a return to the days before the downturn. They concluded that the risk of being wrong if there is a deep and long recession can in some cases be significantly higher than the risk of being wrong if there is a startling upturn.

The CEO expects "there to be opportunities" to buy good assets at distressed prices. "Even well-run companies will have liquidity issues," he says, "and we hope we will be in a position to capture some of the opportunities that are created."

But things are unlikely to be the same again. If the company is well prepared not only to survive but also to thrive in the downturn, one thing is clear to the CEO: "The world will be different when we get out of this recession—we aren't likely to repeat the mistake of fueling artificial growth in demand and asset values with easy credit anytime soon. The costs of that policy are likely to be very high. At least one can hope that we have learned that lesson."

Case Study (2): A European Professional-Services Company

It was early in 2008 that this company began to detect signs of a slowdown: there was a noticeable decrease in its so-called billability rate, which reflects the number of hours its employees work on revenue-generating billable assignments. The slowing productivity was worrying the CEO—and this was some time before the knock-on effects of the financial crisis were felt in the real economy. In the previous downturn, professional services companies had been hard hit by the bursting of the dot-com bubble, and the CEO was anxious to avoid any recurrence of the troubles the company had experienced in 2001.

Taking early action, the CEO ordered a speedy strategic review. This had three components: an analysis of the company's current costs in order to pave the way for a swift but structural cost-reduction program; an assessment of opportunities to address the serious structural problems that had been eating into the company's margins before the downturn; and the creation of various scenarios to help senior managers prepare for a worsening economic climate.

The cost-cutting analysis resulted in a list of concrete and immediate initiatives that were implemented over the next two months. In particular, the company recognized the need to tackle wasteful overheads and scrutinize procurement by centralizing the authorization process for all external expenditures. In this way, senior executives could keep a close eye on costs.

The opportunity assessment was intended to find sources of future long-term profitability for the company. The performance of each business was examined, and the result was a list of concrete measures to improve profitability. These measures will be implemented during 2009, although the real benefits of some of them will not be fully realized until the recession is over.

The result of these two assessments was a profit improvement plan—with short-term cost implications and long-term revenue-generating potential. But this implied investment—and a negative cash impact on the company. For the CEO, this rang alarm bells: on the face of it, a downturn does not seem to be the right time to be investing in future potential rewards.

To convince himself—and his senior colleagues—that he was doing the right thing, the CEO ordered the creation of a computer model to determine the impact of different scenarios. This exercise determined that the severe economic crisis, while not creating a bankruptcy risk, would inflate the company's debt-to-EBITDA ratio, taking it above the thresholds registered in agreements with debt financiers. To breach these agreements was too costly to contemplate—so the CEO sought meetings with the financiers in order to explore ways of limiting the risk of an increased cost of debt.

The jury is still out on whether or not the company has done enough to guard against the worst effects of the crisis.

Case Study (3): A Global Telecommunications Company

The credit crisis erupted in August 2007, but it was not until last month (November 2008) that this company started to sense the first signs of a looming downturn. As it entered contract negotiations—and renegotiations—with large companies about IT and telecom services, the conversations became noticeably trickier.

To understand what was going on, senior executives wanted to get answers to three main questions:

- What is the downturn's expected potential impact on revenues, profitability, and cash flow?
- What steps should be taken to mitigate the impact of the crisis and deliver previously stated capital-market ambitions?
- What are the trigger points for the different steps?

To answer the first question, a scenario-planning team assessed the impact of continuing normal business conditions, a relatively light recession, and a full-scale long-term recession. The assessment was granular, looking not only at the impact on the business as a whole but also at the implications for each division and even each product. Although the focus was on the negative impact of the downturn, the executives also wanted to know what opportunities there were: for instance, with fewer people traveling, there would probably be an increase in international telephone calls.

The review, which is ongoing, found that the company was well positioned to weather the storm: the business generates significant cash, which negates the need for outside financing, and it boasts a strong market position, which means that it could use the downturn to take market share from weaker rivals.

Using the findings of the review, senior executives answered the second and third questions. They agreed on a series of actions, which they grouped into three categories:

- *Undertake "no regret" actions.* The company identified a number of strategic actions that could—and perhaps should—have been carried out during a more settled business climate. They include procurement—in particular, the way the company buys services and products from suppliers. The senior executives view the downturn as a good opportunity to implement some tough but necessary decisions.

- *Improve commercial agility.* With customers expected to be more price sensitive, the company is exploring ways to lower the up-front costs of its products and services.

- *Prepare "Plan B."* The company is preparing a quick-reaction to-do list if there is a sudden worsening of the telecom market—for instance, falling prices, a drop in the number of new customers, and distributors going out of business. The list includes new prices, renegotiated agreements with distributors, and a more selective focus on innovation. It also involves a "hit the brakes" cost-cutting program. This would be implemented if the company's financial results turn negative. It involves some "quick and dirty" measures such as the termination of all temporary labor, a hiring freeze, and a ban on foreign travel.

Case Study (4): A Major European Retailer

This company focuses on the grocery food business, but it also has a sizable presence in the do-it-yourself business and the specialized trade business (electronics, kitchen appliances and housewares, and sporting goods). Its main profit center is its stores: it has a large number of high-street outlets, ranging from discount shops to hypermarkets. It also has two other profit centers: private-label production and wholesale distribution.

As the downturn became more entrenched, the CEO ordered a special team to report on the short-term impact on the three business units. He gave the team three weeks to get the answers. The report had three elements. The first two addressed the broader context: there was to be an assessment of the macroeconomic outlook in each of the countries in which the company operated and then an analysis of the impact that the downturn would have on the different groups of consumers. The third element was company specific: What impact would the downturn have on its growth prospects, profit margins, and costs?

In assessing the downturn's likely impact on the company, the special team set out a base-case scenario and a worst-case scenario. It used a variety of sources to develop the scenarios: national statistics from previous crises, company financial data, sales data from ACNielsen, consumer and retail patterns from other countries, and dedicated interviews with senior executives within the company.

The base-case scenario was that there would be continued market growth—although at a lower level than in the past. Customers would spend more time at home, spending time (and money) on cooking (and therefore buying ingredients for meals) and decorating (boosting the do-it-yourself business). There would, over time, be more pressure from competitors, forcing something of a price war and the need to promote cheaper private-label products rather than costlier branded products.

For the grocery business, the special team projected a 4 percent increase in sales, a zero to 0.4 percent increase in gross profit margins, and a 5 to 6 percent increase in operating costs. For the specialized trade business, it projected a 1 percent increase in sales, a 0.2 percent cut in gross profit margins, and a 5 to 6 percent increase in operating costs.

Given these projections, the company expected to maintain its overall market share in the retail business because of its presence in a range of consumer categories.

The worst-case scenario was a downward spiral as consumers cut their spending and forced a vicious slump in prices. The company's grocery business would still achieve modest growth of about 2 percent—because of the recent inflation in food prices and the pattern of "trading up" to fresh fruit and vegetables—but this would not be enough to generate positive gross profit margins. And sales in the company's specialized trade business would fall by 5 percent—also failing to deliver any gross profit.

These findings were a shock to senior executives. The budget for 2009 assumed that earnings before interest and tax (EBIT) would be about 1 percent lower than in 2008. But if the base-case scenario materialized, then EBIT would be about 10 percent lower than in 2008. If the worst-case scenario came to pass, then EBIT would be about 50 percent lower.

The company's prospects were bleak. The findings were especially troubling because the company had planned to enter a period of heavy investment, with the level of capital expenditure expected to quadruple over the next three years.

The CEO was reluctant to put this investment on hold, because he regards it as a prerequisite to future growth and competitiveness. So he sought a mandate from the board of directors to initiate a major cost-cutting program.

It was agreed that the program would start with a focus on "headquarters" costs—personnel, marketing expenses, and administrative sourcing—as well as costs relating to warehousing and distribution. It would then focus on the cost of goods sold—in particular, an attempt to renegotiate contracts with suppliers. The program's last stage would be a repositioning of the store portfolio, with a greater emphasis on discount outlets and less expensive private-label products.

The company is now implementing the first part of this cost-cutting program.

D. Concluding Thoughts

In our *Collateral Damage* series, we have argued consistently that 2009 will be a tough year. No company can be quite sure how it will be affected. We were surprised by how many companies in our informal survey had not prepared serious downside scenarios—although most had budgeted for a far less growth-oriented year in 2009 than in the recent past. If you have not yet taken any action, it is now time to do so: it is time to instill a sense of urgency within the company.

It is our view that well-prepared organizations would be wise to follow some of the lessons from our four case studies. You should understand how your company's cash flow and earnings will be affected under different scenarios by stress-testing for even the most severe downturn; act in a measured way; be clear about which action gets triggered by which event; and be willing to consider some radical options.

Companies that act late will find that they need to respond in a hurried and short-term way, putting at risk their long-term prospects. By contrast, companies that act in a timely fashion will be able to not only protect their businesses in the downturn but prepare them for the upturn. As one CEO told us, "A crisis is too good an opportunity to waste." He plans on driving through some transformational changes that may have been unpalatable under less challenging economic circumstances.

5. Appendix (1): Lessons from the Great Depression

The downturn has evoked dark memories of the Great Depression of the 1930s. Although we think that the current crisis will be deep and prolonged, we are not yet so pessimistic as to think that it will closely resemble the slump of 75 years ago. Having said this, we believe that a glance back to those gloomy times can be instructive for the leaders of today's companies.

A. The Economic Climate: Some Disturbing Similarities

It is interesting to compare the U.S. economy in 1929, when the Wall Street Crash occurred, with the U.S. economy in 2007, when the mortgage-backed securities market collapsed and triggered the credit crunch.

The two downturns were precipitated by *major speculation* in financial assets. In early 1928, the Dow Jones Industrial Average reached a low of 191. By September 1929, it had risen to a peak of 381. Stocks were highly valued according to all measures and about 10 percent of the market capitalization was bought on credit. Only during the technology boom of 1999 to 2000 were stocks more expensive than in the summer of 1929. It was the low-interest environment that followed the bursting of the technology bubble that allowed the real estate bubble to grow so spectacularly until August 2007.

As in the years leading up to today's crisis, the U.S. Federal Reserve in the 1920s tried to *stop speculation:* the central bank had ongoing concerns about speculation on Wall Street. Its policymakers drew a sharp distinction between "productive" and "speculative" uses of credit, and they were concerned that bank lending to brokers and investors could fuel a speculative wave in the stock market. But the efforts to persuade banks to decrease lending for speculative purposes were unsuccessful, so policymakers opted to raise interest rates in order to discourage lending. Monetarist scholars—notably Milton Friedman and Anna Schwartz—have come to consider this move a strategic mistake that served as a catalyst for the 1929 crash. Not dissimilarly, the Fed attempted to discourage real estate speculation by raising interest rates from 1 percent to 5.25 percent between 2004 and 2006.

The *overall indebtedness* of the U.S. economy (of consumers, corporations, government bodies, and financial sectors) before the Great Depression was around 160 percent of GDP. This was about 40 percentage points higher than the long-term trend of 120 percent of GDP, yet it was significantly lower than today's level of more than 360 percent. The federal government was even running a budget surplus at that time.

Like today, *consumer debt* in the years before 1929 had increased significantly. Mortgages for private householders increased by 150 percent between 1920 and 1929 (to $27 billion, equal to 26.2 percent of GNP). Moreover, the innovation of installment credit—which allowed borrowers to pay back a lump sum through periodic payments—boosted consumer spending during the 1920s and caused a boom in industries such as carmaking, furniture manufacturing, and broadcasting. The volume of outstanding installment credit more than doubled between 1924 and 1929, from $1.6 billion to $3.5 billion (equal to 3.4 percent of GNP). At the end of the decade, the credit allowance of a large proportion of the nation's consumers had been exhausted.

Some economists believe that an additional factor leading to the downturn of the 1930s was the *unequal distribution of wealth.* While workers' salaries grew by 8 percent between 1923 and 1929, manufacturing output rocketed by 32 percent. Thus, by the mid-1920s, the ability of most Americans to purchase durable goods, new automobiles, and new houses started to abate. At the same time, huge cuts were made to the top income-tax rates. As a result, by 1929, the richest 5 percent of Americans received 33.8 percent of total income, whereas today's wealthiest 5 percent receive 22.3 percent.

Another indicator is *trade balance* statistics. In the 1920s, there was a stable surplus and the United States was a net creditor with a positive international investment position of 14 percent of GNP in 1930. Today, the United States is running a deficit (of $794 billion in 2007) that has to be financed by the inflow of foreign investors' capital (–17.6 percent of GNP).

But today's figures are not uniformly worse than those of 80 years ago. The *corporate debt* figures (as a share of total debt) show that companies were worse off in the 1920s: debt increased from 44.6 percent to 46.3 percent between 1925 and 1929. In the second quarter of 2008, the debt figure amounted to 33.6 percent.

Moreover, during the Roaring Twenties, the U.S. economy experienced tremendous *GNP growth* rates—up to 15.9 percent in 1921. While these were much higher than the GNP growth rates of today, they were subject to significantly greater volatility: growth amounted to 12.1 percent in 1923 and then dropped to −0.2 percent in 1924 before rebounding to 8.4 percent in 1925. Today, by contrast, GNP growth rates are more stable, if less spectacular: in the last five years, the United States has enjoyed annual growth rates of more than 2 percent.

B. What Happened in the Great Depression?

The Great Depression is generally seen to have begun with the crash in the U.S. stock market on Friday, October 25, 1929. It was followed by Black Monday, when the stock market fell 13 percent, and Black Tuesday, when it fell 12 percent. The market lost about $30 billion in just three trading days—roughly 30 percent of the nominal U.S. GNP (for 1929). As the Great Depression evolved, the U.S. stock market decreased further, losing 89 percent of its value between September 1929 and July 1932. It was not until 1954 that stocks finally reached their pre-Crash level.

Reduction of Industrial Output/Companies' Profit Losses. In the summer of 1929, warehouses were full of unsold inventories. The cutback in consumer spending after the Crash intensified the incipient recession. Lower demand led the Industrial Production Index to fall from 110 in October 1929 to 100 in December—an annualized decline of 41 percent. In 1930, the index fell a further 21 percent between January and December. While dividend payments remained stable between 1929 and 1930, retained profits decreased sharply, from $2.8 billion to −$2.6 billion.

Bank Failures. Banks faced losses on their loans to investors who could not repay because of their own losses in the stock market. In addition, they suffered credit losses from companies that were suffering from consumers' decreasing demand. In a desperate bid to raise money, banks tried to call in their loans ahead of schedule. When depositors started to withdraw their savings, the banks often did not have enough liquidity to serve them. This caused other depositors to panic and claim their cash, ruining the banks. During this time, long queues of people wanting to withdraw their savings were a common sight. The authorities appeared unable to stop bank runs and the collapse in confidence in the banking system. From October 1929 to October 1930, about 750 U.S. banks went bankrupt. By March 1933, more than 5,000 banks had failed, wiping out the savings of millions of people.

The Worsening of the Crisis Because of Bank Failures and Further Cuts in Consumer Spending. The U.S. economy's credit and money supply system began to dry up as banks collapsed and as those who survived stopped lending to companies. This, added to the fact that consumers were cutting their own spending, led to a fall in investment and output. The knock-on effect was ever-worsening unemployment figures. In 1929, just 3.2 percent of the working population did not have a job. By 1933, that figure was 25 percent: more than 12 million Americans were out of work. This, in turn, caused a further decrease in consumer spending. Between 1929 and 1933, personal disposable income declined by roughly 26 percent—equivalent to $59 billion.

Deflation. Lower investments and the contraction of consumer spending led to falling output and prices, or deflation. This created additional problems. For one thing, it increased the difficulty of paying off debts. The economist Irving Fisher concluded that borrowers' efforts to reduce their debts by selling assets actually led to an increase in the real debt burden because the liquidation of debt could not keep up with the speed of decreasing asset prices. (See the sidebar "Irving Fisher's Debt-Deflation Theory.") (Between 1929 and March 1933, nominal debts declined by 20 percent, while the purchasing power of the U.S. dollar rose and real consumer indebtedness increased by 40 percent.) Between 1929 and 1933, private household wealth fell by more than $100 billion—a sum roughly equal to 100 percent of nominal GNP in 1929. In addition, falling prices encouraged people to hoard cash rather than spend it, thus lowering consumer demand even further. In the end, the U.S. GNP dropped by 29 percent (in terms of 1929 prices) and by 46 percent in nominal terms between 1929 and 1933.

C. What It Meant for Companies

All industries were affected by the Great Depression, at least to varying degrees. Food processing, chemicals, and the tobacco industry were quite recession proof. Other companies that came through the downturn successfully were suppliers of nondurable consumer goods and services, industries with highly innovative products (for instance, refrigerator manufacturers: the number of refrigerators sold increased by 30 percent between 1929 and 1933), and businesses that benefited from necessary structural change (such as the petroleum industry). Producers of industrial, durable, and luxury goods or products that were not innovative suffered substantial losses. (For further details, see the table "How the Great Depression Affected Different Product Categories.")

Small and medium-size companies suffered the biggest decline in profits. On average, those with total assets of less than $50,000 suffered profit losses of more than 25 percent in 1932. By contrast, major corporations—those with total assets of more than $50 million—continued to be profitable. The fact that major

Irving Fisher's Debt-Deflation Theory

Just a few days before the Wall Street Crash of 1929, Irving Fisher, the great Yale economist, had confidently talked of a "permanently high plateau" of stock prices. He thought they would never fall. And after the Crash, he believed that a recovery was just around the corner—putting his money where his mouth was and losing much of his personal fortune. Later, reflecting on the tragedy of the Great Depression, he came up with his famous debt-deflation theory.[1]

Prefacing the theory, Fisher analyzed the nature of instability and equilibrium. He distinguished between two sorts of cyclical tendencies: "forced" cycles (like seasons) and "free" cycles (not forced from outside but self-generating, like waves). Fisher concluded that exact equilibrium is seldom reached and never maintained for long. New disturbances are sure to occur.

It was in this context that Fisher considered the features of business, economics, and investment: overproduction, underconsumption, overcapacity, price dislocation, maladjustment between agricultural and industrial prices, overconfidence, overinvestment, oversaving, overspending, and the discrepancy between saving and investment. These are all factors that help explain business cycles.

But Fisher singled out two other factors—indebtedness and deflation—as the biggest reasons for booms and busts. And the two factors could be linked by a chain of events. As he put it:

> Assuming, accordingly, that, at some point of time, a state of over-indebtedness exists, this will tend to lead to liquidation, through the alarm either of debtors or creditors or both. Then we may deduce the following chain of consequences in nine links: (1) *Debt liquidation* leads to distress selling and to (2) *contraction of deposit currency,* as bank loans are paid off, and to a slowing down of velocity of circulation. This contraction of deposits and of their velocity, precipitated by distress selling, causes (3) *a fall in the level of prices,* in other words, a swelling of the dollar. Assuming, as stated above, that this fall of prices is not interfered with by reflation or otherwise, there must be (4) *a still greater fall in the net worths of business,* precipitating bankruptcies and (5) *a like fall in profits,* which in a "capitalistic," that is, a private-profit society, leads the concerns which are running at a loss to make (6) *a reduction in output,* in trade and in employment of labor. These losses, bankruptcies, and unemployment, lead to (7) *pessimism and loss of confidence,* which in turn lead to (8) *hoarding* and slowing down still more the velocity of circulation. The above eight changes cause (9) *complicated disturbances in the rates of interest,* in particular, a fall in the nominal, or money, rates and a rise in the real, or commodity, rates of interest.

Fisher said that overindebtedness and deflation are a devastating combination. "The two diseases act and react on each other," he said. The first leads to the second, "and, vice versa, deflation caused by the debt reacts on the debt. Each dollar of debt still unpaid becomes a bigger dollar, and if the over-indebtedness with which we started was great enough, the liquidation of debts cannot keep up with the fall of prices which it causes. In that case, the liquidation defeats itself. While it diminishes the number of dollars owed, it may not do so as fast as it increases the value of each dollar owed."

Fisher identified two ways to get out of a depression. One is the natural and long way, through bankruptcy, unemployment, and starvation. The other way—artificial and quick—is to reflate the price level to the average level at which outstanding debts were contracted by existing debtors and assumed by existing creditors.

1. I. Fisher, "The Debt-Deflation Theory of Great Depressions," *Econometrica,* October 1933.

corporations were mostly net creditors receiving an interest income helps explain how they managed to remain profitable in such difficult times.

D. Government and Central Bank Actions During the Crisis

The initial actions of the U.S. Fed after the Crash were similar to those taken to tackle some of the economic crises of the past 20 years: it violated its standing order to limit operations to $25 million a week, and it bought $160 million worth of securities in the week ending October 30 and a total of $370 million by the end of November. Together with the open market expansion, the rediscount rate was lowered to 5 percent on November 1, 1929, and to 4.5 percent on November 15. Further sharp decreases of the rediscount rate followed in 1930 and 1931. In June 1931, it was just 2 percent.

After the United Kingdom went off the gold standard in September 1931, the Fed started to increase the discount rate up to 3.5 percent in order to hinder the outflow of gold. The resulting rise in interest rates caused more business and bank failures.

Herbert Hoover, the U.S. president from 1929 to 1933, conducted a fiscal policy that accelerated the economic decline. He was convinced that a balanced federal budget was crucial to restoring business confidence, so he cut government spending and raised taxes. But in the face of a crashing economy, this only served to reduce consumer demand. To boost the economy, Hoover then opted to support protective tariffs to block imports. The intention was to stimulate the economy by boosting sales of U.S.-made products. The Smoot-Hawley Tariff Act was enacted in 1930, establishing the highest average tariff in American history.

Things changed with the arrival of Franklin D. Roosevelt, who became president in 1933. His New Deal policies were enacted in 1933, leading to the implementation of the Works Progress Administration, the Social Security Act, and the National Labor Relations Act. In addition, the dollar was devalued against gold.

In the end, World War II helped bring an end to the long years of economic depression. U.S. employment and prosperity returned to pre-Depression levels.

E. Today Is Different

Some economic indicators suggest that we are now facing a crisis even worse than the Great Depression. But there are reasons to be optimistic that this twenty-first-century crisis, although it promises to be deep and long, will not be as damaging as its twentieth-century counterpart.

- There are no rigid rules—such as the gold standard that pegged currencies to gold. As a result, currencies can adjust to each other more easily, and central banks can take action to stabilize the monetary system. The Fed's expansion of the balance sheet by 145 percent since September would not have been possible in 1930.

- Governments have been willing to intervene to protect people's savings. As a result, there has not been a severe bank run of the kind that was commonplace in the 1930s.

- Governments have learned from President Roosevelt's actions—taken four years after the Wall Street Crash—and have quickly introduced fiscal stimulus packages. For instance, the U.S. government has set aside $800 billion and China has unveiled a package worth $586 billion.

- Governments are now significant contributors to GDP. Today, the U.S. government's contribution is 37 percent, compared with 11 percent in 1929. This fact, together with the size of social security systems, is an important stabilizing factor.

These factors make us optimistic that the Great Depression was a one-off event. Governments and policymakers have the tools to counter the worst effects of today's downturn. But avoiding another Great Depression will come at a price: the debt burden of governments (and, therefore, taxes) will be significantly higher, growth rates will be lower because private households and corporations with excessively high levels of debt will need to save rather than spend in order to restore their balance sheets, and inflation will be seen as a way to reduce real debt burdens. If there is to be no repeat of the Great Depression, neither is there going to be a quick return to the boom years.

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How the Great Depression Affected Different Product Categories
Production Volume

Production volume decrease (1933 versus 1929)

Machines and vehicles	–52%
Stone, clay, glass, and wood products	–42%
Chemical industry, oil, and coal products	–34%
Textiles	–24%
Synthetics and paper industry	–23%
Food	–18%

Food (1933 versus 1929)—production volume (Ø –18%)

Ice cream	–40%
Margarine	–37%
Canned fish (tuna)	–31%
Bread and cake	–26%
Baking soda	–24%
Sugar	–23%
Cookies and crackers	–22%
Candy	–21%
Cereal	–21%
Wheat flour	–20%
Canned fruits (apples)	–12%
Rice	–10%
Cheese	–6%
Canned meat (beef)	–5%
Condensed milk	–2%
Shortening	–2%
Chocolate	5%
Butter	10%

Textiles (1933 versus 1929)—production volume (Ø –24%)

Linoleum	–58%
Leather belts	–52%
Artificial leather (1931/1929)	–41%
Carpets	–39%
Twine	–29%
Linen thread	–28%
Handkerchiefs (1931/1929)	–26%
Men’s suits	–21%
Leather shoes (1931/1929)	–18%
Leather goods	–16%
Silk	–15%
Artificial wool	–13%
Woolen goods	–13%
Cotton goods	–13%
Jute	–11%
Ladies’ clothing	–9%
Knitwear	0%

Synthetics and paper industry (1933 versus 1929)—production volume (Ø –23%)

Car tires	–35%
Shoes	–29%
Wallpaper	–23%
Other plastics	–20%
Paper	–17%
Wood pulp (sulfite)	–11%

Chemical, oil, and coal products (1933 versus 1929)—production volume (Ø –34%)

Coal briquettes	–63%
Charcoal (1931/1929)	–61%
Coke	–57%
Explosives	–42%
Fertilizer (ammonia)	–40%
Colors/varnish	–38%
Linseed goods (1931/1929)	–33%
Compressed gases	–29%
Salt	–16%
Adhesives (1931/1929)	–15%
Oil refinement	–14%
Soap	–2%

Stone, clay, glass, and wood products (1933 versus 1929)—production volume (Ø –42%)

Lime sand brick	–91%
Clay goods	–72%
Cement	–54%
Timber	–50%
Wood wool	–49%
Barrels	–44%
Asbestos	–44%
Roofer goods (1931/1929)	–38%
Cigar boxes	–35%
Plaster (1931/1929)	–35%
Glass	–22%
Lime (1931/1929)	–22%
Turpentine, resin	–18%
Urns/caskets (1931/1929)	–11%

Machines and vehicles (1933 versus 1929)—production volume (Ø –52%)

Record players	–80%
Ships/boats	–77%
Railway locomotives	–77%
Sewing machines	–74%
Agricultural machinery (1931/1929)	–70%
Rail cars (1931/1929)	–69%
Cars and accessories	–65%
Weighing machines/computers	–65%
Typewriters	–57%
Radios	–25%
Bicycles	4%
Mechanical refrigerators	30%

How the Great Depression Affected Different Product Categories
Average Prices

Food (1933 versus 1929)—average prices (Ø –34%)

Canned meat (beef)	–58%
Margarine	–56%
Butter	–53%
Chocolate	–46%
Shortening (1929/1939)	–45%
Cheese	–45%
Baking soda (1927/1933)	–37%
Condensed milk	–35%
Candy	–31%
Canned fish (tuna)	–31%
Cookies and crackers	–31%
Wheat flour	–28%
Canned fruit (apples)	–26%
Ice cream	–19%
Rice (1929/1931)	–18%
Cereal	–18%
Bread and cake	–16%
Sugar	–14%

Textiles (1933 versus 1929)—average prices (Ø –32%)

Velvet (silk)	–57%
Ladies' clothing	–49%
Wool carpets (Wilton)	–39%
Knit goods (wool) (1931/1929)	–37%
Men's shoes (leather)	–36%
Linen thread	–36%
Woven wool	–36%
Cotton yarn	–34%
Cotton sheets	–32%
Linoleum (simple) (1935/1929)	–29%
Jute yarn	–29%
Men's suits	–27%
Artificial leather (1931/1929)	–26%
Wool fiber	–21%
Leather belts	–12%
Handkerchiefs (1931/1929)	–7%

Synthetics and paper industry (1933 versus 1929)—average prices (Ø –37%)

Car tires	–41%
Rubber boots	–40%
Wood pulp (sulfite)	–38%
Newsprint	–36%
Synthetic heels	–33%
Wallpaper	–32%

Chemical, oil, and coal products (1933 versus 1929)—average prices (Ø –16%)

Lead paint	–38%
Fertilizer (ammonia)	–29%
Soap	–24%
Heating oil	–19%
Coke	–17%
Charcoal	–17%
Coal briquettes	–16%
Dynamite	–15%
Acetyls	–15%
Salt, sun-dried	–3%
Linseed oil (1931/1929)	0%
Adhesives (1931/1929)	6%

Stone, clay, glass, and wood products (1933 versus 1929)—average prices (Ø –15%)

Asbestos clothing	–44%
Window glass	–35%
Cigar boxes (50)	–27%
Door/window frames	–27%
Lime sandstone	–21%
Lime (1931/1929)	–21%
Claystone (simple)	–19%
Wood wool	–18%
Cement (Portland)	–10%
Boxes, coffins (1931/1929)	–8%
Asphalt roofing (1931/1929)	–2%
Barrels	0%
Turpentine	5%
Plaster (sand-based) (1931/1929)	20%

Machines and vehicles (1933 versus 1929)—average prices (Ø –28%)

Radios/record players	–68%
Coin scales	–61%
Radios (1931/1929)	–39%
Tractors (3 gears)	–29%
Electric sewing machines (1931/1929)	–28%
Typewriters	–26%
Cars, closed, 2 doors	–18%
Bicycles	–16%
Mechanical sewing machines (1931/1929)	–8%
Tractors (1/2 gears)	–7%
Cars, open, 2 doors	–4%

Wholesale prices (1933 versus 1929)—production price index (Ø –31%)

Food	–52%
Synthetics	–32%
Metal goods	–24%
Furniture/household articles	–22%
Industrial goods	–22%
Oil/electricity	–19%
Cars and accessories	–16%
All goods	–31%

Consumer prices (1933 versus 1929)—production price index (Ø –24%)

Food	–35%
Rents	–29%
Furnishings	–25%
Clothes	–23%
All goods	–24%

How the Great Depression Affected Different Product Categories

Output Values

Food (1933 versus 1929)—output values (Ø –44%)

Margarine	–73%
Canned meat (beef)	–60%
Ice cream	–56%
Shortening (1929/1931)	–54%
Butter	–49%
Cheese	–48%
Canned fruit (apples)	–47%
Chocolate	–47%
Cookies and crackers	–47%
Baking soda (1927/1933)	–45%
Wheat flour	–42%
Candy	–41%
Cereal	–40%
Canned fish (tuna)	–36%
Sugar	–34%
Bread and cake	–32%
Condensed milk	–27%
Rice (1929/1931)	–17%

Textiles (1933 versus 1929)—output values (Ø –48%)

Wool carpets (Wilton)	–81%
Linoleum (simple) (1935/1929)	–70%
Velvet (silk)	–65%
Leather belts	–64%
Artificial leather (1931/1929)	–60%
Ladies’ clothing	–54%
Jute yarn	–54%
Men’s suits	–49%
Linen thread	–47%
Woven wool	–46%
Men’s shoes (leather)	–44%
Wool fiber	–40%
Cotton yarn	–38%
Handkerchiefs (1931/1929)	–34%
Cotton sheets	–32%
Knit goods (wool) (1931/1929)	15%

Synthetics and paper industry (1933 versus 1929)—output values (Ø –53%)

Rubber boots	–71%
Car tires	–61%
Newsprint	–56%
Wallpaper	–47%
Wood pulp (sulfite)	–46%
Synthetic heels	–38%

Chemical, oil, and coal products (1933 versus 1929)—average output values (Ø –46%)

Coke	–89%
Fertilizer (ammonia)	–66%
Coal briquettes	–63%
Lead paint	–61%
Dynamite	–59%
Charcoal (1931/1929)	–51%
Linseed oil (1931/1929)	–35%
Heating oil	–34%
Acetyls	–34%
Soap	–26%
Salt, sun-dried	–22%
Adhesives (1931/1929)	–11%

Stone, clay, glass, and wood products (1933 versus 1929)—output values (Ø –53%)

Lime sandstone	–93%
Claystone (simple)	–85%
Door/window frames	–83%
Wood wool	–67%
Cement (Portland)	–67%
Asbestos clothing (1931/1929)	–61%
Window glass	–60%
Barrels	–46%
Asphalt roofing (1931/1929)	–44%
Lime (1931/1929)	–40%
Plaster (sand-based) (1931/1929)	–36%
Cigar boxes (50)	–28%
Boxes, coffins (1931/1929)	–24%
Turpentine	–15%

Machines and vehicles (1933 versus 1929)—output values (Ø –74%)

Tractors (3 gears)	–98%
Cars, open, 2 doors	–97%
Radios/record players	–94%
Tractors (1/2 gears)	–93%
Coin scales	–87%
Mechanical sewing machines	–83%
Cars, closed, 2 doors	–68%
Typewriters	–67%
Electric sewing machines (1931/1929)	–63%
Radios (1931/1929)	–53%
Bicycles	–13%

Source: S. Fabricant, *The Output of Manufacturing Industries, 1899–1937,* National Bureau of Economic Research, 1940.

6. Appendix (2): The Recession in Numbers: Key Data

It is now official: this is the worst downturn since the Great Depression of the 1930s. Nothing illustrates this better than the sharp decline in the S&P 500, which fell 41 percent through December 4. The worst previous annual decline was in 1931, when the stock market fell 47 percent.

Closer analysis shows that metals companies—the core of the commodities industry—have suffered the biggest slump in value, falling 53 percent in the first 11 months of the year. This followed the longest and largest boom in commodity prices since 1900.

Just behind the commodities sector were the sectors at the heart of the credit crunch: financial (–52 percent) and real estate (–51 percent) companies.

One of the knock-on effects has been a dramatic drop in prices. The Baltic Dry Index, which records the price of moving raw materials by sea and which saw a significant rise with the growth of international trade, has tumbled to its lowest level since 2003.

Another knock-on effect has been the fall in retail sales. In Spain, the year-on-year change in retail sales has been negative each month all year. The United States has seen monthly year-on-year declines since July, Germany since March (with the exception of May), and the United Kingdom since September. Not surprisingly, these figures are reflected in eroding consumer confidence.

The OECD's leading economic indicators project a "strong slowdown" in every major country—apart from Brazil, where the projection is a hardly confidence-inducing "downturn."

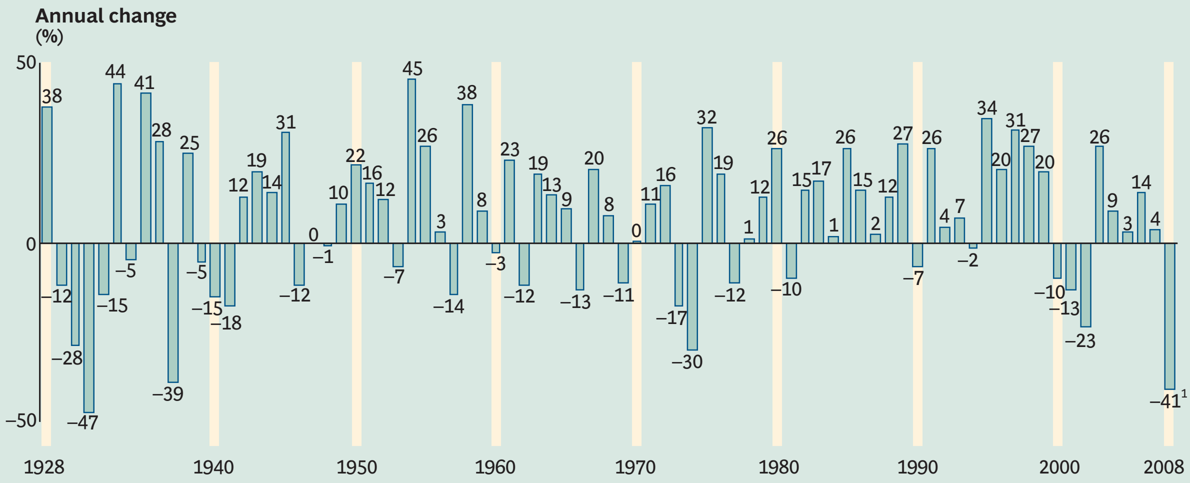
Industrial production is also falling in many countries. In China, which has been an engine of globalization, production has declined on a year-on-year basis in each month since April. Italy has seen year-on-year declines all year, the United Kingdom has seen declines since May, and the United States has seen declines since July.

Given this, it is not surprising that global growth is predicted to slow next year. In November, the International Monetary Fund estimated that growth would be just 2.2 percent in 2009—compared to 3.7 percent in 2008 and 5 percent in 2007. It expected many countries to see real declines, calculating that the United Kingdom would shrink by 1.3 percent—the worst of all the world's leading economies. By December, the World Bank had revised its own growth estimate downward to just 0.9 percent.

In the past, the U.S. consumer has been able to rescue the global economy. Not this time. There are record levels of private and public debt in the United States. U.S. household wealth has been falling since the last quarter of 2007, and house prices are continuing to plummet.

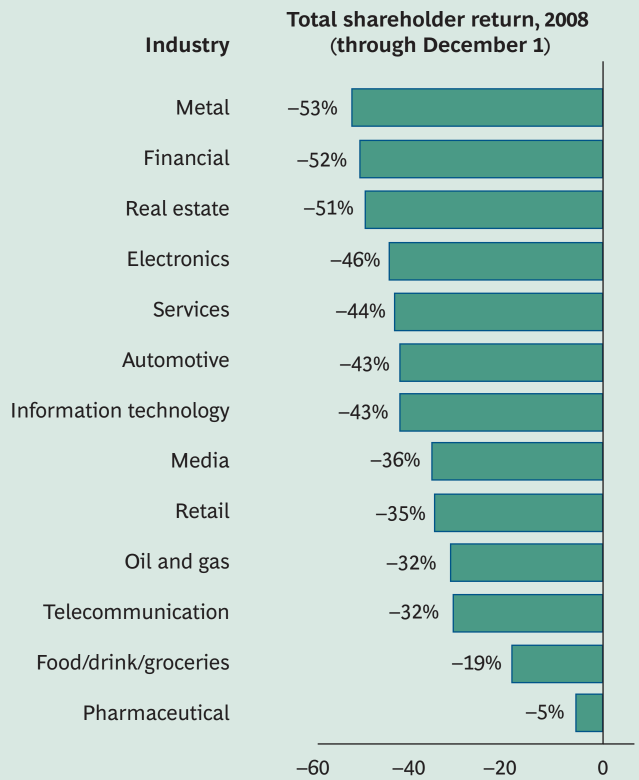
The data support the view that the downturn will be deep and prolonged.

Exhibit 1. The U.S. Stock Market Has Experienced the Largest Drop Since the Great Depression



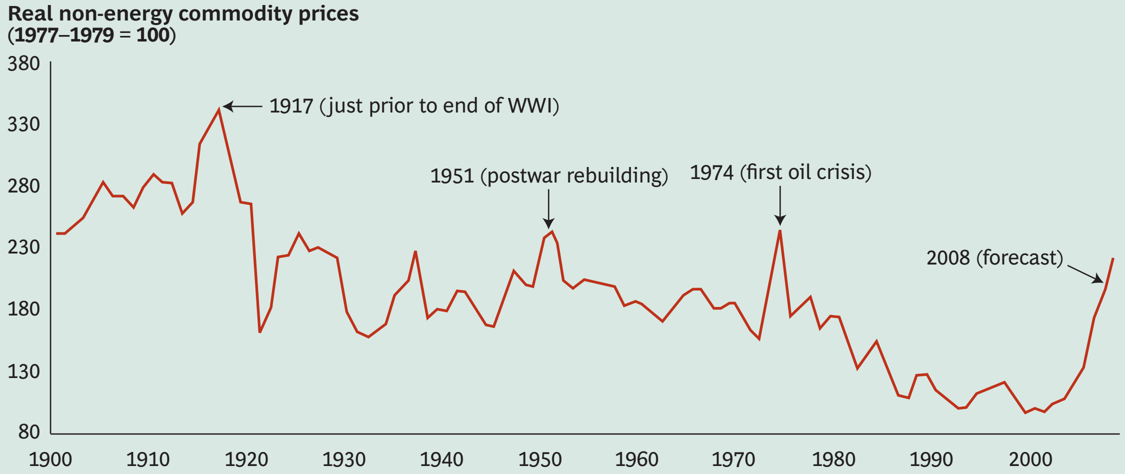
Sources: Bloomberg; BCG analysis.
[1]Through December 4, 2008.

Exhibit 2. Stock Price Declines Have Varied Globally by Industry



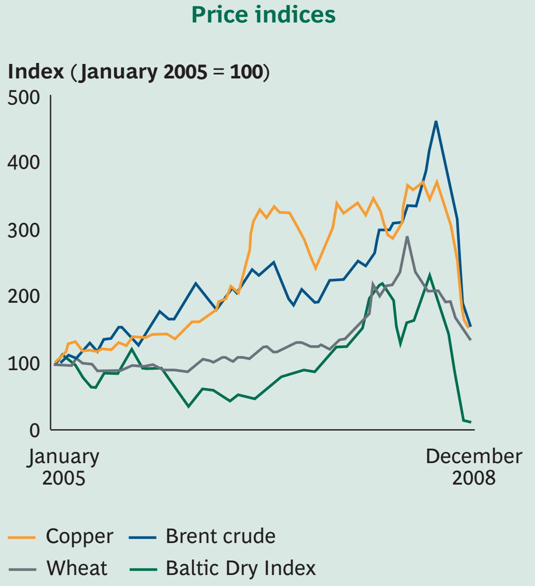
Source: Thomson Financial.

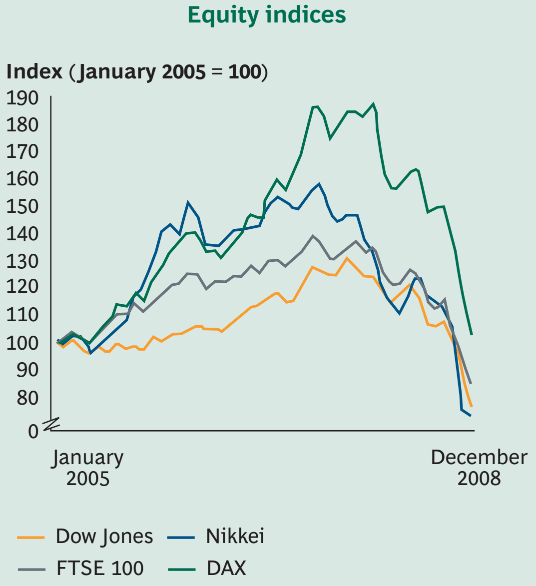
Exhibit 3. The Recent Commodity-Price Boom Was the Largest and Longest of Any Boom Since 1900



Source: World Bank Global Economic Prospects 2009.

Exhibit 4. Prices Are Now Heading South





Source: Thomson Datastream.

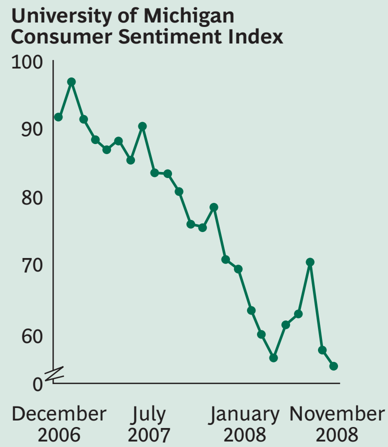
Exhibit 5. Retail Sales Are Showing Weakness

Year-on-year change (%)	January 2008	February 2008	March 2008	April 2008	May 2008	June 2008	July 2008	August 2008	September 2008	October 2008
Brazil[3]	10.9	8.8	10.2	9.6	9.9	10.8	9.7	10.1	10.3	—
China[1]	21.2	19.1	21.5	22.0	21.6	23.0	23.3	23.2	23.2	22.0
France[3]	1.6	3.5	–1.6	1.2	2.0	–1.6	0.4	–0.3	0.8	—
Germany[3]	1.6	0.4	–2.2	–3.9	1.1	–1.6	–1.8	–0.4	–1.0	–1.4
Japan[1]	1.0	3.0	1.0	0.0	0.0	0.0	2.0	1.0	0.0	–1.0
Russia[1]	28.9	31.5	30.1	29.5	30.9	30.2	30.5	29.7	29.7	26.6
Spain[3]	–2.5	–2.6	–5.6	–3.4	–5.3	–8.1	–6.1	–6.1	–7.1	–8.0
United Kingdom[3]	3.9	2.7	2.3	2.8	2.0	3.1	2.0	1.3	–1.1	–4.1
United States[2]	0.6	–0.5	0.5	0.2	0.8	0.1	–0.6	–0.7	–1.3	–2.8

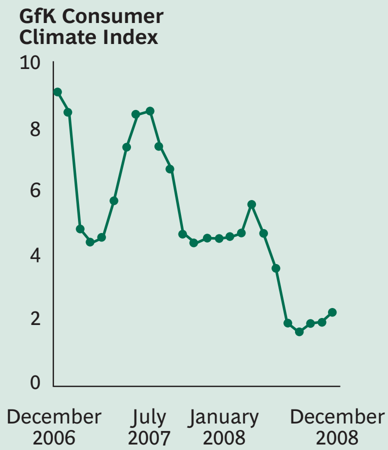
Source: Thomson Datastream.
[1]Current prices, not seasonally adjusted.
[2]Current prices, seasonally adjusted.
[3]Constant prices, seasonally adjusted.

Exhibit 6. Consumer Confidence Is Eroding

United States



Germany



Source: Thomson Datastream.

Exhibit 7. OECD Composite Leading Indicators Project a Global Slowdown

	Ratio to trend, amplitude adjusted (long-term average = 100)					Change from previous month (points)					Year-on-year change (points)	Growth cycle outlook
	2008					2008					Latest month	
	Jun	Jul	Aug	Sep	Oct	Jun	Jul	Aug	Sep	Oct		
OECD Total Area	98.5	97.8	97.0	96.0	95.0	–0.5	–0.7	–0.8	–0.9	–1.0	–5.9	Strong slowdown
Euro Area[1]	98.7	97.9	97.1	96.2	95.3	–0.6	–0.8	–0.8	–0.9	–0.9	–6.3	Strong slowdown
Major Five Asia[2]	99.2	98.3	97.3	95.9	94.5	–0.6	–0.8	–1.1	–1.3	–1.4	–5.9	Strong slowdown
Major Seven	98.4	97.7	96.9	95.9	94.8	–0.5	–0.7	–0.8	–1.0	–1.1	–5.9	Strong slowdown
Canada	98.6	98.1	97.4	96.5	95.5	–0.4	–0.6	–0.7	–0.9	–1.0	–4.9	Strong slowdown
France	98.8	98.1	97.5	96.8	96.0	–0.6	–0.6	–0.7	–0.7	–0.7	–5.6	Strong slowdown
Japan	98.1	97.6	96.9	96.1	95.2	–0.3	–0.5	–0.7	–0.8	–0.9	–3.3	Strong slowdown
Germany	99.1	98.0	96.6	95.1	93.5	–0.9	–1.1	–1.3	–1.5	–1.6	–8.3	Strong slowdown
Italy	98.1	97.5	97.1	96.9	96.8	–0.5	–0.5	–0.5	–0.2	–0.1	–4.1	Strong slowdown
United Kingdom	99.4	98.6	97.7	96.9	96.0	–0.7	–0.8	–0.9	–0.9	–0.9	–6.5	Strong slowdown
United States	98.0	97.4	96.5	95.4	94.2	–0.4	–0.6	–0.9	–1.1	–1.2	–6.6	Strong slowdown
Brazil	103.8	104.0	104.1	103.9	103.6	0.4	0.2	0.0	–0.1	–0.3	–0.4	Downturn
China	99.2	98.2	96.8	95.1	93.4	–0.6	–1.0	–1.4	–1.7	–1.7	–7.0	Strong slowdown
India	98.3	97.7	97.0	95.9	94.8	–0.7	–0.6	–0.7	–1.1	–1.1	–6.6	Strong slowdown
Russia	102.3	101.1	99.1	96.4	92.4	–0.7	–1.3	–2.0	–2.7	–4.0	–10.5	Strong slowdown

Source: OECD.
[1]Austria, Belgium, Cyprus, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovenia, and Spain.
[2]China, India, Indonesia, Japan, and Korea.

Exhibit 8. Industrial Production Is Falling in Many Countries

Year-on-year change (%)	January 2008	February 2008	March 2008	April 2008	May 2008	June 2008	July 2008	August 2008	September 2008	October 2008
Brazil	8.0	6.5	5.7	5.9	3.5	6.3	7.7	4.5	7.1	0.9
China	—	2.5	0.2	–1.5	–1.8	–2.9	–2.8	–4.0	–6.3	–8.2
France	2.6	2.1	0.3	2.9	–1.9	–2.0	–1.9	–2.8	–2.3	–7.2
Germany	5.8	5.1	3.9	5.6	1.6	2.0	0.1	1.5	–1.9	–3.9
India	6.2	9.5	5.5	6.2	4.4	5.4	7.4	1.4	4.8	—
Italy	–1.8	–0.9	–1.5	–0.1	–2.7	–2.1	–3.1	–3.9	–5.7	–6.1
Japan	2.9	4.0	0.5	0.7	2.3	0.0	1.2	–4.7	2.1	–7.0
Russia	4.5	7.4	6.6	9.2	6.7	0.8	3.2	4.8	6.4	—
Spain	–0.5	0.7	–3.3	–1.0	–5.5	–9.4	–3.6	–6.7	–8.3	–11.8
United Kingdom	0.3	1.1	0.3	0.1	–1.7	–2.0	–1.9	–2.7	–2.9	–5.2
United States	2.5	1.6	1.5	0.4	0.2	0.0	–0.5	–1.7	–5.6	–4.1

Source: Thomson Datastream
Note: All data are at constant prices; data are also seasonally adjusted except for China, India, and Russia.

Exhibit 9. Global GDP Growth Is Slowing, and Many Countries Will See Declines

Real GDP growth (%)	2006	2007	2008	2009
World	**5.1**	**5.0**	**3.7**	**2.2**
U.S.	2.8	2.0	1.4	–0.7
Canada	3.1	2.7	0.6	0.3
Europe	**2.8**	**2.6**	**1.2**	**–0.5**
Germany	3.0	2.5	1.7	–0.8
France	2.2	2.2	0.8	–0.5
Italy	1.8	1.5	–0.2	–0.6
Spain	3.9	3.7	1.4	–0.7
United Kingdom	2.8	3.0	0.8	–1.3
Russia	7.4	8.1	6.8	3.5
China	11.6	11.9	9.7	8.5
India	9.8	9.3	7.8	6.3
Brazil	3.8	5.4	5.2	3.0
Japan	2.4	2.1	0.5	–0.2

Source: International Monetary Fund World Economic Outlook.
Note: Figures for 2008 and 2009 are projections as of November 6, 2008.

Exhibit 10. A Downturn in the United States Will Have a Big Impact on Global GDP

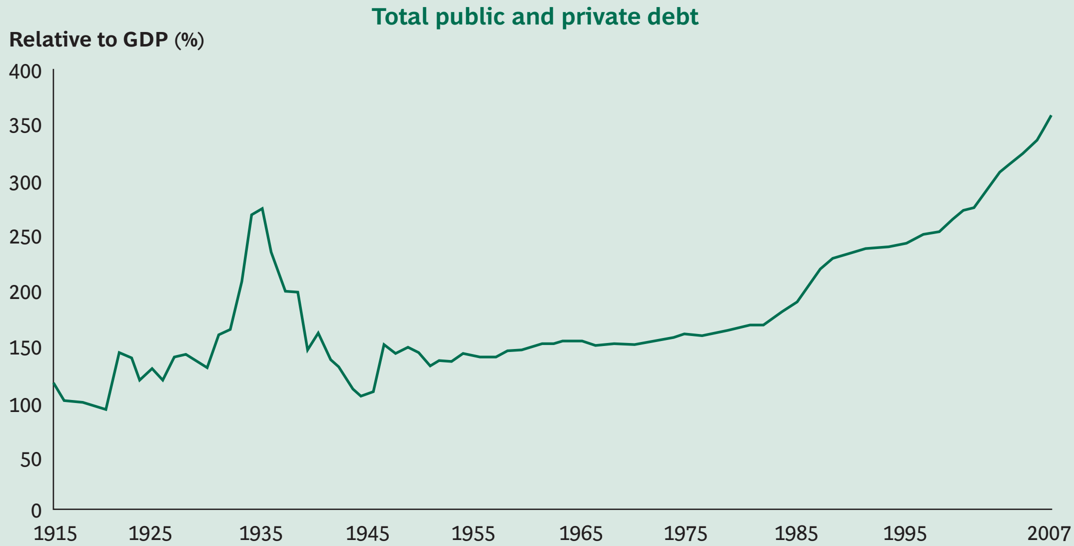
Source: Economist Intelligence Unit.

Exhibit 11. The Global Economy Is Vulnerable to U.S. Consumption Declines

Relative to GDP, 2007 (%)[1]	Consumption	Exports
Brazil	60.3	14.4
China	36.9	38.5
France	56.9	27.5
Germany	56.7	49.3
India	55.9	24.0
Italy	59.3	29.1
Japan	57.2	18.2
Russia	51.2	31.2
Spain	57.5	27.7
United Kingdom	65.2	28.3
United States	70.0	13.4

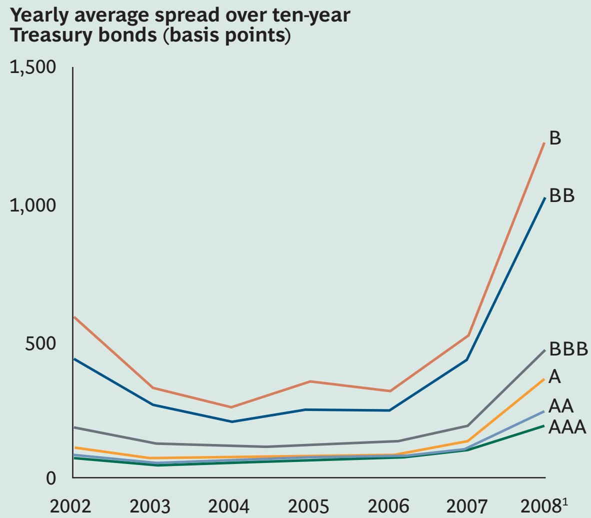
Source: Economist Intelligence Unit.
[1]Since imports will be subtracted, the share of consumption and exports may be larger than 100%.

Exhibit 12. We Are Seeing Record Levels of Debt in the United States



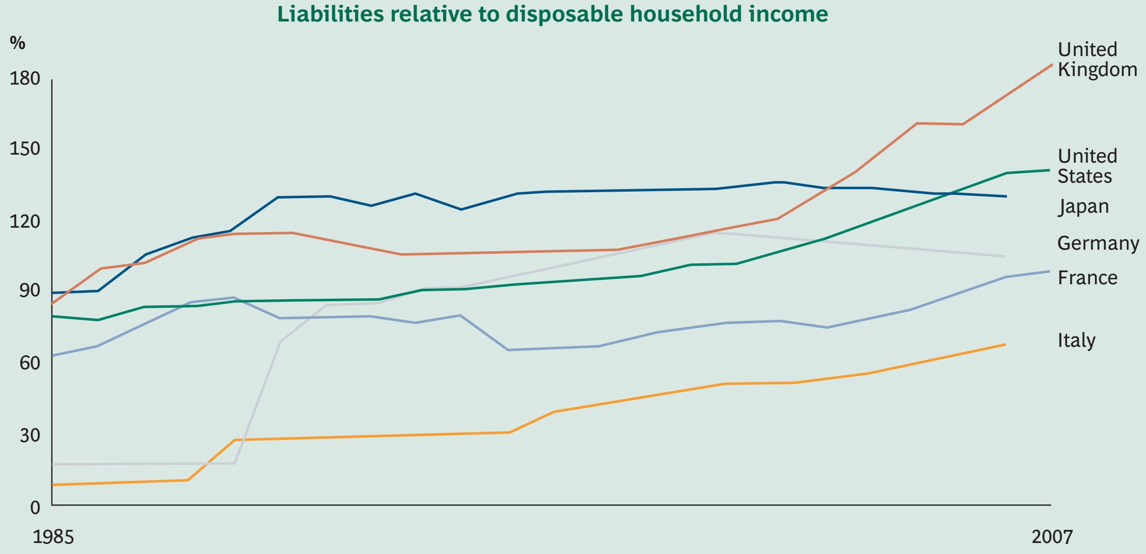
Sources: Thomson Datastream; U.S. Federal Reserve; Bureau of Economic Analysis; Barron's; Elliot Wave International; Gabelli Mathers Fund; BCG analysis.
Note: Includes financial sector debt.

Exhibit 13. Risk Premiums for U.S. Corporate Bonds Have Risen Sharply



Source: Bloomberg.
[1]As of December 12.

Exhibit 14. There Is an Overhang of Indebtedness in Other Countries as Well



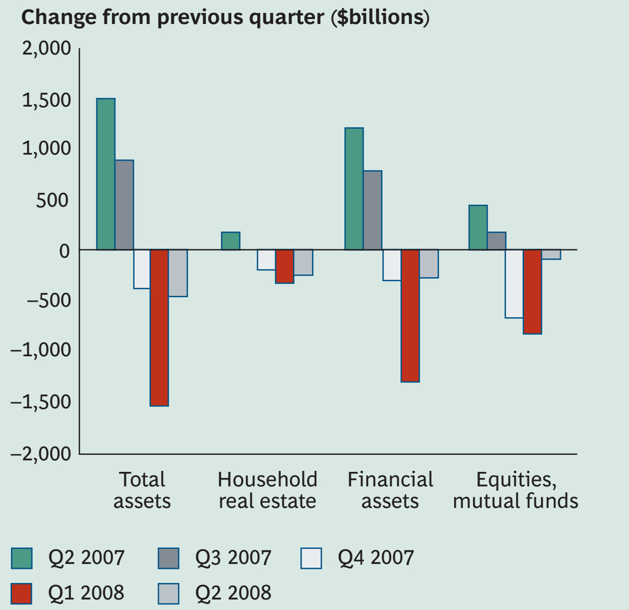
Source: OECD.

Exhibit 15. Household Savings Rates Are Languishing in Many Countries

Relative to disposable household income (%)	2006	2007	2008	2009
France	11.9	12.7	12.3	12.3
Germany	10.5	10.9	10.9	10.6
Italy	8.7	6.8	6.8	6.8
Japan	3.3	3.1	2.6	2.6
Spain	10.5	10.4	10.5	10.9
United Kingdom	4.8	2.9	2.5	2.5
United States	0.4	0.4	1.8	1.2

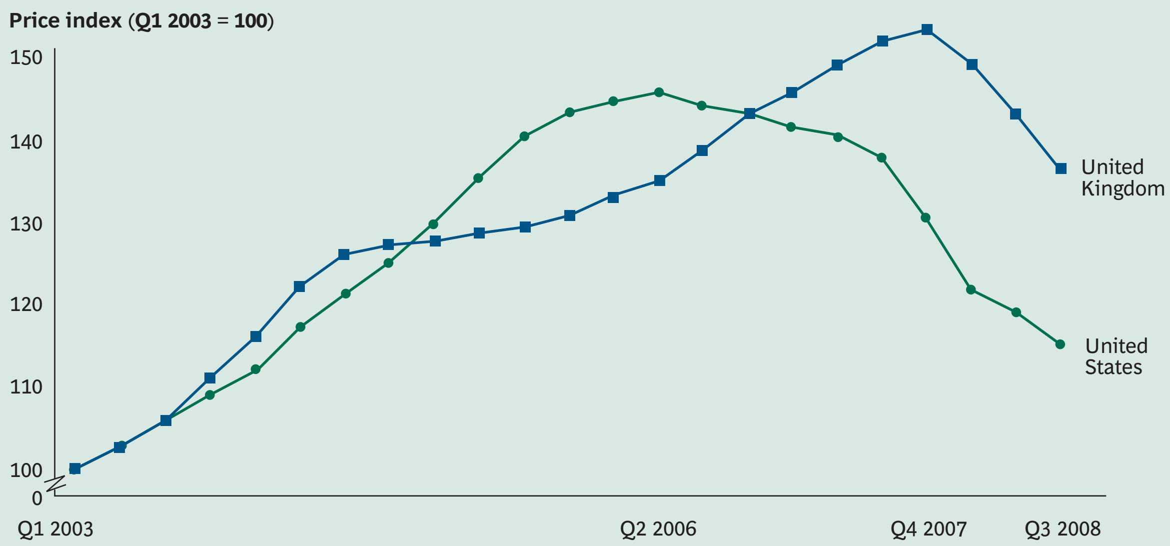
Source: OECD.

Exhibit 16. U.S. Household Wealth Has Fallen over Several Quarters



Source: World Bank Global Economic Prospects 2009.

Exhibit 17. Housing Prices Continue to Fall



Source: Thomson Datastream.

7. Appendix (3): Seminal Events in the Crisis

Many key events have punctuated the growing malaise. In this appendix, we list a few of these events—starting with an early-warning sign that occurred in the summer of 2007—as a way of illustrating how we got to where we are today.[1]

July 17, 2007. In perhaps the first major sign of things to come, Bear Stearns tells its clients that their investments in two hedge funds that were heavily exposed to the subprime market—stakes worth about $1.5 billion at the end of 2006—are nearly worthless.

January 24, 2008. Following an unusually volatile month in U.S. stock markets, the U.S. National Association of Realtors announces that, in 2007, the median price of an American single-family home fell for the first time in at least four decades. "It's the first price decline in many, many years," the trade group says. "And possibly going back to the Great Depression."

March 16. Bear Stearns is acquired for $2 a share, less than one-tenth of the firm's market price two days earlier, by JPMorgan Chase to avoid Bear Stearns going bankrupt due to losses on investments linked to subprime mortgages. The U.S. Federal Reserve and JPMorgan Chase agree to guarantee Bear Stearns's trading obligations.

July 11. U.S. federal regulators take over IndyMac Federal Bank, making it the first major U.S. bank to fail since the mortgage crisis began.

September 7. The U.S. Treasury Department announces the takeover of Fannie Mae and Freddie Mac, government-sponsored organizations that were keys to the housing market. These organizations owned or guaranteed about half of the United States' $12 trillion mortgage market.

September 14. Merrill Lynch agrees to be sold to Bank of America for about $50 billion.

September 15. Lehman Brothers files for bankruptcy protection. Peter G. Peterson, who headed Lehman in the 1970s and is a cofounder of The Blackstone Group, says, "I've been in the business 35 years, and these are the most extraordinary events I've ever seen."

September 17. The U.S. Federal Reserve lends $85 billion to American International Group (AIG) to help the insurance giant stave off bankruptcy, in return for control of the company.

September 25. Washington Mutual, the largest savings and loan organization in the United States, is seized by federal regulators in the largest bank failure in U.S. history. Regulators also arrange the sale of nearly all of WaMu to JPMorgan Chase for $1.9 billion.

October 3. President George W. Bush signs into law the Emergency Economic Stabilization Act, a $700 billion economic intervention package for the financial industry. President Bush says, "We have shown the world that the United States will stabilize our financial markets and maintain a leading role in the global economy."

October 6. The Dow Jones Industrial Average drops more than 700 points to dip below the 10,000 level for the first time in four years. Britain's FTSE 100 index slides nearly 8 percent, Germany's DAX index declines more than 7 percent, France's CAC 40 drops 9 percent, and Russia halts trading after the RTS index falls by more than 20 percent. The U.S. Federal Reserve says it will begin paying interest on commercial banks' reserves and will broaden its loan program to liquidity-strapped banks by billions of dollars.

October 8. Major central banks around the world lower their benchmark interest rates in a coordinated and unprecedented move to cut stock market losses and lubricate dry credit markets. Primary lending

1. The sources for this timeline are various research and press publications.

rates are cut half a percentage point by the U.S. Federal Reserve, the European Central Bank, the Bank of England, and the central banks of Sweden and Canada. In addition, Switzerland cuts its benchmark rate, and the Bank of Japan, without cutting its rates, approves of the moves by other central banks.

October 10. The Dow Jones Industrial Average ends a disastrous trading week with the highest volatility in its history. Over eight trading days, the Dow has plummeted 22 percent as nervous investors sell off stocks amid the deepening credit crisis and the spreading global recession. U.S. stocks have lost more than $8 trillion in value compared with 2007 market peaks.

October 11. The G7 countries meet in Washington and agree that a coordinated plan to rescue the global financial industry is needed, but fail to come up with a well-defined plan of action.

October 14. The United States announces the injection of $250 billion into the U.S. banking system in a deal that includes the government taking equity positions in banks that participate in the program. Nine major banks agree to the deal and are to receive half of the total funds.

October 16. The Baltic Dry Index, which records the price of moving raw materials by sea, tumbles to its lowest level since 2003. Ships are left without cargo to transport as cargo shipments dry up.

October 17. Oil prices fall below $70 for the first time in a year, and a leading index of commodity prices falls to a four-year low.

October 19. Seoul announces a comprehensive $130 billion rescue package for banks and companies suffering from a foreign-currency liquidity crunch. The package includes state guarantees on bank debt (up to $100 billion) for three years when Korean banks or their overseas branches take on external debt (through June 30, 2009). The government also provides the banking sector with $30 billion to support small companies.

October 21. Sweden becomes the last European country to take measures to stabilize its financial system by guaranteeing up to $205 billion of new bank borrowings. The U.S. Fed offers $540 billion to purchase short-term debt from money market mutual funds.

October 24. Goldman Sachs announces plans to lay off 10 percent of its workers in reaction to the worsening economic environment in the United States and abroad. Thirty-year rate swaps are pushed to levels that were considered to be “mathematically impossible.” The swap spread, reflecting the risk of trading with a private counterparty (as opposed to the government), has turned negative.

October 29. The U.S. Fed cuts interest rates to 1 percent and announces plans to lend $30 billion each to central banks in Brazil, Mexico, South Korea, and Singapore.

November 6. The European Central Bank and the Bank of England both cut interest rates—the former by half a percentage point to 3.25 percent, and the latter by 1.5 percentage points to 3 percent—because of a worsening economic outlook.

November 7. General Motors warns that it will run out of cash necessary to keep its business alive in the first half of 2009.

November 14. New data show that Germany has officially entered a recession. After a 0.4 percent decline in economic activity in the second quarter of 2008, GDP shrank by an additional 0.5 percent in the third quarter.

November 15. After a 0.2 percent fall in GDP in the third quarter, the Eurozone follows Germany into recession.

November 18. To deal with the financial crisis, Citigroup cuts 52,000 more jobs. Japan enters its first recession in seven years after its economy contracts in both the second and third quarters.

November 25. The U.S. government agrees to provide Citigroup with a rescue package of $300 billion.

December 4. The European Central Bank reduces its benchmark interest rate by three-quarters of a percentage point, to 2.5 percent, the largest cut in the bank's history. The Bank of England reduces interest rates by a full percentage point, to 2 percent, the lowest level in 50 years. President Nicolas Sarkozy says that France will spend €26 billion over the next two years to ease the effects of the global recession and increasing unemployment.

December 5. The U.S. Bureau of Labor Statistics announces that U.S. employers cut 533,000 jobs in November, the largest monthly drop since 1974. The U.S. unemployment rate rises to 6.7 percent. Roughly 1.9 million jobs have been lost in the United States in the past year, two-thirds of them since September.

December 8. The White House and Democratic congressional leaders announce that they are nearing agreement on what would be a $15 billion bailout of the U.S. automobile industry.

December 9. In Japan, GDP figures reveal that the economy shrank by 0.5 percent in the third quarter, much more than the preliminary figure of 0.1 percent. Analysts note that leading manufacturers are reducing output to cope with declining global demand. Sony announces that it will eliminate 16,000 jobs and reduce planned investments in order to cut $1.1 billion a year in costs because of the deteriorating global economic outlook.

December 12. The U.S. Senate defeats the bailout bill for American carmakers.

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