

SEPTEMBER 11, 2009

## FINANCIAL CONDITIONS WATCH

### GLOBAL FINANCIAL MARKET TRENDS & POLICY

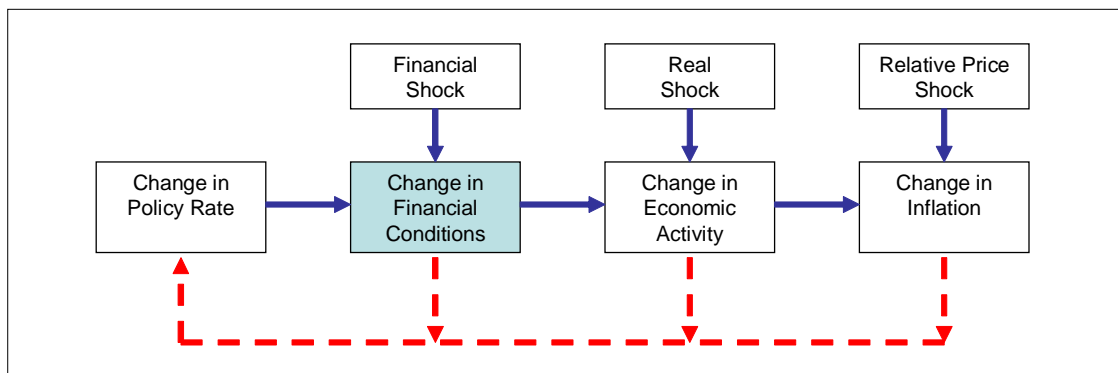
MICHAEL R. ROSENBERG

#### Inside This Issue:

#### Looking Forward, Looking Back —

U.S. Financial Conditions & the U.S. Economic Outlook

Could the 2007-09 Economic and Financial Crisis Have Been Anticipated?



"Monetary policy works in the first instance by affecting **financial conditions**, including the levels of interest rates and asset prices. Changes in **financial conditions** in turn influence a variety of decisions by households and firms, including choices about how much to consume, to produce, and to invest."

*Federal Reserve Chairman Ben S. Bernanke, March 2, 2007*

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## Yield Spread/Volatility Watch

## Financial Conditions Relative to Pre-Crisis Average

	Latest	--- Jan. Avg. ---	2000-June 2007 Std.Dev.	Z-Score
<b>U.S. Money-Market Spreads</b>				
TED Spread	16	32.1	16.7	-0.97
Libor/OIS Spread	12	11.0	3.5	0.19
CP/T-Bill Spread	22	23	17	-0.06
<b>U.S. Yield Curve Spreads</b>				
2-Yr./Fed Funds Spread	62	35.0	68.1	0.39
10-Yr./3-Mo. Spread	316	151.2	140.4	1.17
10-Yr./2-Yr. Spread	243	101.7	101.4	1.39
<b>U.S. Agency Bond Spreads</b>				
2-Yr. Agency Spread	-5	24.8	11.6	-2.57
10-Yr. Agency Spread	45	55.7	22.2	-0.48
<b>U.S. Municipal Bond Spreads</b>				
AAA Muni/10-Yr. Spread	-34	-74.8	25.7	1.60
AA Muni/10-Yr. Spread	-21	-65.9	26.4	1.72
A Muni/10-Yr. Spread	160	22.9	44.5	3.09
Baa Bond/10-Yr. Spread	273	57.9	53.9	4.00
<b>U.S. Investment-Grade Corporate Spreads</b>				
AAA/10-Yr. Gov't Spread	182	143.2	51.2	0.77
AA/10-Yr. Gov't Spread	194	171.3	56.0	0.41
A/10-Yr. Gov't Spread	227	197.1	59.3	0.51
Baa/10-Yr. Gov't Spread	306	236.1	60.5	1.16
<b>U.S. Swap Spreads</b>				
U.S. 2-Yr. Swap Spread	31	44.3	13.8	-1.00
U.S. 10-Yr. Swap Spread	15	61.8	25.0	-1.87
U.S. 1-Yr. Fwd. Swap Yld.(%)3.8		5.5	0.9	-2.02
<b>North American Credit Default Swap Spreads</b>				
IBOX 5-Yr. Invest. Grade	110	47.2	9.9	6.40
IBOX Crossover Index	648	179.0	34.7	13.52
<b>High-Yield Spreads</b>				
High-Yield Corp. Spread	876	578.2	214.0	1.39
EMBI+ Spread	361	528.0	255.0	-0.65
<b>U.S. Inflation Protected Bond Yields</b>				
TIPS Bond Yield(%)	1.55	2.6	0.8	-1.29
Breakeven Inflation Rate (%)	1.75	2.1	0.4	-1.02
<b>U.S. Equity Market</b>				
S&P 500	1044	1194.1	176.8	-0.85
S&P Financials	196	396.4	59.7	-3.35
Ambac	1.60	65.7	15.0	-4.28
MBIA	6.46	53.5	9.6	-4.88
VIX Index	23.8	19.2	6.9	0.68
<b>Fixed Income/FX Market Volatility</b>				
Move Index	117	95.8	23.5	0.92
Swaption Volatility Index	126	103.7	14.9	1.48
Euro-Dollar Volatility	12.0	10.0	2.1	0.92
Dollar-Yen Volatility Index	14.4	9.5	1.6	3.07

## Notes:

Unless noted otherwise, all indicators are basis-point yield spreads. Indicators highlighted in orange are significantly above or below their January 7, 2000-June 29, 2007 average levels.

## Financial Conditions Relative to Crisis-Period Average

	Latest	--- 52-Week Avg. ---	Std.Dev.	Z-Score
<b>U.S. Money-Market Spreads</b>				
TED Spread	16	122.4	100.7	-1.06
Libor/OIS Spread	12	106.5	81.3	-1.17
CP/T-Bill Spread	22	129.1	107.7	-0.99
<b>U.S. Yield Curve Spreads</b>				
2-Yr./Fed Funds Spread	62	55.9	32.6	0.18
10-Yr./3-Mo. Spread	316	299.7	44.1	0.36
10-Yr./2-Yr. Spread	243	213.4	35.9	0.82
<b>U.S. Agency Bond Spreads</b>				
2-Yr. Agency Spread	-5	59.8	49.9	-1.30
10-Yr. Agency Spread	45	71.0	25.8	-1.01
<b>U.S. Municipal Bond Spreads</b>				
AAA Muni/10-Yr. Spread	-34	30.9	62.6	-1.03
AA Muni/10-Yr. Spread	-21	44.9	62.7	-1.04
A Muni/10-Yr. Spread	160	230.4	68.1	-1.03
Baa Bond/10-Yr. Spread	273	330.9	71.3	-0.81
<b>U.S. Investment-Grade Corporate Spreads</b>				
AAA/10-Yr. Gov't Spread	182	228.0	36.9	-1.24
AA/10-Yr. Gov't Spread	194	284.4	54.6	-1.65
A/10-Yr. Gov't Spread	227	339.7	71.6	-1.57
Baa/10-Yr. Gov't Spread	306	476.7	104.9	-1.62
<b>U.S. Swap Spreads</b>				
U.S. 2-Yr. Swap Spread	31	70.6	33.3	-1.20
U.S. 10-Yr. Swap Spread	15	27.7	14.3	-0.88
U.S. 1-Yr. Fwd. Swap Yld.(%)3.8		3.8	0.6	0.09
<b>North American Credit Default Swap Spreads</b>				
IBOX 5-Yr. Invest. Grade	110	177.3	45.6	-1.47
IBOX Crossover Index	648	534.2	142.5	0.80
<b>High-Yield Spreads</b>				
High-Yield Corp. Spread	876	1327.0	323.7	-1.39
EMBI+ Spread	361	552.5	137.0	-1.39
<b>U.S. Inflation Protected Bond Yields</b>				
TIPS Bond Yield(%)	1.55	2.0	0.5	-0.92
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<b>Fixed Income/FX Market Volatility</b>				
Move Index	117	163.0	35.3	-1.29
Swaption Volatility Index	126	115.6	12.4	0.83
Euro-Dollar Volatility	12.0	16.5	3.6	-1.24
Dollar-Yen Volatility Index	14.4	16.6	2.9	-0.78

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**Overview**

**U.S. Financial Conditions — Looking Forward, Looking Back**

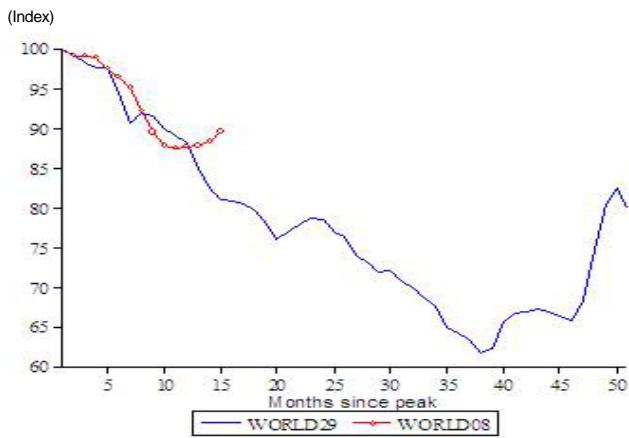
**Looking Forward—U.S. Financial Conditions and the U.S Economic Outlook**

Numerous economists and market pundits have tried to draw parallels between the 2008-09 global recession and the Great Depression of the 1930s. For example, as reported by Professors Barry Eichengreen and Kevin O'Rourke, until recently world industrial production, world equity markets, and world trade were contracting at a pace equal to or, in some cases, greater than the contraction experienced in the 1930s (see Figures 1-3). Fortunately for the world, the 2008-09 path is beginning to

diverge in a more favorable way from the path taken in the 1930s.

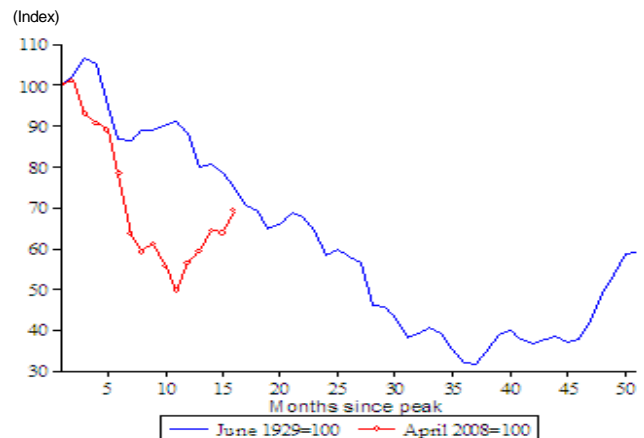
Most of the credit for this more favorable path goes to policymakers, who learned from the policy mistakes of the 1930s and have attacked the current crisis head on. In the last 12 months, there have been massive injections of liquidity by the leading central banks, implicit and explicit government guarantees to prevent major financial institutions from failing, and massive infusions of government funds to boost the capital of major banks.

**Figure 1**  
**World Industrial Production in 1929 and 2008**



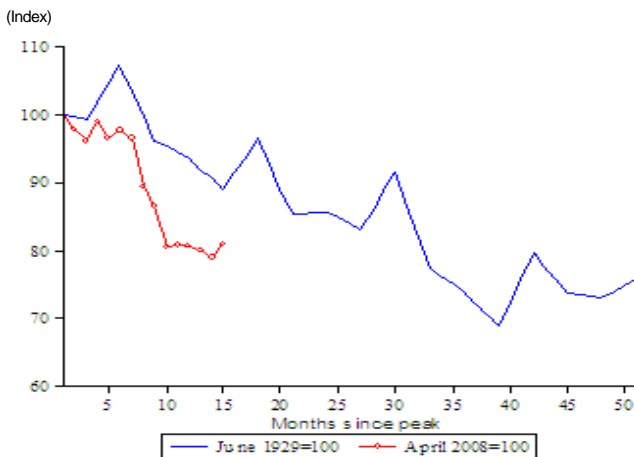
Source: Barry Eichengreen Kevin H. O'Rourke, "A Tale of Two Depressions", VOX, September 1, 2009, <http://www.voxeu.org/index.php?q=node/3421>

**Figure 2**  
**World Stock Markets in 1929 and 2008**



Source: Barry Eichengreen Kevin H. O'Rourke, "A Tale of Two Depressions", VOX, September 1, 2009, <http://www.voxeu.org/index.php?q=node/3421>

**Figure 3**  
**World Trade Volume in 1929 and 2008**



Source: Barry Eichengreen Kevin H. O'Rourke, "A Tale of Two Depressions", VOX, September 1, 2009, <http://www.voxeu.org/index.php?q=node/3421>

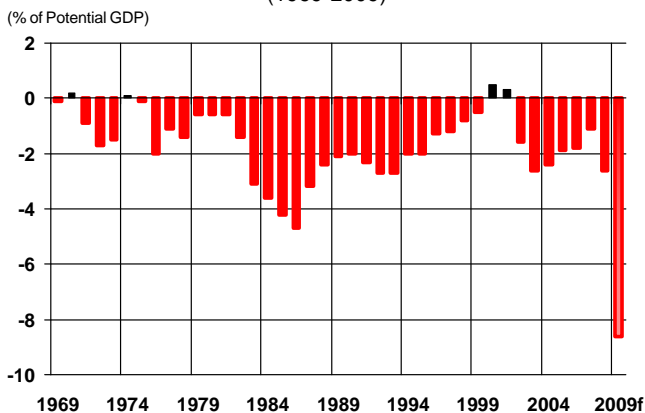
This monetary stimulus, coupled with an enormous boost coming from government fiscal stimulus initiatives is now expected to push global real GDP growth back into positive territory in the second half of this year and into the first half of 2010 as well. For example, the U.S. *cyclically adjusted* budget deficit is projected to more than triple in size to -8.6% of GDP in 2009, from -2.7% in 2008 (see Figure 4). In fact, if there is any debate among economists regarding the prospects for recovery at this point, most of it is focused on how strong the recovery is likely to be and whether the upturn will prove to be sustainable once the initial policy-induced growth spurt is behind us.

There are several reasons to be optimistic about the year-ahead economic outlook. First, Bloomberg's Financial Conditions Index {BFCIUS Index} continues to rebound strongly. The BFCIUS index—which monitors the level of

stress in the U.S. financial markets by gauging how far trends in U.S. money-market spreads, bond-market spreads, and key equity-market indicators are deviating from historical norms—is now less than one standard deviation below normal levels, after reaching 11.5 standard deviations below historical norms at the depth of the crisis last autumn.

The improvement in financial conditions is a direct result of the Federal Reserve's aggressive approach to monetary-policy easing in the past year and, as evident in Figure 6, this points to banks loosening their lending standards in the coming months. And as we show in Figure 7, the reason that the trend in bank lending standards is so important is that it tends to lead changes in U.S. real GDP growth.

Figure 4  
**U.S. Cyclically Adjusted Budget Balance**  
(1969-2009)



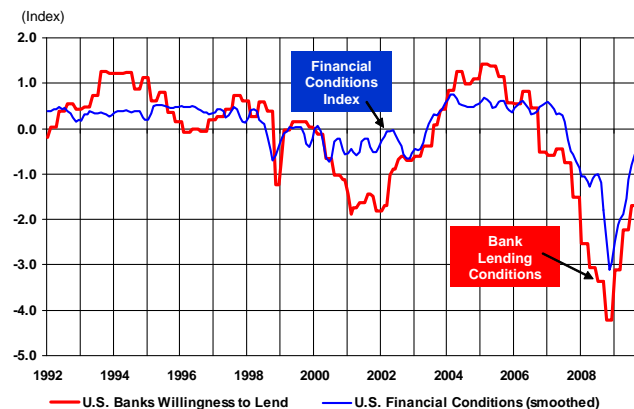
Source: Office of Management and Budget;

Figure 5  
**U.S. Financial Conditions**  
(BFCIUS Index, 1995-2009)



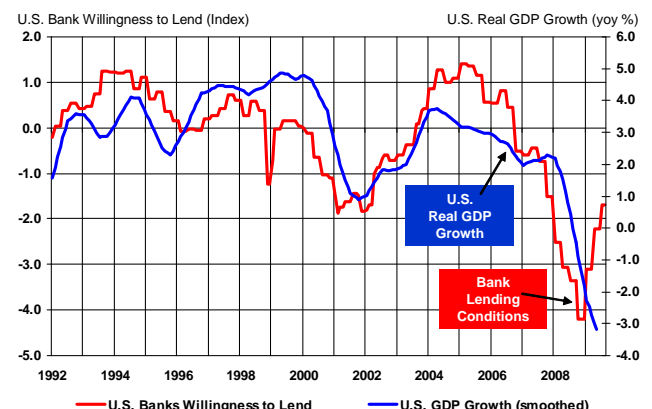
Source: Bloomberg

Figure 6  
**U.S. Financial Conditions & U.S. Bank Lending Conditions**  
(BFCIUS Index and Fed Senior Loan Officer Opinion Survey)



Source: Bloomberg

Figure 7  
**U.S. Bank Lending Conditions & U.S. Real GDP Growth**  
(Fed Senior Loan Officer Opinion Survey)



Source: Bloomberg

While we are encouraged by the fact that financial conditions and bank lending conditions have improved—both of which should be positive for U.S. real GDP growth—we would first like to see financial conditions recover to pre-crisis levels. If the BFCIUS index were to improve further from -0.6 to 0.0 (or even better, move into positive territory), we would fully embrace the notion that economic growth will recover strongly and on a sustained basis.

For now, with the VIX index of equity market volatility still elevated in the mid-20s (see Figure 8) and corporate bond spreads still uncomfortably wide (see Figure 9), it appears that BFCIUS is likely to be stuck at around -0.6 to

-1.0 in the period ahead. Such a reading would be broadly consistent with real GDP growth of around 2% per annum, a generally subpar pace for the first year of an economic recovery, but nevertheless one that is in positive territory.

A second factor that reinforces this positive growth outlook is the recent gains in the Institute for Supply Management (ISM) purchasing managers index. Led by significant gains in production (see Figure 10) and new orders (Figure 11), the ISM composite index (Figure 12) has rebounded strongly in recent months, and at 52.9 now lies above the 50.0 threshold for the first time since January 2008.

Figure 8

**VIX Index of Equity Market Volatility**  
(2005-2009)



Source: Bloomberg

Figure 9

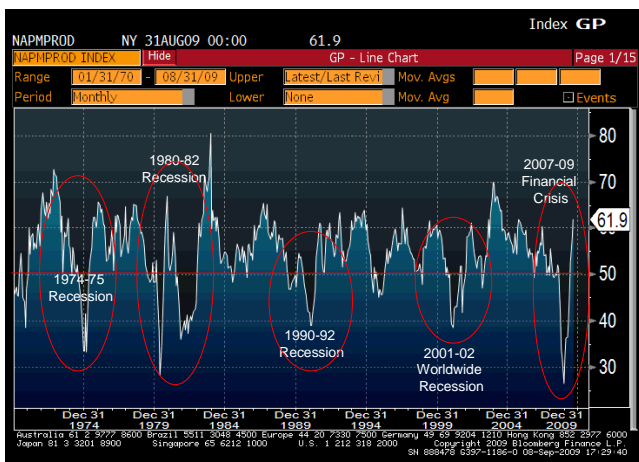
**Corporate Baa/Treasury Spread**  
(2005-2009)



Source: Bloomberg

Figure 10

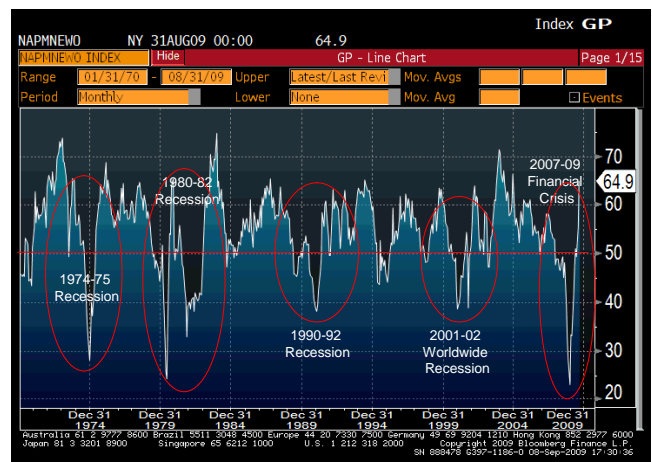
**U.S. ISM Production Index**  
(1970-2009)



Source: Bloomberg

Figure 11

**U.S. ISM New Orders Index**  
(1970-2009)



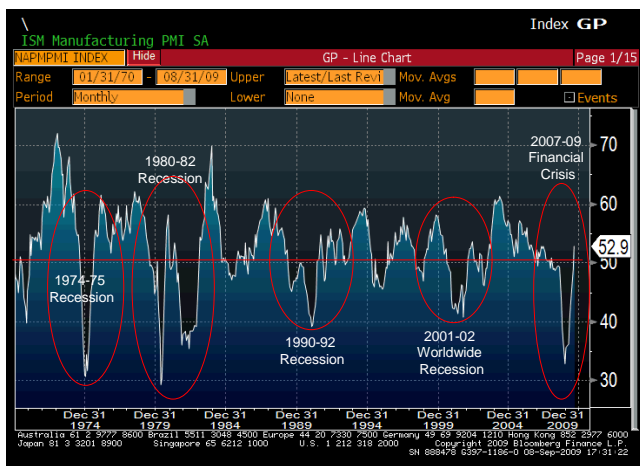
Source: Bloomberg

This bodes well for the medium-term growth outlook in the U.S. This is evident in Figure 13 where it is shown that there exists a strong positive relationship between the trend in the ISM composite index and the trend in U.S. real GDP growth. Based on current readings of the ISM composite index, Figure 13 suggests that U.S. real GDP growth could rebound at a 3%-4% annualized pace heading into 2010. Even if real GDP growth were to fall a bit short of this pace, it would nevertheless be a marked improvement from the negative 3.9% year-over-year pace registered in the second quarter of 2009.

While the recent policy-induced improvement in financial conditions, coupled with the more favorable outlook reported by purchasing managers at U.S. manufacturing firms, bodes well for a return to positive real GDP growth in the U.S. in coming quarters, many investors are still nervous about a possible double-dip scenario playing itself out, where growth begins to tail off by mid-2010 once policy stimulus initiatives begin to wane. Investors naturally fear that the U.S. could suffer the same fate as Japan, where the residual effects of Japan's financial crisis contributed to a persistent slump in domestic growth and equity prices for more than a decade. However, as we show below, not all financial crises follow the path that Japan took.

Figure 12

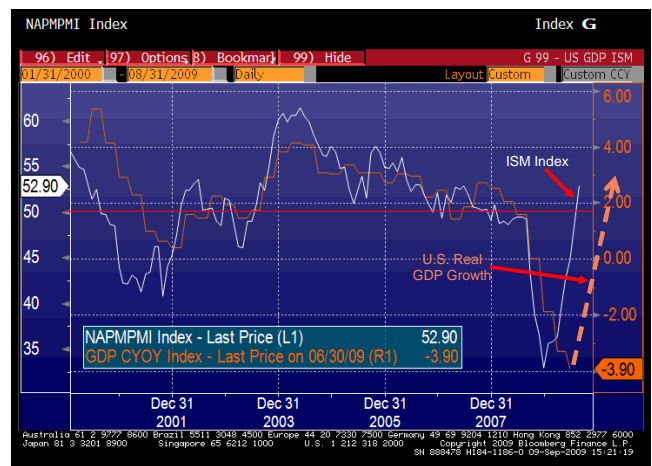
**U.S. ISM Purchasing Managers Index (1970-2009)**



Source: Bloomberg

Figure 13

**U.S. ISM Purchasing Managers Index & Real GDP Growth (2000-2009)**



Source: Bloomberg

Consider the economic and financial crisis of 1907. A number of economists (see Robert F. Bruner and Sean D. Carr's popular book, *The Panic of 1907*) have tried to draw parallels between today's crisis and the crisis that affected the U.S. economy and financial markets a century ago. Indeed, today's crisis may be more similar to the 1907 crisis episode than to the 1929-32 crisis episode.

Although both the 1907 and the 1929-32 episodes witnessed great falls in output and equity prices, the policy responses and recovery paths differed greatly. According to Bruner and Carr, equity prices fell by 37% peak-to-trough in 1907 while the unemployment rate rose from 2.8% to 8.0%. But unlike the response to the 1929 crash, the 1907 panic was rapidly brought to a halt by the financial assistance and leadership provided by J. Pierpont Morgan—remember that the Federal Reserve did not come into existence until 1914—sending the U.S. economy onto a path to recovery.

What makes the panic of 1907 so interesting from today's vantage point is that despite the financial panic and sharp

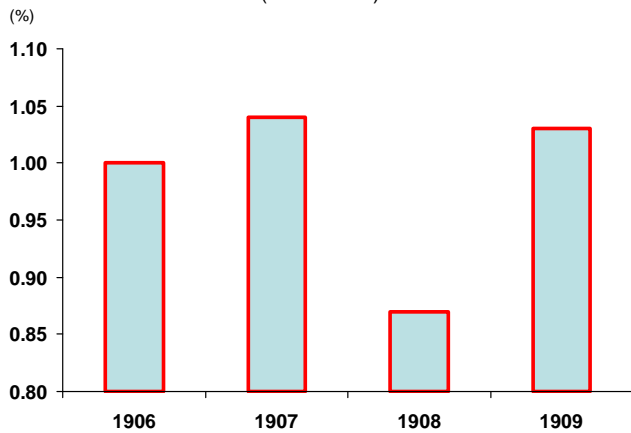
contraction in growth, the recovery sparked by J. Pierpont Morgan's intervention was actually quite robust. This can be seen in Figures 14 and 15, both of which appear in Bruner and Carr's book. As shown, both industrial production and the Dow Jones Industrial Average experienced sharp declines in 1907 and 1908, but by the end of 1909, both variables had recovered strongly to their pre-crisis levels.

What the 1907 episode suggests is that the recovery path from a major financial crisis need not be a feeble, drawn-out process. Rather, recovery paths can be robust if policy steps are taken to insure that underlying financial conditions improve significantly on a sustained basis.

So far in 2007-09, it has been Fed Chairman Ben Bernanke who has provided the liquidity and credit-easing initiatives to ease financial conditions. The question now is whether the U.S. economy will follow the same recovery path that it took a century ago when financial assistance was provided to end that crisis.

Figure 14

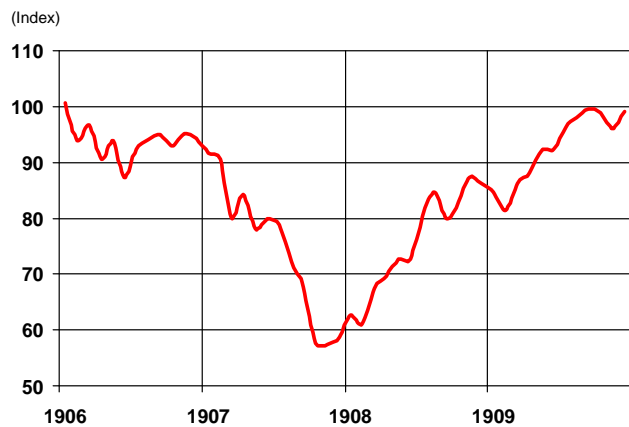
**U.S. Industrial Production during the Panic of 1907**  
(1906-1909)



Source: Robert F. Bruner and Sean D. Carr, *The Panic of 1907*, John Wiley & Sons, Inc., 2007, page 144.

Figure 15

**Dow Jones Industrials Index during the Panic of 1907**  
(1906-1909)



Source: Robert F. Bruner and Sean D. Carr, *The Panic of 1907*, John Wiley & Sons, Inc., 2007, page 144.



**Looking Backward—Could the 2007-09 Economic and Financial Crisis Have Been Anticipated?**

Economists and policymakers are often asked to devise early warning systems that could successfully anticipate financial crises. A recent Federal Reserve Bank of San Francisco working paper (Andrew K. Rose and Mark M. Spiegel, "Cross Country Causes and Consequences of the 2008 Crisis: Early Warning") examined a wide array of economic and financial variables to assess their predictive power in terms of warning of an impending crisis. Unfortunately, the authors "found almost none of (their) posited variables seem to be statistically significant determinants of crisis severity." They concluded by noting that "model-based early warning systems are unlikely to predict future crises accurately."

These findings raise a number of important issues. First, if even after the fact an early warning system could not have been built to warn of the impending financial crisis of 2007-09, is it really fair to blame former Fed Chairman Alan Greenspan or current Fed Chairman Ben Bernanke for not having taken steps to head off the crisis? Second, is it fair to fault investors who lost considerable sums of money during the financial-market meltdown when in fact no economic or financial indicator existed that would have successfully warned them to get out of harm's way?

These issues prompted us to take a closer look at our own Bloomberg Financial Conditions Index to see whether it could have been used to successfully warn of the impending 2007-09 financial crisis. Most economists would argue that the seeds of the financial crisis were planted many years prior to the onset of the crisis. Overly easy

financial conditions in the years leading up to the crisis, generated in large part by low short-term and long-term interest rates, narrow credit spreads, increased credit availability, and greater financial leverage helped fuel an equity and housing price bubble that eventually burst when the financial crisis took hold.

If, in fact, financial conditions were overly easy heading into the crisis, this should have been reflected in a high, positive reading in our Bloomberg Financial Conditions Index. While the BFCIUS index was positive—averaging about +0.5 standard deviations above normal—between early 2004 and mid 2007 (see Figure 16), to be fair, it never got to the point where it was screaming that U.S. financial conditions had moved to levels that were totally out of line with historical norms.

This led us to consider the possibility that the BFCIUS index might need to be expanded to include other financial variables that might have successfully warned of the impending financial crisis.

We first considered adding variables that would capture the effect of the two major asset-market bubbles that affected the U.S. economy in the last decade—the tech bubble in the late 1990s and the housing bubble in the early-to-mid 2000s. To capture the tech bubble, we constructed a simple ratio of Nasdaq share prices {CCMP Index} to the overall S&P 500 index {SPX Index}. As Figure 17 shows, the ratio of tech share prices to the overall S&P 500 index surged to unprecedented heights by the end of 1999, just prior to the downturn in the U.S. stock market in 2000 and the U.S. recession in 2001.

Figure 16

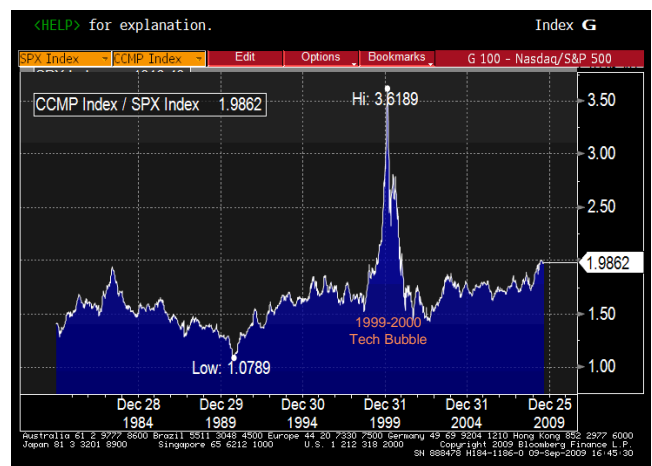
**Bloomberg's Financial Conditions Index Prior to the 2007-09 Crisis**



Source: Bloomberg

Figure 17

**The 1999-2000 Tech Bubble**  
(Ratio of the Nasdaq Index to the S&P 500 Index)



Source: Bloomberg

To capture the housing bubble, we constructed the ratio of the S&P Homebuilders index {S5Home Index} to the overall S&P 500 index {SPX Index}. This ratio also surged to unprecedented heights in 2005-06 (see Figure 18), which should have warned policymakers and investors that something was amiss.

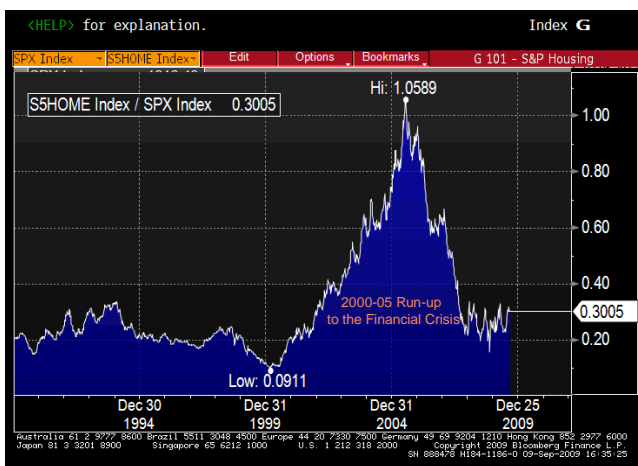
We then considered adding variables to capture the low level of long-term interest rates that existed earlier this decade to see what impact that might have had on financial conditions. Fed Chairman Greenspan labeled the persistence of low levels of long-term interest rates—despite Fed rate hikes during the 2004-06 period—as the "bond market conundrum". The unusually low level of nominal yields in the U.S. as reflected in five-year Treasury yields relative to U.S. nominal GDP growth (see Figure 19), and real yields as reflected in Baa corporate bond yields less the year-over-year U.S. inflation rate (see Figure 20), dur-

ing the 2004-07 period suggests that U.S. financial conditions were quite easy for a sustained period leading up to the crisis.

The BFCIUS index monitors the level of financial stress in the U.S. financial markets by tracking how far trends in U.S. money-market spreads, bond-market spreads, and broad equity prices and volatility trends are deviating from historical norms. As presently constructed, BFCIUS does not capture sectoral asset-price bubbles such as the tech and housing price bubbles, nor does it capture the effect of low levels of nominal and real long-term interest rates that prevailed in the earlier part of this decade. To remedy this, we decided to construct an experimental financial conditions index that appends those variables to our existing BFCIUS index. We call this extended index, BFCIUS+.

Figure 18

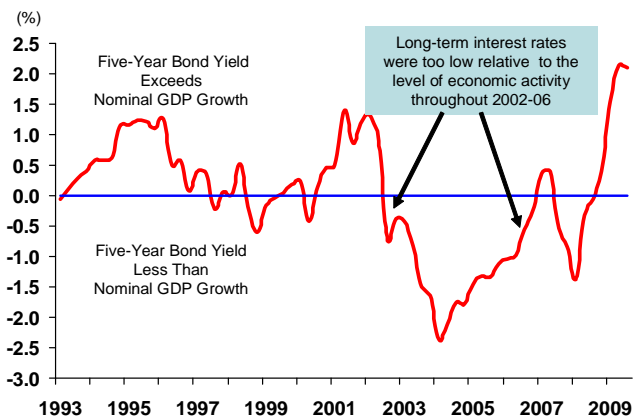
**The 2000-07 U.S. Housing Bubble**  
(Ratio of S&P Homebuilding Index to the S&P 500 Index)



Source: Bloomberg

Figure 19

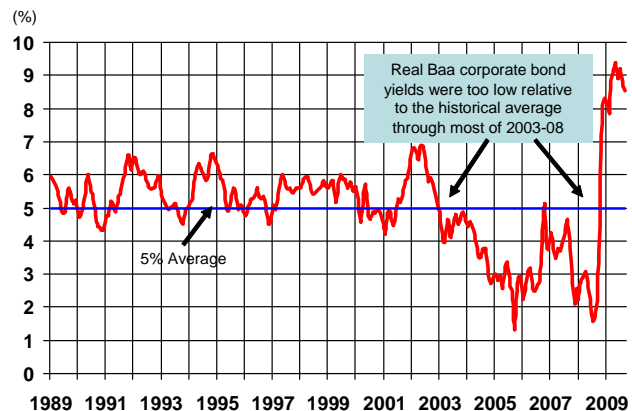
**U.S. Five-Year Note Yields less U.S. Nominal GDP Growth**  
(1993-2009)



Source: Bloomberg

Figure 20

**U.S. Real Corporate Baa Bond Yields**  
(1993-2009)



Source: Bloomberg

Figure 21 illustrates the differences in the construction of the BFCIUS and BFCIUS+ indices. Figure 22 shows the time-series path that the two indices have taken over the past 12 years. While the two series do move in tandem most of the time, the BFCIUS+ index rose more sharply into positive territory during the 2004-07 housing bubble.

The relatively high positive reading of BFCIUS+ in 2004-07 (around +2.0 standard deviations above normal) suggests that U.S. financial conditions were overly easy heading into the crisis, and thus would have warned policymakers that corrective steps were required. This would not have been the case using the BFCIUS index.

In addition to the fact that BFCIUS+ would have done a better job of warning about existence of overly easy financial conditions heading into the crisis, the longer-term trend in BFCIUS+ actually does a better job than BFCIUS

in explaining the long-term trend in U.S. nominal GDP growth. Indeed, the correlation between BFCIUS+ and U.S. nominal GDP growth is a robust 0.83 over the 1997-2009 period, which is considerably larger than the 0.74 correlation between BFCIUS and U.S. nominal GDP growth. As shown in Figure 23, there is a strong positive correlation between the smoothed trends in BFCIUS+ and nominal GDP growth over the 1997-2009 period.

We view BFCIUS+ as a first stab at creating an early warning system to predict the economic fallout from large swings in U.S. financial conditions. In future issues of *Financial Conditions Watch*, we will provide regular updates on the trends in U.S. economic activity and our evolving BFCIUS+ index.

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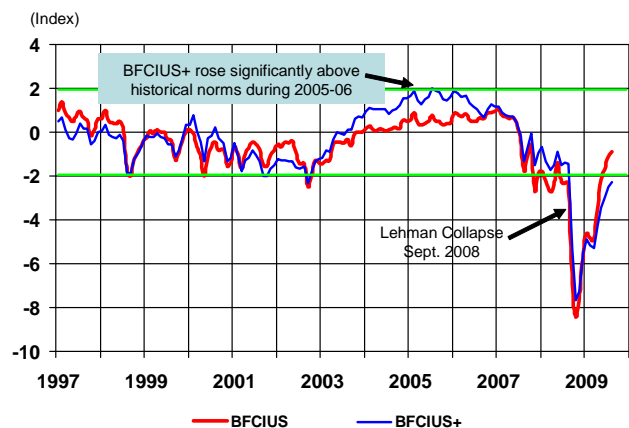
Figure 21

	----- Weights -----	
	BFCIUS	BFCIUS+
<b>Money Market</b>		
Ted Spread	11.1%	6.7%
Commerical Paper/T-Bill Spread	11.1%	6.7%
Libor-OIS Spread	11.1%	6.7%
	<b>33.3%</b>	<b>20.0%</b>
<b>Bond Market</b>		
Baa/Treasury Spread	6.7%	4.0%
Muni/Treasury Spread	6.7%	4.0%
Swaps/Treasury Spread	6.7%	4.0%
High Yield/Treasury Spread	6.7%	4.0%
Agency/Treasury Spread	6.7%	4.0%
	<b>33.3%</b>	<b>20.0%</b>
<b>Equity Market</b>		
S&P 500 Share Prices	16.7%	10.0%
VIX Index	16.7%	10.0%
	<b>33.3%</b>	<b>20.0%</b>
<b>Asset Bubbles</b>		
Nasdaq/S&P 500 Ratio	--	10.0%
S&P Homebuilders/S&P 500 Ratio	--	10.0%
	--	<b>20.0%</b>
<b>Equilibrium Yield Gap</b>		
5-Yr. Treasury Yield less Nom. GDP Growth	--	10.0%
Real Baa Corporate Yield less Average	--	10.0%
	--	<b>20.0%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>

Source: Bloomberg

Figure 22

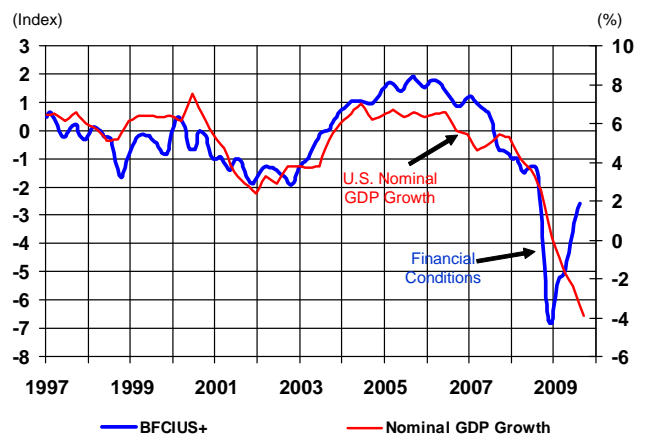
**Comparison of the BFCIUS and BFCIUS+ Indices**  
 (Month-End Values, 1997-2009)



Source: Bloomberg

Figure 23

**BFCIUS+ and U.S. Nominal GDP Growth**  
 (Month-End Values, 1997-2009)



Source: Bloomberg

## Bloomberg Financial Conditions Index

Bloomberg's composite Financial Conditions Index (BFCIUS Index) tracks the overall stress in the U.S. money market, bond market, and equity market and provides a useful gauge to assess the availability and cost of credit in the U.S. financial market.

The table below lists the components and weights used to calculate the financial conditions index. The spreads

and indices are normalized and combined, and then presented in BFCIUS Index as a Z-score (defined as the number of standard deviations that financial conditions lie above or below the average level of financial conditions observed during the January 1994-June 2008 period).

According to the index, U.S. financial conditions are now roughly 0.6 standard deviations below their neutral level.

### Bloomberg's U.S. Financial Conditions Index Components and Weights

	Index Weight
<b>Money Market</b>	
Ted Spread	11.1%
Commerical Paper/T-Bill Spread	11.1%
Libor-OIS Spread	11.1%
	<b>33.3%</b>
<b>Bond Market</b>	
Investment-Grade Corporate/Treasury Spread	6.7%
Muni/Treasury Spread	6.7%
Swaps/Treasury Spread	6.7%
High Yield/Treasury Spread	6.7%
Agency/Treasury Spread	6.7%
	<b>33.3%</b>
<b>Equity Market</b>	
S&P 500 Share Prices	16.7%
VIX Index	16.7%
	<b>33.3%</b>
<b>Total</b>	<b>100%</b>

### Bloomberg's Financial Conditions Index (BFCIUS Index, Daily Z-Score Values, 2000-09)



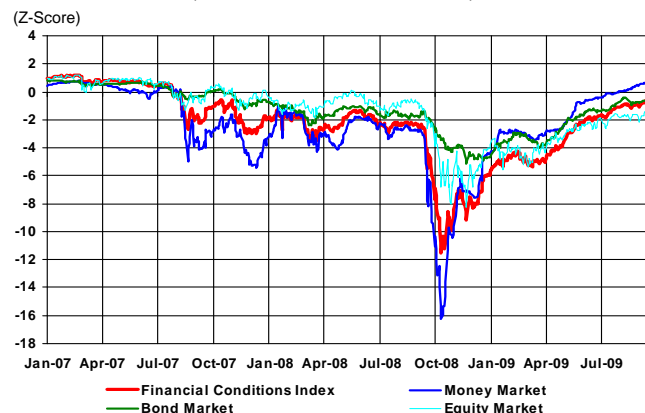
Source: Bloomberg

## Contributions of the Money, Bond, and Equity Markets to Financial Conditions

The U.S. money market, which was the first sector to react to the onset of the financial crisis in the summer of 2007, is now the first sector to reach positive territory again. The Libor/OIS, Ted, and 90-Day Commercial paper spreads are now below their longer-term averages, signaling the money-market's confidence in the Fed's ability to resuscitate the financial markets.

Corporate and high-yield bond spreads remain wider than normal, however, which perhaps reflects market anxiety over the possibility of a double-dip recession. And despite the recent gains in the equity market, the S&P 500 remains below its long-term trend, and the VIX index of S&P volatility remains higher than normal.

### Financial Conditions Index Components (Normalized Values, 2007-09)



Source: Bloomberg

## Federal Reserve Policy Watch

### Modified Taylor Rule Estimate of the Fed Funds Rate (1987-2009)

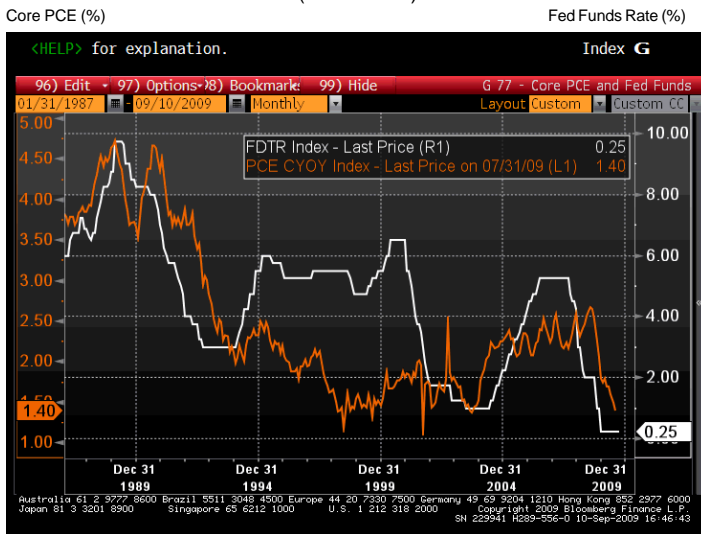


### Fed Funds Rate Outlook Matrix

Modified Taylor Rule Estimates of the Fed Funds Rate at Selected Levels of Inflation and Unemployment

		Unemployment Rate								
		8.75	9.00	9.25	9.50	9.70	9.75	10.00	10.25	10.50
Core PCE Inflation Rate	0.50	-6.75	-7.25	-7.75	-8.25	-8.65	-8.75	-9.25	-9.75	-10.25
	0.75	-6.38	-6.88	-7.38	-7.88	-8.28	-8.38	-8.88	-9.38	-9.88
	1.00	-6.00	-6.50	-7.00	-7.50	-7.90	-8.00	-8.50	-9.00	-9.50
	1.25	-5.63	-6.13	-6.63	-7.13	-7.53	-7.63	-8.13	-8.63	-9.13
	1.40	-5.40	-5.90	-6.40	-6.90	-7.30	-7.40	-7.90	-8.40	-8.90
	1.50	-5.25	-5.75	-6.25	-6.75	-7.15	-7.25	-7.75	-8.25	-8.75
	1.75	-4.88	-5.38	-5.88	-6.38	-6.78	-6.88	-7.38	-7.88	-8.38
	2.00	-4.50	-5.00	-5.50	-6.00	-6.40	-6.50	-7.00	-7.50	-8.00
2.25	-4.13	-4.63	-5.13	-5.63	-6.03	-6.13	-6.63	-7.13	-7.63	

### Core PCE Inflation and the Nominal Fed Funds Rate (1987-2009)



U.S. Money-Market

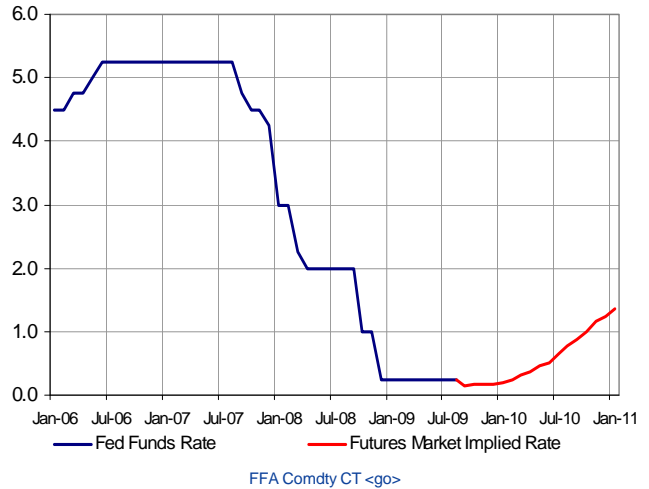
TED Spread

(Three-Month US\$ Libor less Three-Month T-Bill Rate)



Market Expectations of the Fed Funds Rate

(Actual Fed Funds Rate and the Futures Implied Rate)



U.S. Libor-OIS Spread

(Three-Month US\$ Libor less Three-Month Swap Rate)



Market Expectations of the Three-Month Euro-\$ Rate

(CME 90-Day Euro-\$ Futures)



Commercial Paper/Three-Month T-Bill Spread

(90-Day Commercial Paper less 3-Mo. T-Bill Rate)



# U.S. Treasury Yield-Curve Spreads

**U.S. 2-Year/Fed Funds Rate Spread**  
(Two-Year Treasury Yield less Fed Funds Rate)



[.US02YFED Index GP <go>](#)

**U.S. 10-Year/2-Year Spread**  
(10-Year less Two-Year Treasury Yields)



[.US10Y02Y Index GP <go>](#)

**U.S. 10-Year/3-Month Spread**  
(10-Year Treasury Yield less Three-Month T-Bill Rate)



[.US10Y03M Index GP <go>](#)

**U.S. One-Year Forward Swap Rate in Nine Years' Time**  
(2005-08)



[USFS019 Index <go>](#)

# U.S. Real Yields and Inflation Expectations

**U.S. Five-Year TIPS Yield**  
(Five-Year Treasury Inflation-Protected Securities)



USGGT05Y Index GP <go>

**U.S. 10-Year TIPS Yield**  
(10-Year Treasury Inflation-Protected Securities)



USGGT10Y Index GP <go>

**U.S. Five-Year Implied Breakeven Inflation Rate**  
(Five-Year Treasury less TIPS Yield)



USGGBE05 Index GP <go>

**U.S. 10-Year Implied Breakeven Inflation Rate**  
(10-Year Treasury less TIPS Yield)



USGGBE10 Index GP <go>

**U.S. Breakeven 5-Yr. Yield/Inflation Rate in 5-Years' Time**  
(since April 2007)



USGG5Y5Y Index GP <go>



## U.S. Agency-Bond Yield Spreads

**U.S. Two-Year Agency Spread**  
(Two-Year Agency less Two-Year Treasury Yield)



**U.S. 10-Year Agency Spread**  
(10-Year Agency less 10-Year Treasury Yield)



## U.S. Swap Spreads

**U.S. Two-Year Swap Spread**  
(Two-Year U.S. Swap less Two-Year Treasury Yield)



**U.S. 10-Year Swap Spread**  
(10-Year U.S. Swap less 10-Year Treasury Yield)



## U.S. Corporate-Bond/Treasury Yield Spreads

**U.S. AAA Corporate/Treasury Yield Spread**  
(AAA Corporate less 10-year Treasury Bond Yield)



**U.S. AA Corporate/Treasury Yield Spread**  
(AA Corporate less 10-year Treasury Bond Yield)



**U.S. A Corporate/Treasury Yield Spread**  
(A Corporate less 10-year Treasury Bond Yield)



**U.S. Baa Corporate/Treasury Yield Spread**  
(Baa Corporate less 10-year Treasury Bond Yield)



## U.S. Credit Default Swaps

### IBOX North American Five-Year Investment-Grade Index (since October 4, 2005)



IBOXUMAE Index GP <go>

### IBOX North American Crossover Index (since September 22, 2006)



IBOXUXAE Index GP <go>

## High-Yield Spreads

### U.S. High-Yield Corporate Spread (JP Morgan Domestic High-Yield Corporate Yield Spread)



JPDFHYI Index GP <go>

### EMBI+ Spread (JP Morgan Emerging-Market Yield Spread)



JPEMSOSD Index GP <go>

# U.S. Municipal-Bond Yield Spreads

**U.S. AAA Muni Bond Spread**  
(AAA Muni less 10-Year Treasury Yield)



.MAAA10YIndex GP <go>

**U.S. AA Muni Bond Spread**  
(AA Muni less 10-Year Treasury Yield)



.MAA10Y Index <go>

**U.S. A Muni Bond Spread**  
(A Muni less 10-Year Treasury Yield)



.MA10YIndex GP <go>

**U.S. Baa Muni Bond Spread**  
(Baa Muni less 10-Year Treasury Yield)



.MBAA10Y Index <go>

# U.S. Equity Market — Trend, Volatility, and Valuation

**S&P 500 Index**  
(Last Five Years)



**S&P Financials Index**  
(Last Five Years)



**U.S. Financial Monolines — Ambac**  
(Ambac Share Prices)



**U.S. Financial Monolines — MBIA**  
(MBIA Share Prices)



**U.S. Equity Market Volatility**  
(VIX Index of S&P 500 Volatility)



**S&P 500 Price/Earnings Ratio**  
(Last Five Years)



# Fixed Income and FX Market Volatility

## Move Index

(Merrill Lynch One-Month Treasury Options Volatility Index)



MOVE GP <go>

## Barclays Swaption Volatility Index

(Implied Basis Point Volatility of Liquid Swaptions)



LBPX Index GP <go>

## Euro-Dollar Volatility

(Three-Month Implied EUR Volatility)



EURUSDV3M Index GP <go>

## Dollar-Yen Volatility

(Three-Month Implied JPY Volatility)



USDJPYV3M Index GP <go>

# U.S. Fed Senior Loan Officer Survey

## U.S. Banks Tighter Standards for C&I Loans to Large Firms (Fed Senior Loan Survey)



SLDETIGT Index GP <go>

## U.S. Banks Tighter Standards for Comm. Real Estate Loans (Fed Senior Loan Survey)



SDRETIGT Index GP <go>

## U.S. Increasing Loan Rates for C&I Loans to Large Firms (Fed Senior Loan Survey)



SLDESPRD Index GP <go>

## U.S. Banks Stronger Demand for Comm. Real Estate Loans (Fed Senior Loan Survey)



SDREDEM Index GP <go>

## U.S. Stronger Demand for C&I Loans to Large Firms (Fed Senior Loan Survey)



SLDEDEM Index GP <go>

**U.S. Banks Tightening Standards for Credit Card Loans**  
(Fed Senior Loan Survey)



SDCLTGT Index GP <go>

**U.S. Banks Willingness to Lend to Consumers**  
(Fed Senior Loan Survey)



SDCLCON Index GP <go>

**U.S. Banks Tightening Standards for Other Consumer Loans**  
(Fed Senior Loan Survey)



SDCLTGT0 Index GP <go>

**U.S. Banks Stronger Demand for Consumer Loans**  
(Fed Senior Loan Survey)

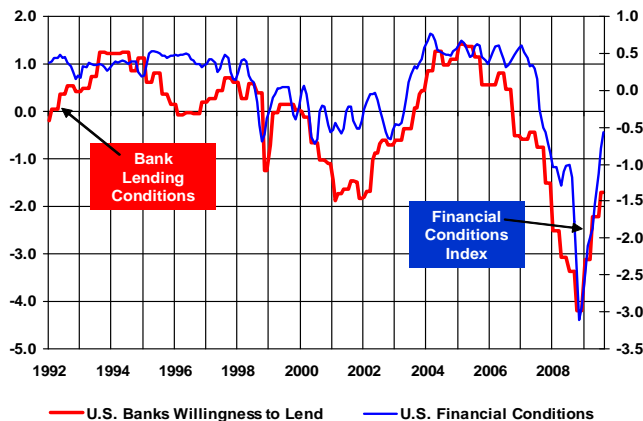


SDCLCDMS Index GP <go>

**Bank Lending Standards & Financial Conditions Index**

(Composite of Fed Senior Loan Officer Survey)

U.S. Banks Willingness to Lend (smoothed)      Financial Conditions Index (smoothed)



— U.S. Banks Willingness to Lend      — U.S. Financial Conditions

Source: Bloomberg



# U.S. Money Supply Growth and Velocity

**U.S. M1 Money Supply**  
(Year-over-Year % Change)



M1% YOY Index GP <go>

**U.S. M2 Money Supply**  
(Year-over-Year % Change)



M2% YOY Index GP <go>

**U.S. Velocity of M1 Money**  
(GDP Divided by M1 Money Supply)



VELOM1 Index GP <go>

**U.S. Velocity of M2 Money**  
(GDP Divided by M2 Money Supply)



VELOM2 Index GP <go>

**U.S. Monetary Base Growth**  
(Year-over-Year % Changes)



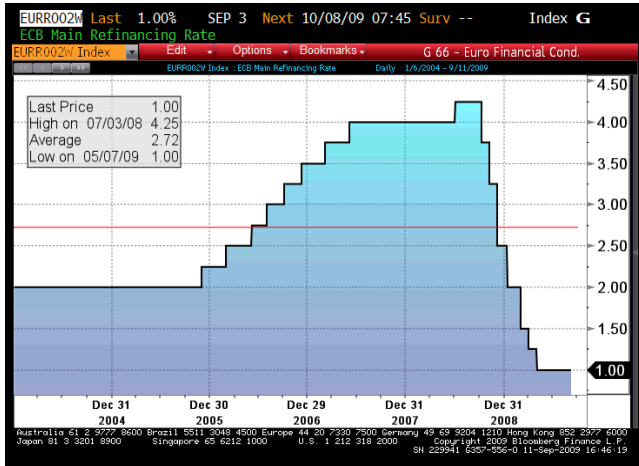
ARDIMBSY Index GP <go>





# Euro-Area Financial Conditions

**ECB Policy Rate**  
(ECB Refinancing Rate)



EURR002W Index GP <go>

**EUIBOR-OIS Spread**

(Three-Month Euribor Rate less Effective Overnight Swap Rate)



.EULIBOIS Index GP <go>

**Euro-Area Equity Prices**  
(Dow-Jones Euro Stoxx Index)



SX5E Index GP <go>

**Euro-Area Yield-Curve Spread**

(10-Year less Three-Month Rate Euro Gov't Bond Yield)



.EU10Y3M Index GP <go>

**Euro 10-Year Swap Spreads**



EUSS10 Index GP <go>

**Europe Credit Default Swap Spreads**

(iTraxx Europe Credit Default Swap Spread)



ITRXEBE Index GP <go>

# Euro-Area Bank Lending Conditions for Enterprises

**Tightening of Credit Standards for Enterprises—Past 3 Mo.**  
(ECB Bank Lending Survey)



EBLS11NC Index GP <go>

**Tightening of Credit Standards for Enterprises—Next 3 Mo.**  
(ECB Bank Lending Survey)



EBLS61NC Index GP <go>

**Overall Demand for Loans by Enterprises—Past 3 Mo.**  
(ECB Bank Lending Survey)



EBLS3CL Index GP <go>

**Overall Demand for Loans by Enterprises—Next 3 Mo.**  
(ECB Bank Lending Survey)



EBL5ECL Index GP <go>

## Euro-Area Bank Lending Conditions to Households

**Tightening of Standards for Home Purchase—Past 3 Mo.**  
(ECB Bank Lending Survey)



EBL581NC Index GP <go>

**Tightening of Standards for Home Purchase—Next 3 Mo.**  
(ECB Bank Lending Survey)



EBL5161N Index GP <go>

**Tightening of Standards for Consumer Loans—Past 3 Mo.**  
(ECB Bank Lending Survey)



EBL582NC Index GP <go>

**Tightening of Standards for Consumer Loans—Next 3 Mo.**  
(ECB Bank Lending Survey)



EBL5162N Index GP <go>

**Positive Demand for Home Purchase Loans—Past 3 Mo.**  
(ECB Bank Lending Survey)



EBL5EHP Index GP <go>

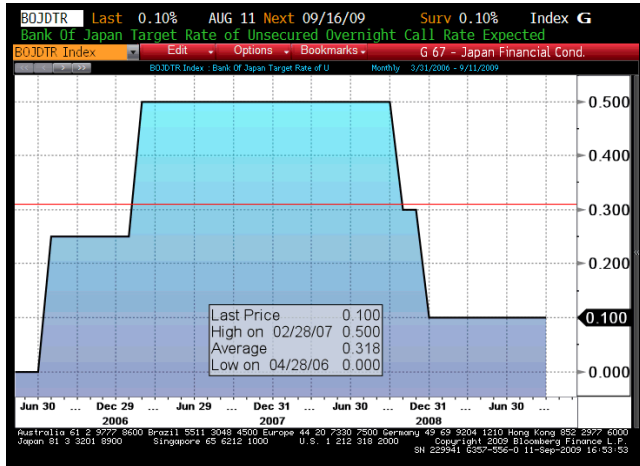
**Positive Demand for Consumer Loans—Past 3 Mo.**  
(ECB Bank Lending Survey)



EBL53CC Index GP <go>

# Japan's Financial Conditions

**Bank of Japan Policy Rate**  
(BoJ Overnight Call Target Rate)



BOJDTR Index GP <go>

**TIBOR-OIS Spread**

(Three-Month Tibor Rate less Effective Overnight Swap Rate)



.JPLIBOIS Index GP <go>

**Japanese Equity Prices**  
(Tokyo Stock Price/TOPIX Index)



TPX Index GP <go>

**Japan's Yield-Curve Spread**

(10-Year less Three-Month Japanese Government Bond Yield)



.JP10Y3M Index GP <go>

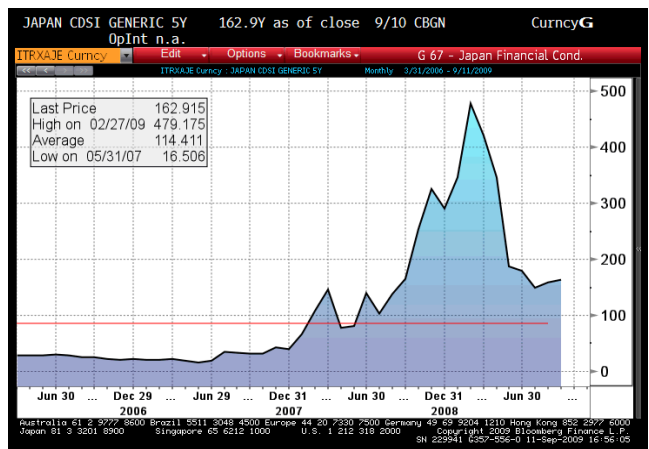
**Japan 10-Year Swap Spreads**



JYSS10 Index GP <go>

**Japan Credit Default Swap Spreads**

(iTraxx Theoretical Five-Year Credit Default Swap Spread)



ITRAXJE Index GP <go>

# Japan Bank Lending Conditions for the Past Three Months

**Credit Standards for Households—Past 3 Months**  
(BoJ Senior Loan Officer Opinion Survey)



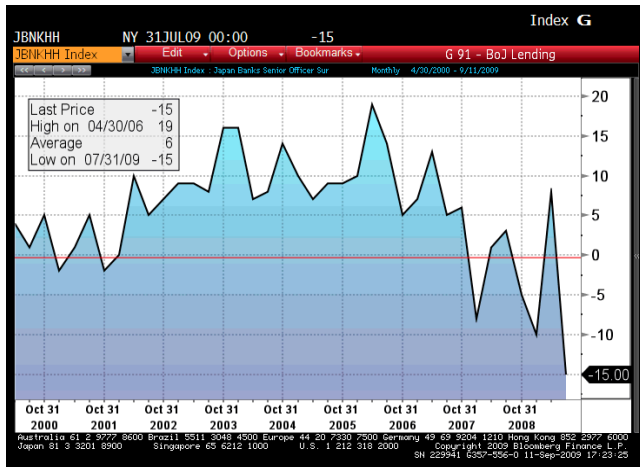
JBNKCHH Index GP <go>

**Credit Standards for Large Firms—Past 3 Months**  
(BoJ Senior Loan Officer Opinion Survey)



JBNKCL Index GP <go>

**Household Demand for Loans—Past 3 Months**  
(BoJ Senior Loan Officer Opinion Survey)



JBNKHH Index GP <go>

**Total Firms Demand for Loans—Past 3 Months**  
(BoJ Senior Loan Officer Opinion Survey)



JBNKFT Index GP <go>



# Japan Bank Lending Conditions for the Next Three Months

**Credit Standards for Households—Next 3 Months**  
(BoJ Senior Loan Officer Opinion Survey)



JBKOCHH Index GP <go>

**Credit Standards for Large Firms—Next 3 Months**  
(BoJ Senior Loan Officer Opinion Survey)



JBKOCL Index GP <go>

**Household Demand for Loans—Next 3 Months**  
(BoJ Senior Loan Officer Opinion Survey)



JBKOHH Index GP <go>

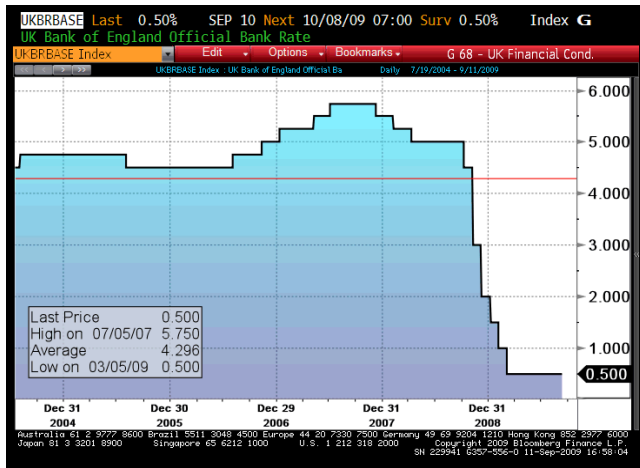
**Total Firms Demand for Loans—Next 3 Months**  
(BoJ Senior Loan Officer Opinion Survey)



JBKOFH Index GP <go>

# U.K. Financial Conditions

**Bank of England Policy Rate**  
(BoE Base Rate)



UKBRBASE Index GP <go>

**UK Libor-OIS Spread**  
(Three-Month Libor Rate less Effective Overnight Rate)



.UKLIBOIS Index GP <go>

**UK Equity Prices**  
(FTSE 100 Share Price Index)



UKX Index GP <go>

**U.K. Yield-Curve Spread**  
(10-Year less Three-Month Gilt Yield)



.UK10Y3M Index GP <go>

**U.K. 10-Year Swap Spreads**



BPSS10 Index GP <go>

# U.K. Bank Lending Conditions for Households

**Credit Standards for Households—Next 3 Months**  
(BoE Credit Conditions Survey)



UKLSPHSE Index GP <go>

**Credit Standards for Households—Next 3 Months**  
(BoE Credit Conditions Survey)



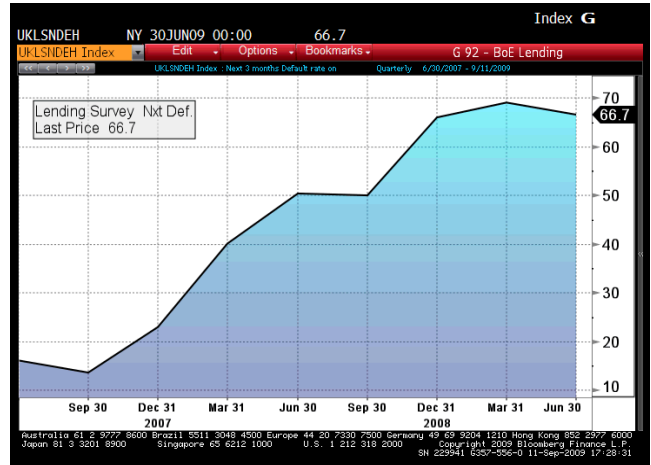
UKLSNHSE Index GP <go>

**Household Default Rates—Past 3 Months**  
(BoE Credit Conditions Survey)



UKLSPDEH Index GP <go>

**Household Default Rates—Next 3 Months**  
(BoE Credit Conditions Survey)



UKLSNDEH Index GP <go>

**Demand for House Purchase Loans—Past 3 Months**  
(BoE Credit Conditions Survey)



UKLSPDSL Index GP <go>

**Demand for House Purchase Loans—Next 3 Months**  
(BoE Credit Conditions Survey)



UKLSNDSL Index GP <go>

# U.K. Bank Lending Conditions for Corporates

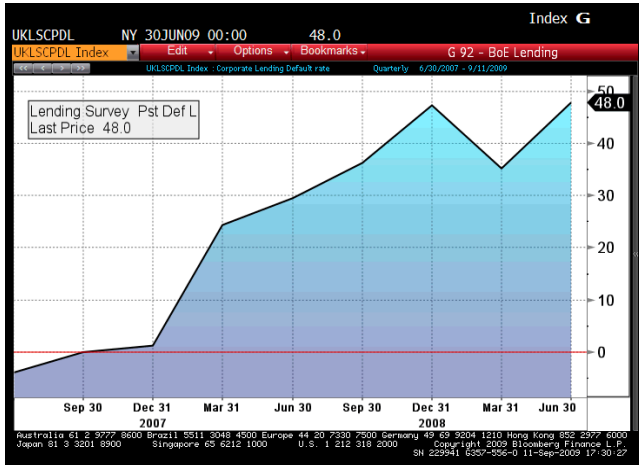
**Availability of Credit to the Corporate Sector—Past 3 Mo.**  
(BoE Credit Conditions Survey)



**Availability of Credit to Comm. Real Estate—Past 3 Mo.**  
(BoE Credit Conditions Survey)



**Default Rates of Large Corporates—Past 3 Months**  
(BoE Credit Conditions Survey)



**Demand For Lending from Large Corporates—Past 3 Months**



**Spreads on Large Corporate Lending—Past 3 Months**  
(BoE Credit Conditions Survey)



## Financial Crisis Timeline

### A Timeline of Events that Led to the Current Global Financial Crisis

		Libor/OIS Spread	Baa/Trsy. Yield Spread	S&P 500 Index	Financial Cond. Index
March 5, 2007:	HSBC Holdings Plc, Europe's biggest bank by market value, says the U.S. subprime market is "unstable" and now in a "downturn," making it the main drag on company earnings.	8	169	1374	0.44
March 29, 2007:	HSBC Chairman Stephen Green says the U.S. subprime mortgage services division will be "run down significantly" as the bank tries to recover from loan losses.	8	174	1423	0.71
April 2, 2007:	New Century Financial Corp., which specialized in loans to people with poor credit, files for bankruptcy protection after being overwhelmed by customer defaults.	8	175	1425	0.72
July 17, 2007:	Investors in two Bear Stearns Cos. Hedge funds that invested in collateralized debt obligations backed by subprime mortgage loans are told there is no value left in the funds, wiping out \$1.6 billion originally invested.	8	162	1549	0.58
July 19, 2007:	Federal Reserve Chairman Ben S. Bernanke tells the U.S. Senate's Banking Committee that there may be as much as \$100 billion in losses associated with subprime mortgage products.	8	161	1553	0.60
Aug. 9, 2007:	BNP Paribas SA, France's biggest bank, halts withdrawals from three investment funds because it can't "fairly" value their holdings, as concern over U.S. subprime mortgage losses roils credit markets.	40	193	1453	-0.84
Aug. 17, 2007:	The Fed lowers the interest rate it charges banks and acknowledges for the first time that an extraordinary policy shift is needed to contain the subprime-mortgage collapse.	40	193	1453	-0.84
Aug. 22, 2007:	Countrywide Financial Corp., the biggest U.S. mortgage lender, sells \$2 billion of preferred stock to Bank of America Corp., the biggest U.S. bank by market value, to bolster its finances.	60	206	1446	-2.22
Sept. 7, 2007:	The three-month London interbank offered rate, or Libor, the rate banks charge each other for dollars, rises to a seven-year high, signaling efforts by central banks to free up lending are sputtering.	58	205	1464	-1.89
Sept. 14, 2007:	Northern Rock Plc says the Bank of England agreed to provide emergency funds to ease a "severe liquidity squeeze" sparked by U.S. subprime mortgage defaults following the first run on a British bank in more than a century.	95	210	1454	-2.23
Oct. 9, 2007:	U.S. stock indexes rally to records for the second time in a month after minutes from the Fed allayed investor concern that the U.S. economy is heading for a recession. The Dow Jones Industrial Average and the Standard & Poor's 500 Index set all-time highs, with the Dow closing at 14,164.53.	84	213	1484	-2.06
Oct. 30, 2007:	Merrill Lynch & Co. ousts Stan O'Neal as chairman and chief executive officer after reporting a \$2.24 billion loss, six times bigger than a forecast the firm offered just three weeks earlier.	58	192	1565	-0.72
Nov. 4, 2007:	Citigroup Inc. CEO Charles "Chuck" Prince, who took over in 2003, steps down after the largest U.S. bank by assets increased its estimate for mortgage-related writedowns.	46	201	1531	-0.78
Jan. 11, 2008:	Bank of America, the biggest U.S. bank by market value, agrees to buy Countrywide for about \$4 billion.	47	203	1502	-1.23

		Libor/OIS Spread	Baa/Trsy. Yield Spread	S&P 500 Index	Financial Cond. Index
March 14, 2008:	Bear Stearns Cos. gets emergency funding from the U.S. Federal Reserve and JPMorgan Chase & Co. as a run on the bank depletes its cash reserves in three days.	62	281	1401	-1.80
March 16, 2008:	JPMorgan Chase agrees to buy Bear Stearns for 7 percent of its market value in a sale brokered by the Fed and the U.S. Treasury.	82	339	1288	-3.48
April 1, 2008:	Lehman Brothers Holdings Inc., the fourth- largest U.S. securities firm, raises \$4 billion from a stock sale to quell speculation it's short of capital.	81	353	1277	-3.51
April 9, 2008:	Washington Mutual Inc. rejected an offer from JPMorgan Chase to buy it for as much as \$8 a share, or \$7 billion, before announcing it received a \$7 billion capital infusion from a group led by TPG Inc., the Wall Street Journal reports, citing people familiar with the situation.	67	344	1370	-2.34
April 28, 2008:	The U.S. Internal Revenue Service starts distributing tax rebates electronically as part of a \$168 billion economic stimulus plan.	77	339	1354	-2.59
May 31, 2008:	Bear Stearns ceases to exist as the acquisition by JPMorgan is completed.	86	314	1396	-2.34
June 20, 2008:	The Dow closes below 12,000.	68	300	1400	-1.34
July 11, 2008:	IndyMac Bancorp Inc., the second-biggest independent U.S. mortgage lender, is seized by federal regulators after a run by depositors depleted its cash.	71	294	1318	-1.94
July 31, 2008:	Nationwide Building Society, Britain's fourth-biggest mortgage lender, says U.K. house prices declined the most in almost two decades in July and consumer confidence fell to a record low as the economy edged closer to a recession.	73	315	1239	-2.55
Aug. 12, 2008:	UBS AG, Switzerland's biggest bank, announces plans to separate its investment banking and wealth management units after mounting subprime writedowns prompt rich clients to withdraw funds for the first time in almost eight years.	74	326	1267	-2.33
Aug. 31, 2008:	Commerzbank AG agrees to buy Allianz SE's Dresdner Bank for 9.8 billion euros (\$13.3 billion) in Germany's biggest banking takeover in three years.	76	327	1290	-2.19
Sept. 7, 2008:	The U.S. government seizes control of Fannie Mae and Freddie Mac, the largest U.S. mortgage-finance companies.	78	331	1283	-2.30
Sept. 15, 2008:	Lehman Brothers Holdings Inc. files the largest bankruptcy in history, and Bank of America agrees to acquire Merrill Lynch for about \$50 billion.	81	335	1268	-2.32
Sept. 16, 2008:	American International Group Inc. accepts an \$85 billion loan from the Fed to avert the worst financial collapse in history, and the government takes over the company.	105	374	1193	-4.04
Sept. 18, 2008:	Lloyds TSB Group Plc, the U.K.'s biggest provider of checking accounts, agrees to buy HBOS Plc, Britain's largest mortgage lender, for 10.4 billion pounds (\$18.1 billion).	101	372	1214	-4.10
Sept. 21, 2008:	Goldman Sachs Group Inc. and Morgan Stanley receive approval to become commercial banks regulated by the Fed as tight credit markets forced Wall Street's two remaining independent investment banks to widen their sources of funding.	139	378	1207	-5.40
Sept. 23, 2008:	Goldman Sachs says it will raise at least \$7.5 billion from Warren Buffett's Berkshire Hathaway Inc. and public investors in a bid to quell concerns that pushed up the Wall Street firm's borrowing costs and hurt its stock.	129	377	1207	-4.63

		Libor/OIS Spread	Baa/Trsy. Yield Spread	S&P 500 Index	Financial Cond. Index
Sept. 26, 2008:	The U.S. Securities and Exchange Commission ends a program that monitored securities firms' capital after Morgan Stanley and Goldman Sachs, the only companies remaining under its jurisdiction, became banks overseen by the Fed.	137	382	1188	-5.01
Sept. 26, 2008:	The SEC's inspector general releases a report asserting that the agency failed in overseeing Bear Stearns because it knew the firm had "high leverage" and was too concentrated in mortgage securities before its forced sale to JPMorgan Chase & Co.	208	388	1213	-6.13
Sept. 26, 2008:	Washington Mutual Inc. is seized by government regulators and its branches and assets sold to JPMorgan Chase in the biggest U.S. bank failure in history.	208	388	1213	-6.13
Sept. 27, 2008:	Washington Mutual files for bankruptcy protection.	208	388	1213	-6.13
Sept. 28, 2008:	Fortis, the largest Belgian financial-services firm, receives an 11.2 billion-euro rescue from Belgium, the Netherlands and Luxembourg after investor confidence in the bank evaporates.	208	388	1213	-6.13
Sept. 29, 2008:	The House of Representatives rejects a \$700 billion plan to rescue the U.S. financial system, sending the Dow Jones Industrial Average down 778 points, its biggest point drop ever. Citigroup agrees to acquire the banking operations of Wachovia Corp. for about \$2.16 billion after shares of the North Carolina lender collapsed under the weight of overdue mortgages. Bradford & Bingley Plc, the U.K.'s biggest lender to landlords, is seized by the government. The Dow closes below 11,000.	232	404	1106	-7.71
Sept. 30, 2008:	Dexia SA, the world's biggest lender to local governments, gets a 6.4 billion-euro state-backed rescue as a worsening financial crisis forces policy makers across Europe to aid ailing banks. Ireland says it will guarantee its banks' deposits and debts for two years.	232	404	1106	-7.71
Oct. 1, 2008:	The U.S. Senate approves a revised version of the rescue plan that was refashioned to entice enough votes for passage.	232	403	1166	-6.88
Oct. 3, 2008:	The House passes the revised version of the rescue plan. Wells Fargo & Co., the biggest U.S. bank on the West Coast, agrees to buy all of Wachovia for about \$15.1 billion, trumping Citigroup's government-assisted offer. U.S. President George W. Bush signs the rescue plan into law.	251	413	1161	-7.42
Oct. 5, 2008:	BNP Paribas SA, France's biggest bank, will take control of Fortis's units in Belgium and Luxembourg after an earlier government rescue failed to ensure the company's stability as the global credit crisis worsened.	289	438	1099	-8.56
Oct. 6, 2008:	The Fed says it will double its auctions of cash to banks to as much as \$900 billion and is considering further steps to unfreeze short-term lending markets as the credit crunch deepens. The German government and the country's banks and insurers agreed on a 50 billion euro rescue package for commercial property lender Hypo Real Estate Holding AG after an earlier bailout faltered. The Dow Jones Industrial Average falls below 10,000 for the first time in four years.	288	446	1057	-8.94
Oct. 9, 2008:	Citigroup walks away from its attempt to buy Wachovia, handing victory to Wells Fargo. The Dow Jones falls below 9,000 for the first time in five years and briefly dips below 8,000.	288	446	1057	-8.94
Oct. 11, 2008:	U.S. Treasury Secretary Henry Paulson indicates that pumping government funds into banks is a priority, saying financial markets will remain volatile.	354	453	910	-10.62

		Libor/OIS Spread	Baa/Trsy. Yield Spread	S&P 500 Index	Financial Cond. Index
Oct. 12, 2008:	European leaders agree to guarantee bank borrowing and use government money to prevent big lenders from going under, trying to stop the financial hemorrhage and stave off a recession.	364	488	899	-11.51
Oct. 13, 2008:	The Fed leads an unprecedented push by central banks to flood the financial system with as many dollars as banks want, backing up government efforts to revive confidence and helping to reduce money-market rates.	354	477	1003	-10.57
	Royal Bank of Scotland Group Plc, HBOS Plc, and Lloyds TSB Group Plc get an unprecedented 37 billion-pound bailout from the U.K. government as Germany, France and Spain prepare similar rescues. Germany says it will provide as much as 500 billion euros in loan guarantees and capital to bolster the banking system, the country's biggest government intervention since the Berlin Wall came down in 1989.	354	477	1003	-10.57
Nov. 5, 2008:	Barack Obama is elected the 44th president of the United States, opening a new chapter in the country's history as the first African-American to hold the world's most important job. The Illinois senator caps his 21-month quest with a sweeping electoral victory that also enhances the Democrats' majority in Congress and marks the end of an era of Republican dominance in Washington.	192	556	953	-7.33
Nov. 8, 2008:	General Motors Corp., seeking U.S. aid to avoid collapse, said it may not have enough cash to keep operating this year and will be "significantly short" by the end of June unless the auto market improves or it adds capital.	176	549	931	-7.12
Nov. 14, 2008:	The European economy falls into its first recession in 15 years. Gross domestic product in the 15 euro nations shrank 0.2 percent from the previous three months, when it also contracted 0.2 percent, the Union's Luxembourg-based statistics office said.	173	554	873	-7.95
Dec. 11, 2008:	Bernard Madoff is arrested and charged with securities fraud by U.S. prosecutors after telling his two sons and federal investigators that he had been using money from new investors to pay off old ones in a massive Ponzi scheme. The 70-year-old president of New York-based Bernard L. Madoff Investment Securities LLC said clients lost \$50 billion.	173	611	874	-7.32
Dec. 19, 2008:	U.S. President George W. Bush announces troubled automakers General Motors Corp. and Chrysler will get \$13.4 billion in government loans to allow them to keep operating until March. If the companies can't demonstrate financial viability by March 31, the loans will be called and the money must be returned.	129	595	888	-6.18
Dec. 31, 2008:	London's FTSE 100 closes 31 percent down in 2008, its worst annual decline on record. Banks and basic resources companies suffered the biggest losses. HBOS Plc lost 90 percent of its value over the year. Royal Bank of Scotland Group Plc, the second-worst performer, tumbled 87 percent.	121	586	903	-5.58
Jan. 12, 2009	U.S. President George W. Bush asks Congress to prepare \$350 billion in Troubled Asset Relief Program funds for President-elect Barack Obama to use in case of an "economic emergency." The money includes initiatives to stem mortgage foreclosures. Obama vows to place conditions on how it's spent. {NXTW NSN KDE08HOUQVI9 <GO>}	99	574	870	-5.08
Jan. 15, 2009	Ireland's government nationalizes Anglo Irish Bank Corp., scrapping a proposed 1.5 billion-euro (\$1.97 billion) cash injection less than four weeks after the government agreed to bail out the Dublin-based bank and take a 75 percent stake. Anglo Irish lost 98 percent of its value last year as losses on property loans mounted. {NXTW NSN KDJ7TI0UQVJJ <GO>}	89	570	844	-5.28



		Libor/OIS Spread	Baa/Trsy. Yield Spread	S&P 500 Index	Financial Cond. Index
Jan. 16, 2009	Bank of America receives \$138 billion in TARP funds, in exchange for preferred shares in the Charlotte, North Carolina-based bank, the same day it reports a fourth-quarter loss of \$1.79 billion and slashes its dividend to a penny a share. The shares drop 14 percent, or \$1.14, to \$7.18. {NXTW NSN KDL2UE1A114I <GO>}	95	559	850	-4.92
Jan. 26, 2009	Timothy Geithner, 47, is approved by the Senate to be Treasury secretary, putting him at the center of a global effort to arrest the financial crisis and end the longest U.S. recession in a quarter-century. The vote is 60-34 in his favor, the closest post-World War II margin for a Treasury secretary. {NXTW NSN KE3QW71A74EF <GO>}	94	566	837	-4.86
Feb. 10, 2009	The Federal Reserve says a new program to spur consumer and business loans may increase to as much as \$1 trillion from \$200 billion and include loans backed by residential and commercial real estate. {NXTW NSN KEUZTR07SXXK <GO>}	96	517	827	-4.62
Feb. 17, 2009	President Barack Obama signs into law a \$787 billion stimulus package, one of the biggest economic rescue efforts in U.S. history. The measure, rejected by almost all Republicans in Congress, combines tax breaks and government spending to help revive a worsening U.S. economy and save or create about 3.5 million jobs. {NXTW NSN KF88PC0YHQ0X <GO>}	98	527	789	-4.84
Feb. 25, 2009	The 19 biggest U.S. banks are given until the end of April to pass a mandatory government "stress test" of their balance sheets and six months to raise private capital or accept government funds in the form of convertible preferred securities. Those would give the government voting rights in the banks if the government converts them into common stock, Treasury officials say. {NXTW NSN KFN8021A74E9 <GO>}	101	520	765	-4.62
Mar. 2, 2009	U.S. insurer AIG posts a record \$61.7 billion fourth-quarter loss and the Treasury agrees to spend as much as \$30 billion more on preferred shares. "Liquidity is not an issue for us now," says AIG Chairman Edward Liddy. A restructuring of the firm "will take time and possibly further government support, if markets do not stabilize and improve," the Treasury and Fed say in a statement. {NXTW NSN KFWRUS07SXXK <GO>}	102	534	701	-5.27
Mar. 7, 2009	Lloyds Banking Group Plc, Britain's biggest mortgage lender, agrees to cede control to Prime Minister Gordon Brown's government in return for state guarantees covering 260 billion pounds (\$367 billion) of risky assets. The government's stake rises to as much as 75 percent, making Lloyds the fourth U.K. bank to slip into state control since the run on Northern Rock Plc in September 2007. {NXTW NSN KG54EO1A74E9 <GO>}	103	531	683	-5.18
Mar. 12, 2009	Industrial production in Germany, Europe's largest economy, dropped the most on record in January as the global recession sapped demand for goods at home and abroad. From a year earlier, output collapsed 19.3 percent. {NSN KGE3U91A114G <GO>}	107	556	751	-4.90
Mar. 12, 2009	General Electric Co.'s finance arm lost the AAA rating from Standard & Poor's for the first time since 1956 as a global recession sapped earnings and exposed potential risks. {NSN KGAEPOUQVIC <GO>}				
Mar. 18, 2009	U.K. unemployment rose at the fastest pace since at least 1971 in February. The number of people receiving unemployment benefits increased 138,400 to 1.39 million. A broader measure of unemployment climbed above 2 million for the first time since 1997 and incomes grew at the slowest pace since at least 1991. {NSN KGP46O1A114I <GO>}	107	586	794	-5.05

		Libor/OIS Spread	Baa/Trsy. Yield Spread	S&P 500 Index	Financial Cond. Index
Mar. 18, 2009	The Federal Reserve announced plans to buy \$300 billion in Treasury securities and acquire more mortgage and agency debt in an effort to bolster housing and hasten the end of the recession. <a href="#">{NSN KGPU3E0UQVIU &lt;GO&gt;}</a>	107	586	794	-5.05
Mar. 23, 2009	The U.S. Treasury announced a plan aimed at financing as much as \$1 trillion in purchases of distressed assets to help a financial system that is "still working against recovery." <a href="#">{NSN KGYK3407SXXK &lt;GO&gt;}</a>	99	591	823	-4.96
Mar. 30, 2009	General Motors Corp. Chief Executive Officer Rick Wagoner was forced out after President Barack Obama's task force decided he was unable to craft a plan to save the automaker he ran for more than eight years. Chief Operating Officer Fritz Henderson became CEO and director Kent Kresa succeeded Wagoner as chairman. <a href="#">{NSN KHB03G07SXLE &lt;GO&gt;}</a>	98	577	788	-5.05
Apr. 2, 2009	The Financial Accounting Standards Board, pressured by U.S. lawmakers and financial companies, voted to relax fair-value rules. The changes to so-called mark-to-market accounting allow companies to use "significant" judgment when gauging the price of some investments on their books, including mortgage-backed securities. <a href="#">{NSN KHHAP90YHQ0X &lt;GO&gt;}</a>	94	569	834	-4.63
Apr. 2, 2009	The Group of 20 policymakers agreed on a regulatory blueprint for reining in the excesses that fed the worst financial crisis in six decades and pledged more than \$1 trillion in emergency aid to cushion the economic fallout. Meeting in London, world leaders called for stricter limits on hedge funds, executive pay, credit-rating companies and risk-taking by banks. They also boosted the resources of the International Monetary Fund and offered cash to revive trade to help governments weather the economic and social turmoil. <a href="#">{NSN KHHE700UQVJ0 &lt;GO&gt;}</a>				
Apr. 13, 2009	Goldman Sachs Group Inc. announced plans to raise \$5 billion to repay U.S. government rescue funds after posting profit that exceeded the most optimistic Wall Street estimates. <a href="#">{NSN KI25JN0D9L35 &lt;GO&gt;}</a>	94	562	859	-4.25
Apr. 14, 2009	Lawrence Summers, director of the White House National Economic Council, said he sees a "more balanced feel" to economic reports. Video <a href="#">{NSN KI409G1A1I4H &lt;GO&gt;}</a>	93	561	842	-4.25
Apr. 17, 2009	Federal Reserve Chairman Ben S. Bernanke said the collapse of U.S. lending will probably cause "long-lasting" damage to home prices, household wealth and borrowers' credit scores. "One would be forgiven for concluding that the assumed benefits of financial innovation are not all they were cracked up to be," the Fed chairman said. <a href="#">{NSN KI979P0YHQ0X &lt;GO&gt;}</a>	91	546	870	-3.83
April 24, 2009	The U.K. economy shrinks more than economists forecast in the first quarter in the biggest contraction since the rise of Margaret Thatcher in 1979 as manufacturing and business services posted record declines. Gross domestic product falls 1.9 percent after declining 1.6 percent in the previous quarter. The economy fails to grow for a year. <a href="#">{NSN KILJM03T6SQQ &lt;GO&gt;}</a>	87	529	866	-3.80
April 24, 2009	German business confidence, according to the Ifo Institute, rebounds more than economists forecast from a 26-year low in April as interest-rate cuts and government stimulus packages boosted expectations that the recession will ease later in 2009. <a href="#">{NSN KILJV01A74E9 &lt;GO&gt;}</a>				

		Libor/OIS Spread	Baa/Trsy. Yield Spread	S&P 500 Index	Financial Cond. Index
April 30, 2009	Chrysler LLC, the automaker that survived a near-death experience in 1979, files for bankruptcy protection to streamline operations and shed debt in a reorganization that includes Italy's Fiat SpA as a partner. {NSN KIXC0C0D9L36 <GO>}	82	512	873	-3.52
May 4, 2009	China's manufacturing expands for the first time in nine months after declines in export orders moderated and investment surged because of the government's four trillion yuan (\$586 billion) stimulus package. {NSN KJ41601A114H <GO>}	79	502	907	-3.30
May 7, 2009	Federal regulators unveil what Treasury Secretary Timothy Geithner terms a "reassuring" picture of a U.S. banking system able to withstand whatever stresses the recession may inflict on it once a handful of institutions add to their capital base. Federal Reserve stress tests on the 19 biggest lenders show Bank of America Corp., Wells Fargo & Co. and Citigroup Inc. together require about \$54 billion, said people familiar with the conclusions. {NSN KJ9GXD0YHQ0X <GO>}	75	485	907	-2.95
May 21, 2009	Britain's top-level credit rating is more likely to be cut by Standard & Poor's as the government's finances deteriorate amid the worst recession since World War II. The U.K.'s AAA outlook is lowered to "negative" from "stable" because of the nation's increasing "debt burden," S&P said. {NSN KJZK651A74E9 <GO>}	46	468	888	-2.32
May 26, 2009	Confidence among U.S. consumers jumps to the highest level since September, reflecting growing perceptions that the job market will improve. The Conference Board's sentiment index surged more than forecast and posted the biggest gain since April 2003. Another report showed that home prices continued to plunge. {NSN KK99JE07SXKX <GO>}	45	457	910	-2.20
May 28, 2009	General Motors Corp., once the world's largest automaker, plans to file for bankruptcy protection on June 1 and sell most of its assets to a new company, people said. GM, which would follow Chrysler LLC into bankruptcy, plans to build a new business around assets such as the Cadillac and Chevrolet brands. {NSN KKD35U1A74E9 <GO>}	46	444	907	-2.35
May 29, 2009	Japan's industrial output surges the most in 56 years in April as a rebound in exports helped the economy emerge from its worst recession since World War II. Production rises 5.2 percent from March, the second monthly gain. {NSN KKE0PN07SXKX <GO>}	46	430	919	-2.14
June 1, 2009	General Motors Corp., the world's largest carmaker until its 77-year reign ended last year, filed for bankruptcy protection in the U.S. with a plan to create a 21st-century company that can compete in world markets. {NSN KKKMVN1A114H <GO>}	44	430	943	-2.21
June 1, 2009	General Motors Corp. and Citigroup Inc., crippled by the first global recession since World War II, were removed from the Dow Jones Industrial Average and replaced by Cisco Systems Inc. and Travelers Cos. {NSN KKKKJI1A114I <GO>}				

		Libor/OIS Spread	Baa/Trsy. Yield Spread	S&P 500 Index	Financial Cond. Index
June 4, 2009	Japanese companies cut spending at the fastest pace in 54 years as a slump in global demand eroded profits, leaving less money for plant and equipment. Capital spending excluding software fell 25.4 percent in the three months ended March 31 from a year earlier, the largest drop since the government began the survey in 1955, the Ministry of Finance said today in Tokyo. Profits tumbled a record 69 percent. { <a href="#">NSN KKP5F70D9L35 &lt;GO&gt;</a> }	41	406	942	-2.02
June 8, 2009	Ireland's credit rating was lowered by Standard & Poor's for the second time in three months on the cost of bailing out the country's banking industry. The rating was dropped to AA from AA+ with a "negative" outlook, indicating that S&P is more likely to lower the classification again than raise it or leave it unchanged, the company said today in a statement. Ireland lost the top AAA credit rating on March 30, having won it in October 2001. { <a href="#">NSN KKWZNW0YHQ0X &lt;GO&gt;</a> }	41	384	939	-1.95
June 9, 2009	The U.S. Treasury approved 10 banks to buy back \$68 billion of government shares, reducing officials' authority to intervene in everything from lending and hiring strategies to compensation policies. "These repayments are an encouraging sign of financial repair, but we still have work to do," Treasury Secretary Timothy Geithner said in a statement released in Washington today. { <a href="#">NSN KKZ4VK0D9L3F &lt;GO&gt;</a> }	42	385	942	-1.86
June 25, 2009	The Federal Reserve will let one of its emergency programs expire and trim two others in a sign that improving financial markets allow a first step toward ending its unprecedented interventions. "Conditions in financial markets have improved in recent months, but market functioning in many areas remains impaired and seems likely to be strained for some time," the Fed said in its statement. { <a href="#">NSN KLSXSY0UQV19 &lt;GO&gt;</a> }	38	365	920	-1.76
July 8, 2009	The U.S. Treasury Department today named nine asset managers for the Public-Private Investment Program (PPIP), in an effort to remove as much as \$40 billion in troubled assets from banks and other financial firms. The Treasury will invest as much as \$30 billion in the program. The first closing on an established PPIP fund is expected in August, the Treasury said. { <a href="#">NSN KMHBP0UQVIA &lt;GO&gt;</a> }	33	368	880	-1.86
July 14, 2009	CIT Group Inc., the century-old lender that's been unable to persuade the government to back its debt sales, is in "active discussions" with regulators about a rescue before \$1 billion of bonds mature next month. { <a href="#">NSN KMR36I0D9L35 &lt;GO&gt;</a> }	32	371	906	-1.50
August 6, 2009	The Bank of England expanded its bond purchase program beyond its original limit in an effort to spur lending and fight a recession that's deeper than previously anticipated.	27	294	997	-0.94
August 7, 2009	CIT Group Inc., the 101-year-old lender working to avert collapse, suspended dividend payments on four series of preferred stock to "improve liquidity and preserve capital."	27	289	1010	-0.86
August 13, 2009	The German and French economies unexpectedly grew in the second quarter, bringing an end to their worst recessions since World War II. Germany's gross domestic product rose a seasonally adjusted 0.3 percent from the first quarter. The French economy also expanded 0.3 percent,.	26	298	1013	-0.90
August 17, 2009	The Federal Reserve extended by three to six months an emergency program aimed at restarting credit markets, a move that may cushion the commercial real-estate industry from rising defaults and falling prices.	24	309	980	-1.14

		Libor/OIS Spread	Baa/Trsy. Yield Spread	S&P 500 Index	Financial Cond. Index
August 17, 2009	Japan's economy emerged from its deepest postwar recession as exports and consumer spending rebounded. Gross domestic product expanded at an annual 3.7 percent pace in the three months to June 30, the first growth in five quarters, following an 11.7 percent decline in the first three months of the year.	24	309	980	-1.14
August 25, 2009	Federal Reserve Chairman Ben Bernanke, who led the biggest expansion of the central bank's power in its 95-year history to battle the worst economic slump since the Great Depression, was nominated to a second term today by President Barack Obama.	19	302	1028	-0.94

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## Keeping Up with the Financial Crisis

### News

CCRT Credit Crisis Timeline  
 NICRUNCH Credit Crunch/Crisis News  
 SBPR Subprime News

### Credit Markets

BANK Monitor bank prices and CDS rates  
 GCDS CDS sector graph  
 WDCI Writedowns and credit loss vs. capital raised  
 CCRU Credit crunch overview  
 WWCC Worldwide credit crunch menu

### Mortgages / Housing / Delinquency

HSST U.S. housing and construction statistics  
 DELQ Credit card delinquency rates  
 BBMD Mortgage delinquency monitor  
 REDQ Commercial real estate delinquencies  
 DQLO Delinquency rates by loan originator

### Inflation Analysis

ILBE World inflation breakeven rates

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