# Running the Numbers on High Yield Bonds

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# Overview

- Default Rate Trend Drives Returns
- Rating Group Relative Performance
- Default Rate Outlook

# Default Rate Trend Drives Returns

Default Rate Trend

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Direction of High Yield Index Price

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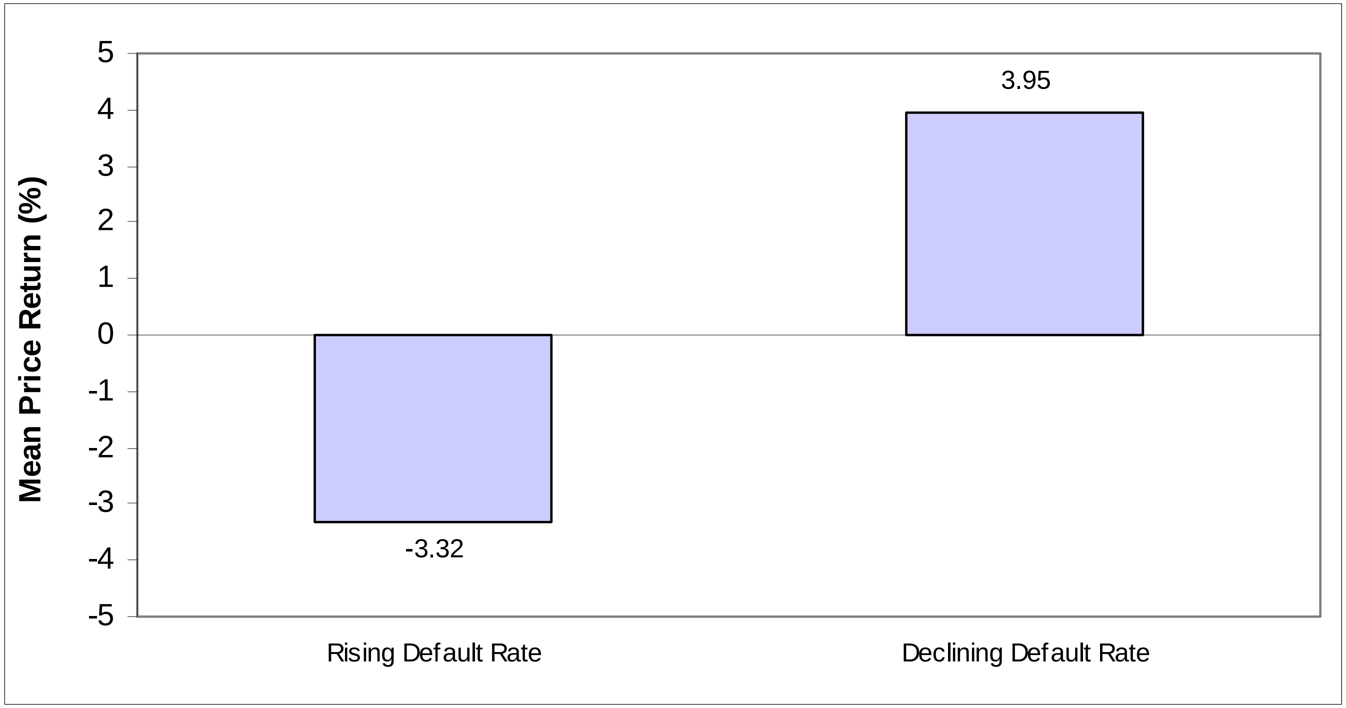
Rating Group Relative Performance

# Change in Default Rate versus High Yield Master Index II Price Return

1987 – 2009, Annually



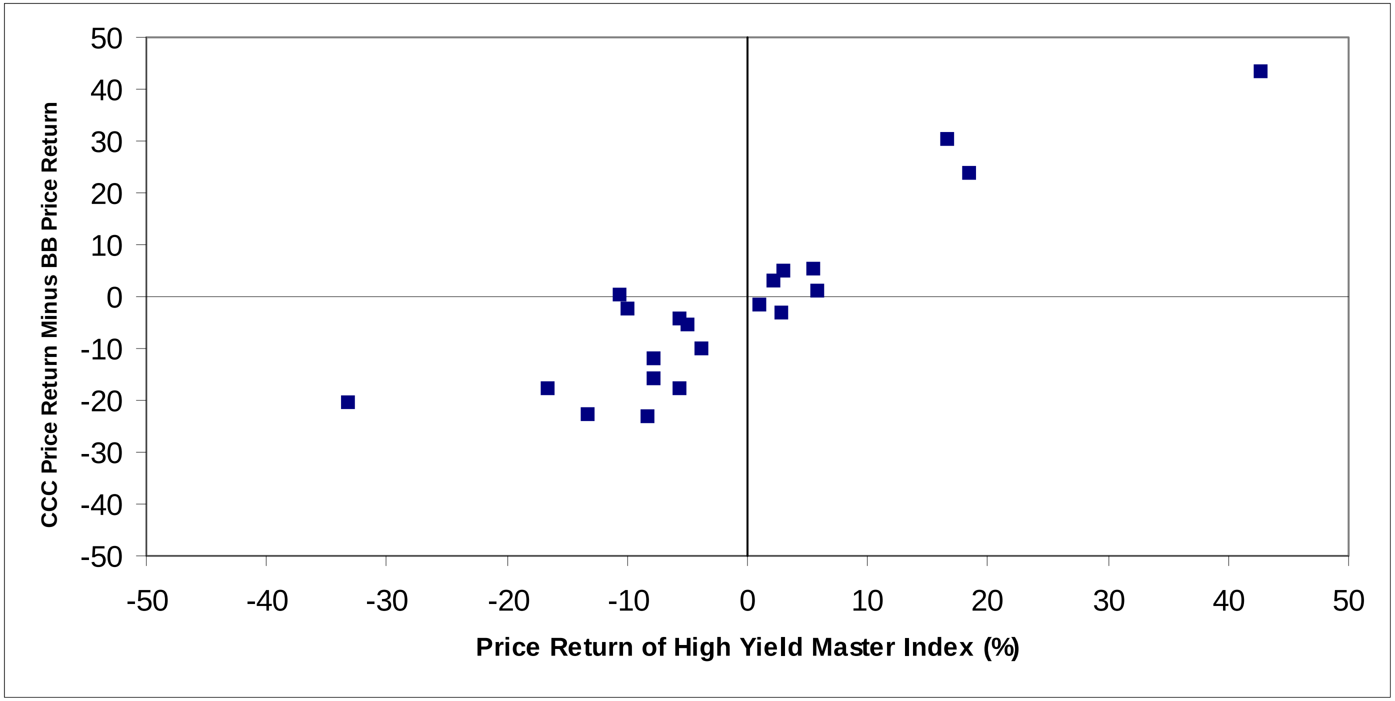

In 17 out of 23 years, the default rate and the high yield index price moved in opposite directions

Sources: BofA Merrill Lynch Global Research, Moody's Investors Service.

# Rating Group Relative Performance

# Rating Group Relative Performance vs. Index Price Return

1989 – 2009, Annually



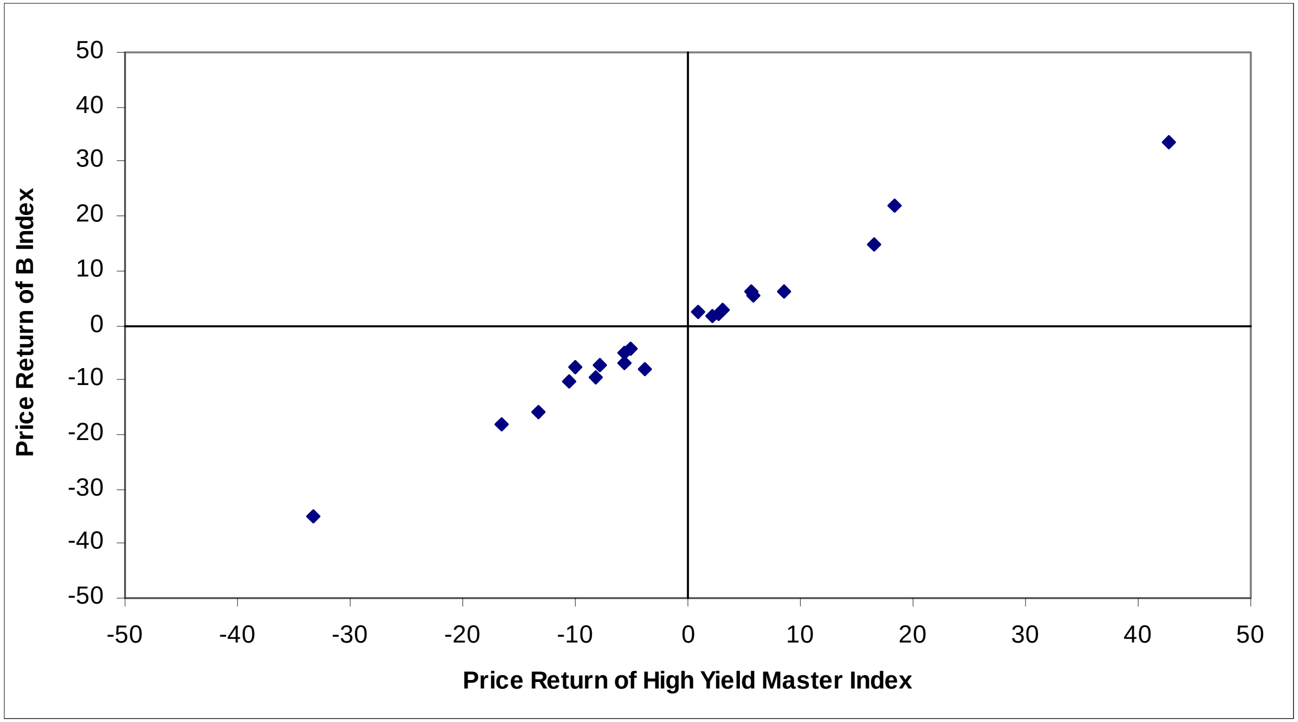

Source: BofA Merrill Lynch Global Research.

In 86% of all years, the high yield price return and the price return differential had the same sign

The slope of this graph is 1.0 (a 45° angle), meaning that on average, index price return = CCC minus BB price return

# B Price Return vs. Index Price Return

1988 – 2009, Annually



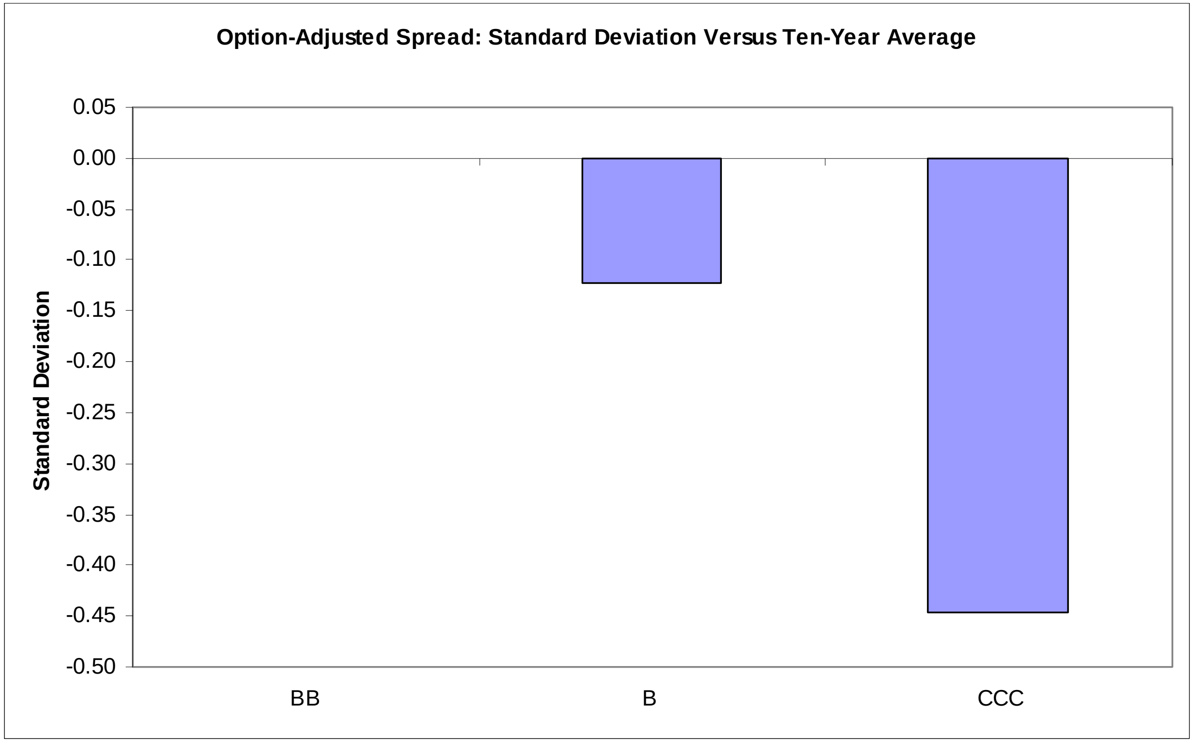

The B price return generally matches the high yield index's price return

Source: BofA Merrill Lynch Global Research.

The slope of this graph is 0.94. The signs are the same in every single year.

# Rating Group Relative Valuation

## October 31, 2010



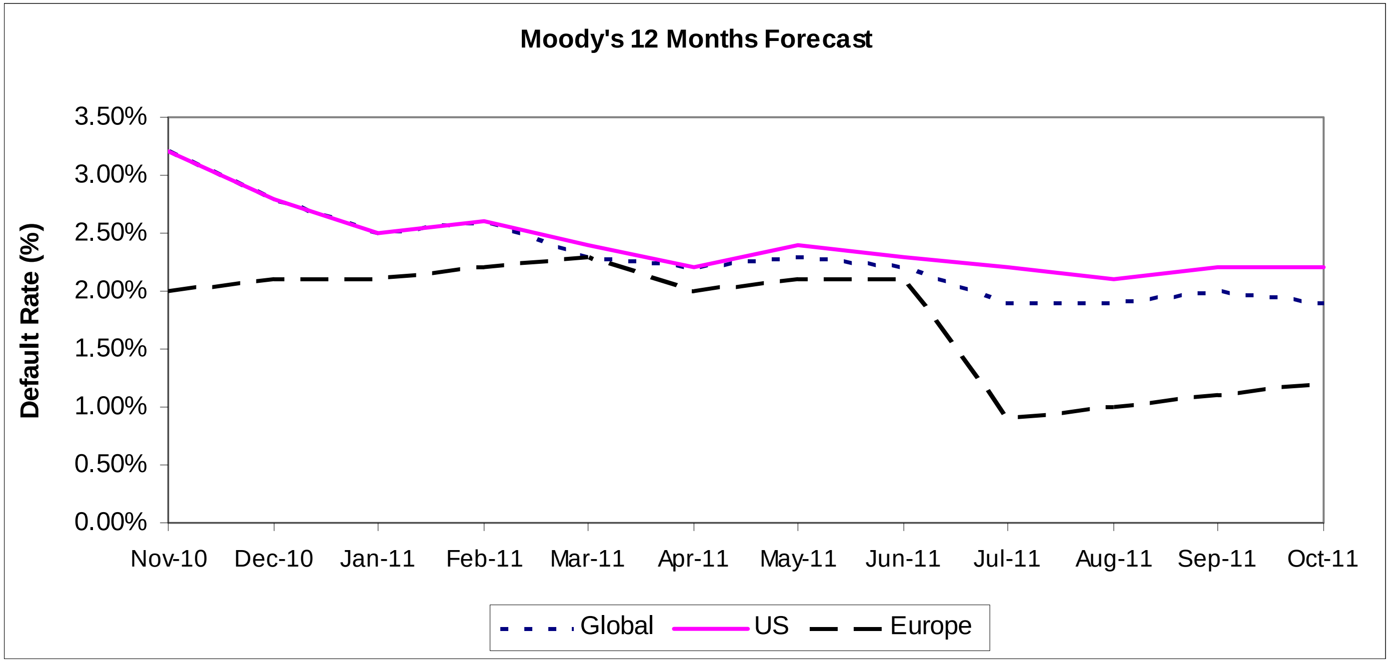

Rich valuation of CCCs raises a caution in view of uncertainty surrounding the base-case outlook

Sources: BofA Merrill Lynch Global Research.

# Default Rate Outlook

# Moody's Twelve-Month Default Forecast

## October 2003-October 2010

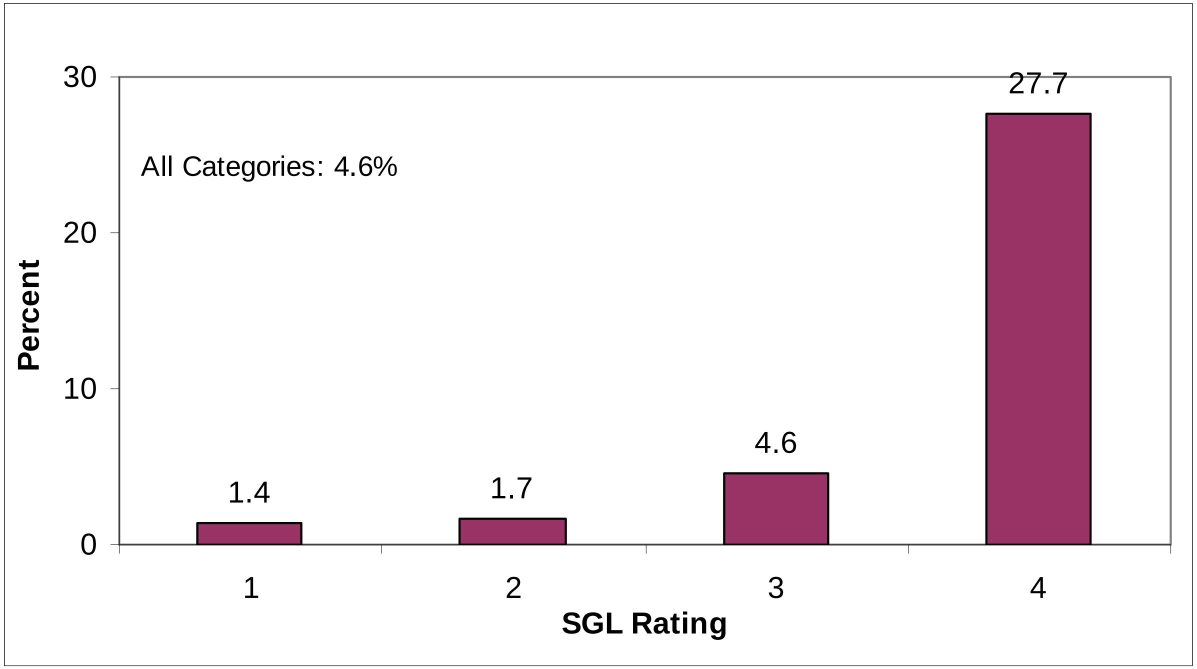



Further declines in the trailing-12-month rate should occur as year-ago, high-default-rate-environment quarters drop out of the series

Source: Moody's Investors Service.

# Speculative Grade Liquidity Default Rate by Category

October 2003-July 2010

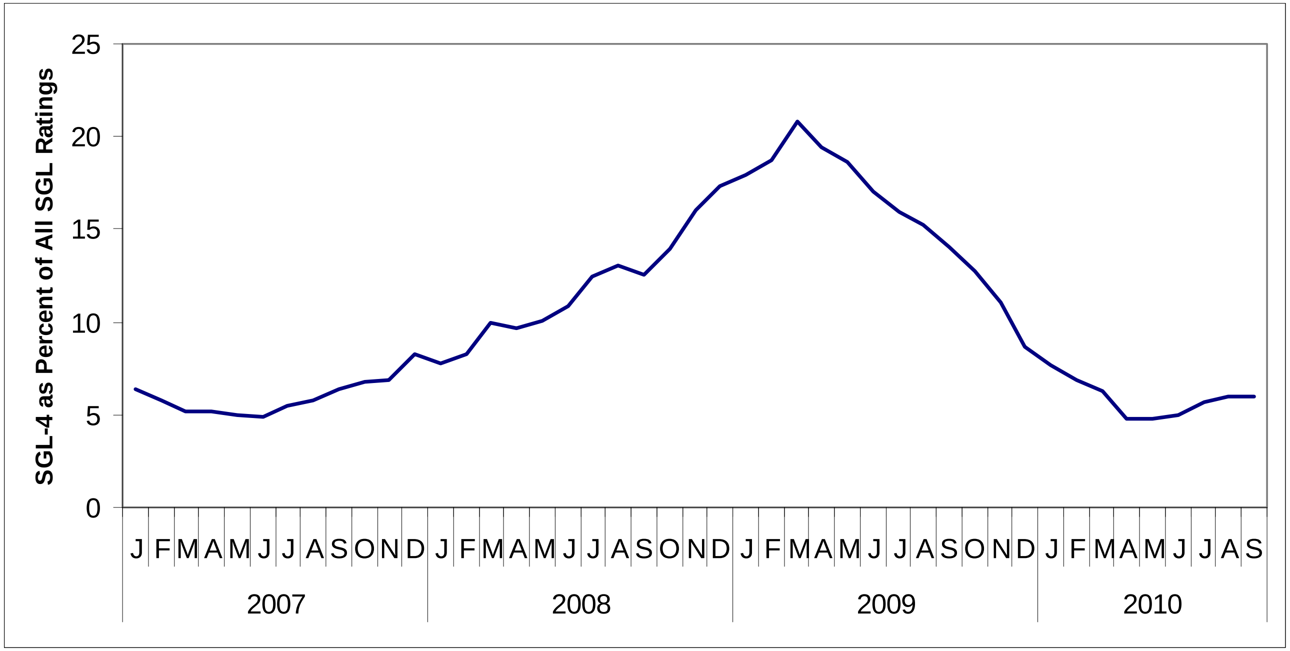



Source: Moody's Investors Service.

Moody's SGL ratings shift more rapidly than bond ratings to reflect changes in near-term default risk

# Speculative Grade Liquidity Ratings

## 2007-2010




This series suggests the default rate could be nearing a bottom

Source: Moody's Investors Service.

# Market-Based Default Rate Forecast

As of October 31, 2010

| | | Distribution of High Yield Universe (%) | | Annual Default Rate (%)* | | Weighted Average (%) |
|---|---|---|---|---|---|---|
| **Distressed** | | 9.72% | x | 23.53% | = | 2.29% |
| **Non-distressed** | + | 90.28% | x | 1.23% | = | 1.11% |
| **Cyclical Adjustment Factor** | + | | | -0.75% | = | -0.75% |
| **Default Rate Forecast** | | | | | = | **2.65%** |

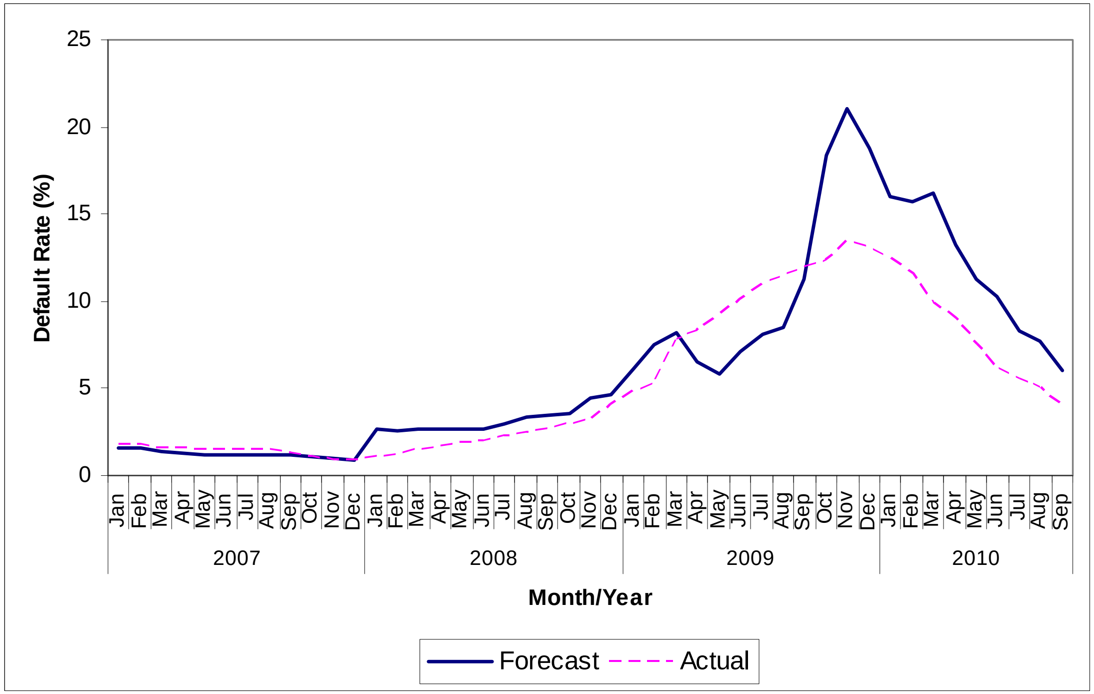
Source: BofA Merrill Lynch Global Research.

* Source: Martin Fridson, Kevin P. Covey, and Karen Sterling, "Performance of Distressed Bonds," The Journal of Portfolio Management (Spring 2008).

The divergence between the market-based forecast and the Moody's econometric model's forecast is considerably wider than it was earlier in the year.

# Actual versus Forecast

## March 2007 – October 2010, Monthly




In most periods, the market has achieved fairly good success in forecasting the default rate

* Sources: Garman Research, BofA Merrill Lynch Global Research, Moody's Investors Service.

# Wild Card in Default Rate Forecast: Double-Dip Recession

Market-Based Probability of Double-Dip

Fridson-Kong Estimated Spread November 9, 2010: 554 Basis Points

Estimated Recession Spread: 1,083 Basis Points

Actual Spread November 9, 2010: 564 Basis Points

Probability of a Double-Dip Recession: 1,083 p + 554 (1-p) = 564

p= 2%

Source: BNP Paribas Asset Management, Inc.

# Fridson-Kong Model

Relative Return Statistics

| | | | |
|---|---|---|---|
| *Price Return* | | | |
| | Cheap | Fair | Rich |
| Count | 15 | 129 | 5 |
| Average | 21.99% | -5.01% | -2.29% |
| Stdev | 18.38% | 9.32% | 5.62% |
| *Total Return* | | | |
| | Cheap | Fair | Rich |
| Count | 15 | 129 | 5 |
| Average | 35.73% | 3.53% | 6.09% |
| Stdev | 21.53% | 9.76% | 6.06% |
| **Total Sample** | | | |
| Count | 149 | | |
| *Price Return* | | | |
| Average | -2.20% | | |
| Stdev | 13.19% | | |
| *Total Return* | | | |
| Average | 6.86% | | |
| Stdev | 14.88% | | |

Sources: Federal Reserve Bank of New York, Moody's Investors Service.

Historical R-Squared: 83.54%

Current Estimated Spread: 554

| **Variables** |
|---|
| Fed Survey |
| Capacity Utilization |
| Industrial Production |
| Trailing 3-month Default Rate |

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