

# Running the Numbers on High Yield Bonds

Martin Fridson, CFA

Global Credit Strategist

Presented to: Quantitative Work Alliance for Applied Finance Education and Wisdom —  
November 17, 2010



**BNP PARIBAS**  
ASSET MANAGEMENT

A BNP Paribas Investment Partner

# Overview

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



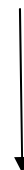
# Default Rate Trend Drives Returns



Default Rate Trend



Direction of High Yield Index Price

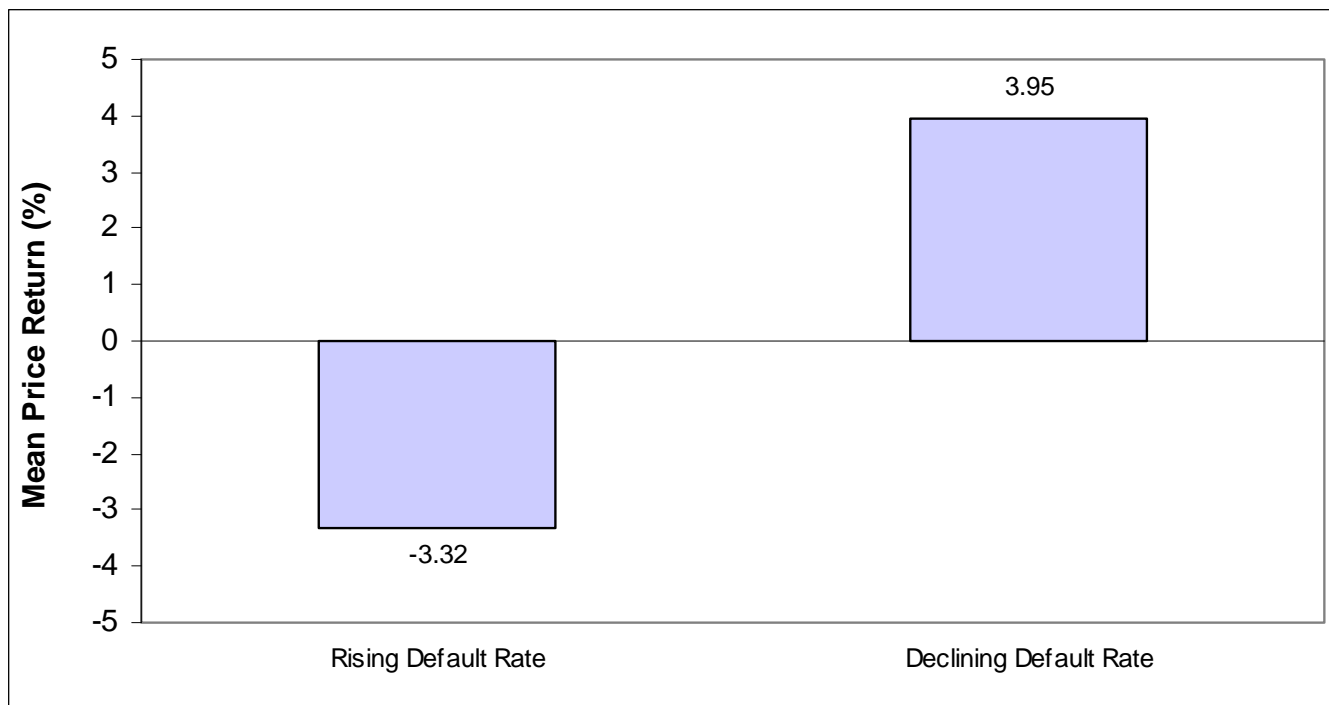


Rating Group Relative Performance



# 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.

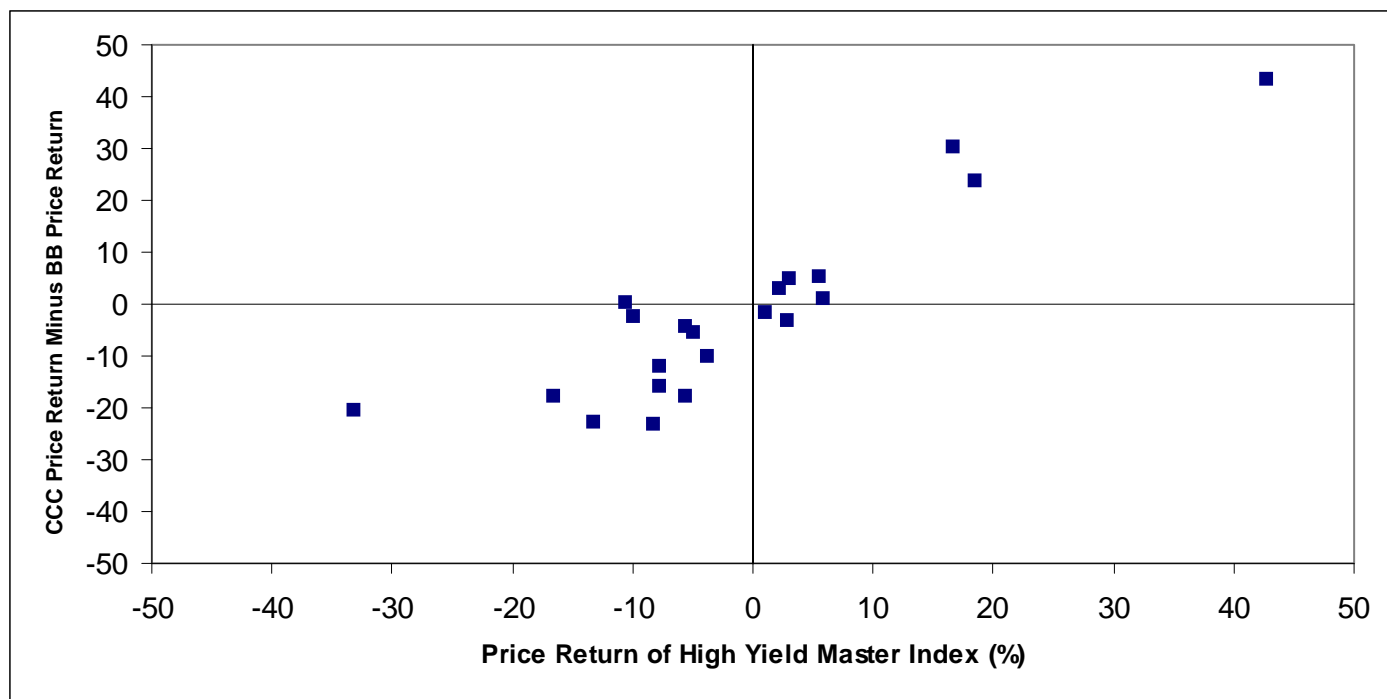


# Rating Group Relative Performance



# Rating Group Relative Performance vs. Index Price Return

1989 – 2009, Annually



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

Source: BofA Merrill Lynch Global Research.

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

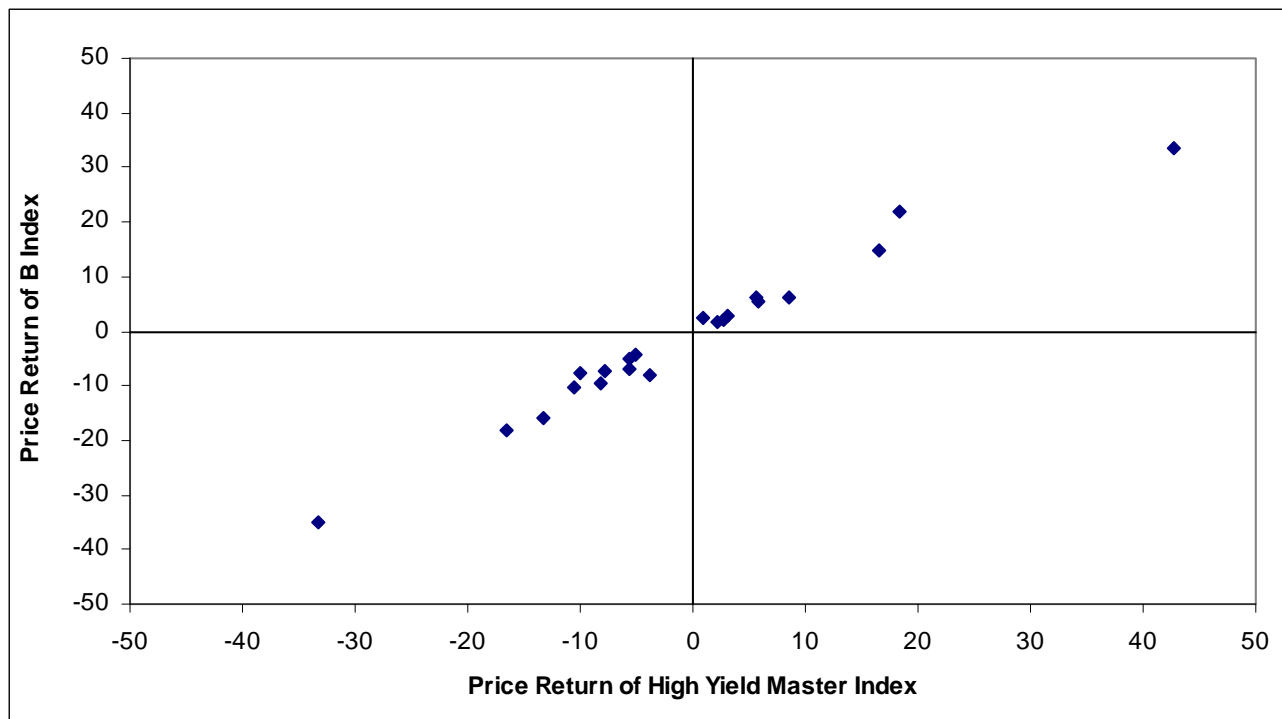


**BNP PARIBAS**  
ASSET MANAGEMENT

A BNP Paribas Investment Partner

# 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.



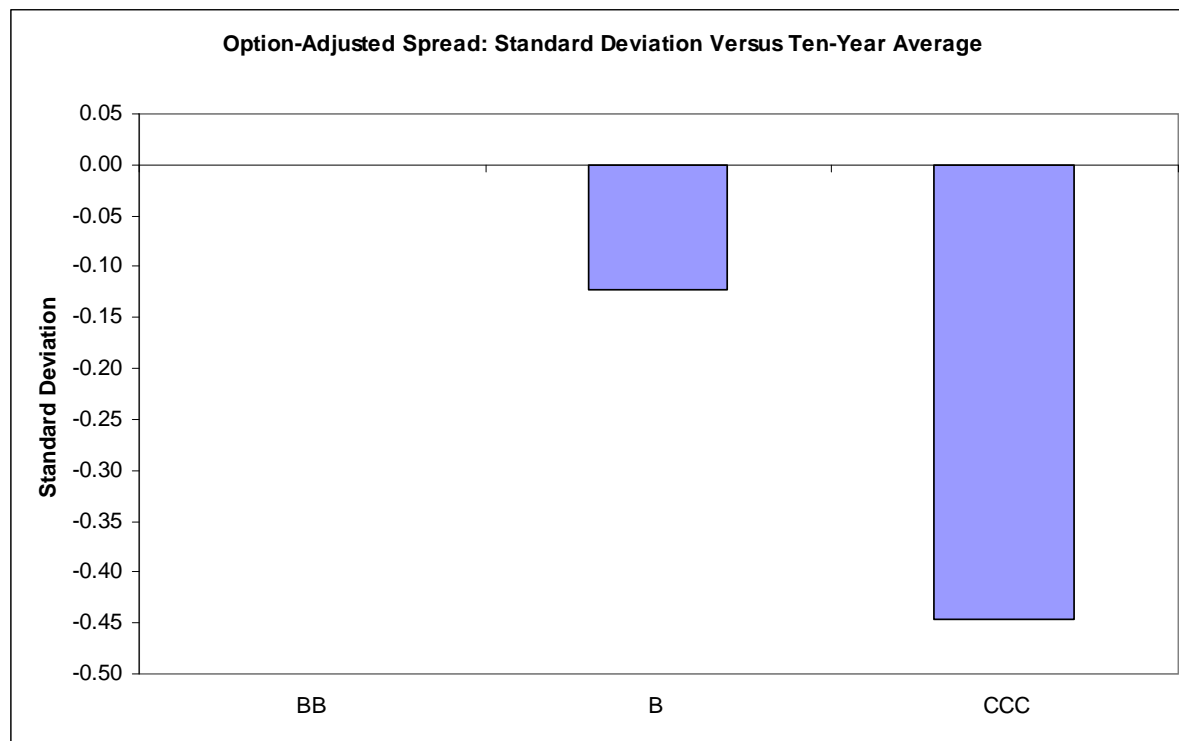
**BNP PARIBAS**  
ASSET MANAGEMENT

A BNP Paribas Investment Partner



# 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.

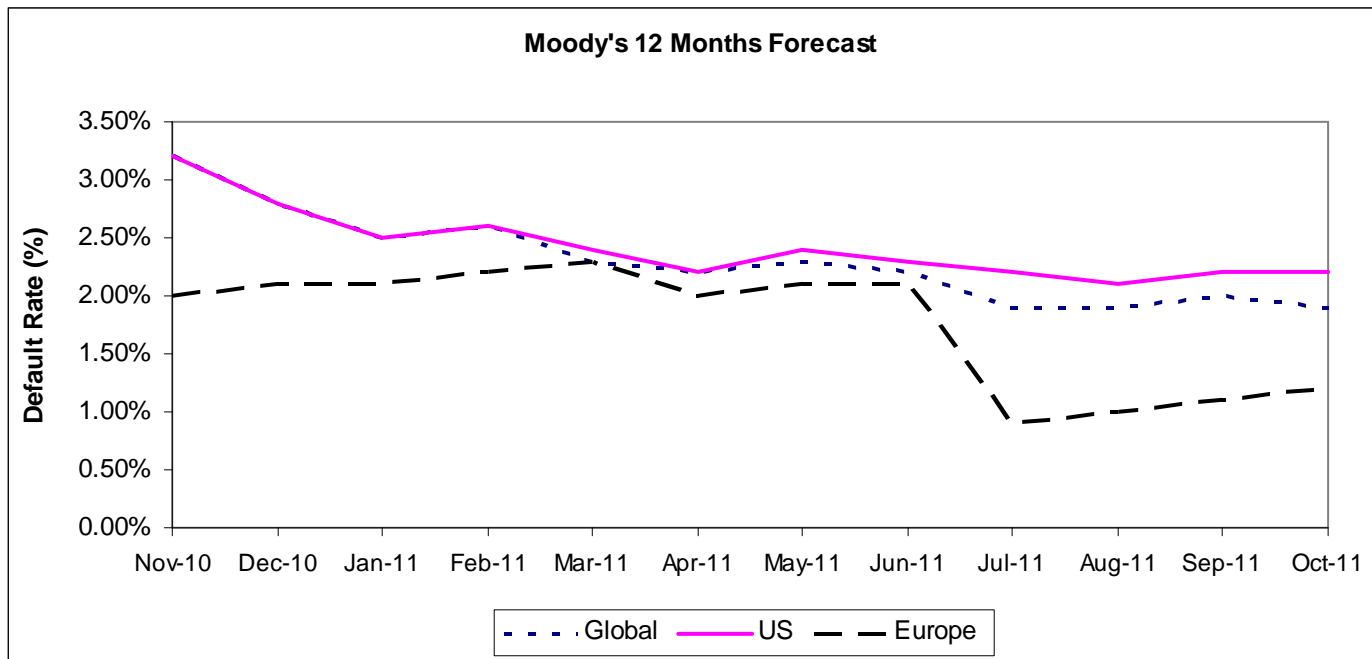


# Default Rate Outlook



# Moody's Twelve-Month Default Forecast

October 2003-October 2010



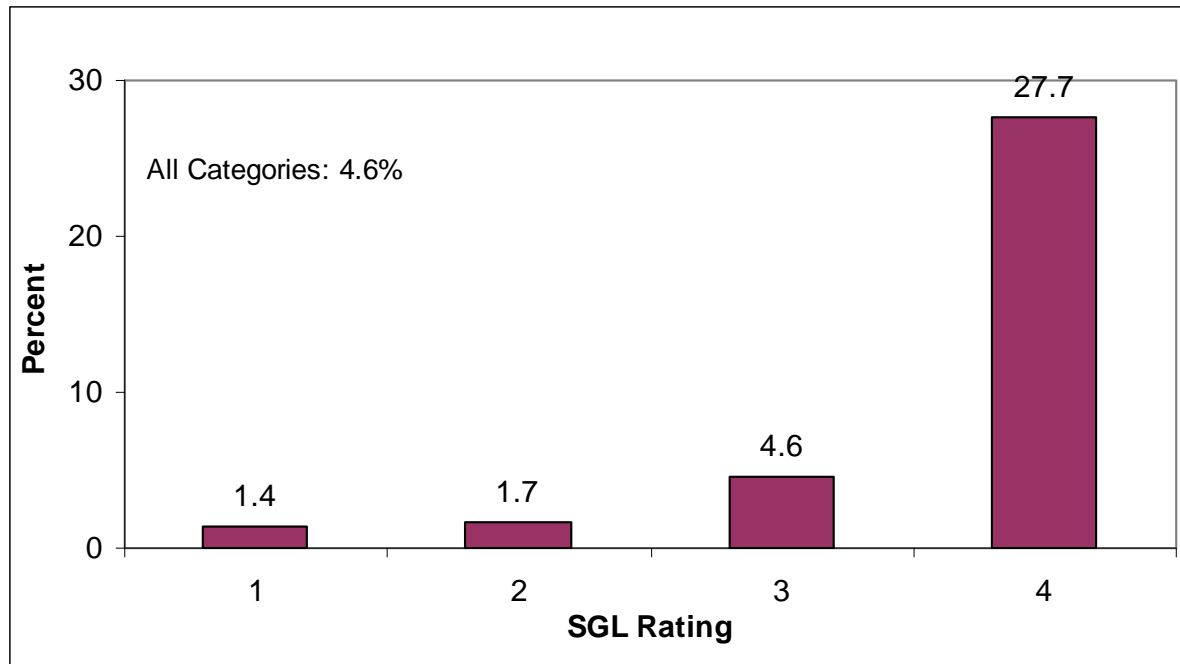
Further declines in the trailing-12-month rate should occur as year-ago, high-default-rate-environment quarters drop out of the series

Source: Moody's Investors Service.



# Speculative Grade Liquidity Default Rate by Category

October 2003-July 2010



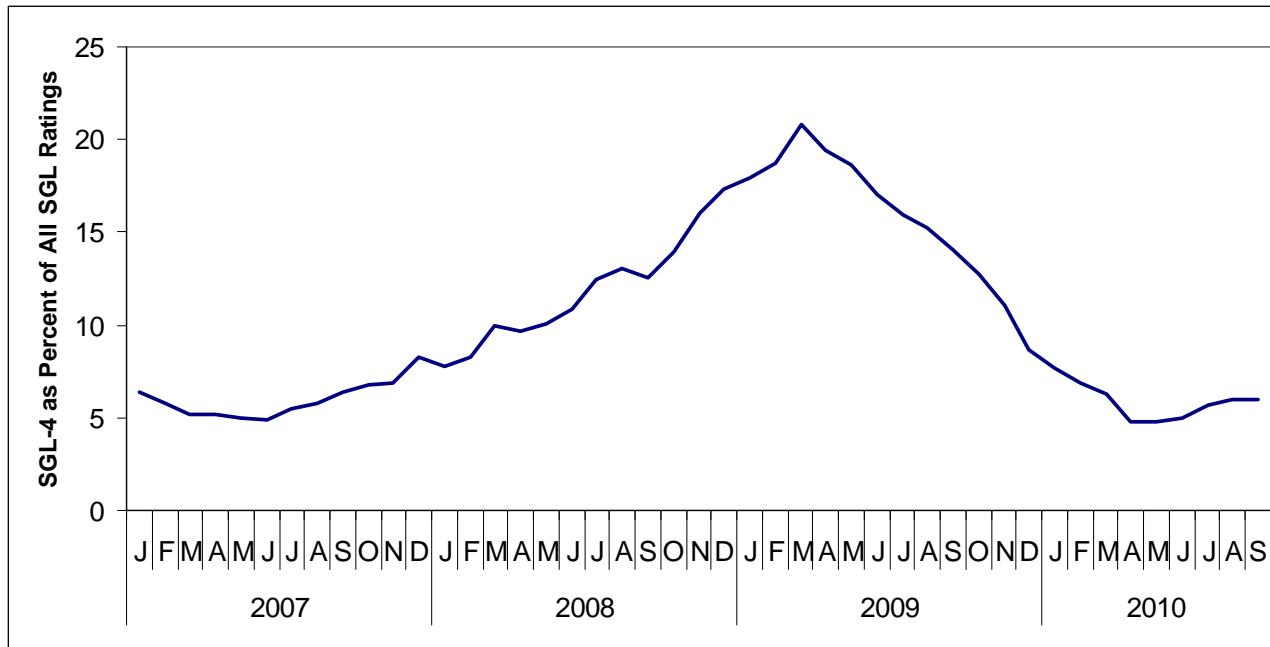
Moody's SGL ratings shift more rapidly than bond ratings to reflect changes in near-term default risk

Source: Moody's Investors Service.



# 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%
<b>Default Rate Forecast</b>					=	<b>2.65%</b>

Source: BofA Merrill Lynch Global Research.

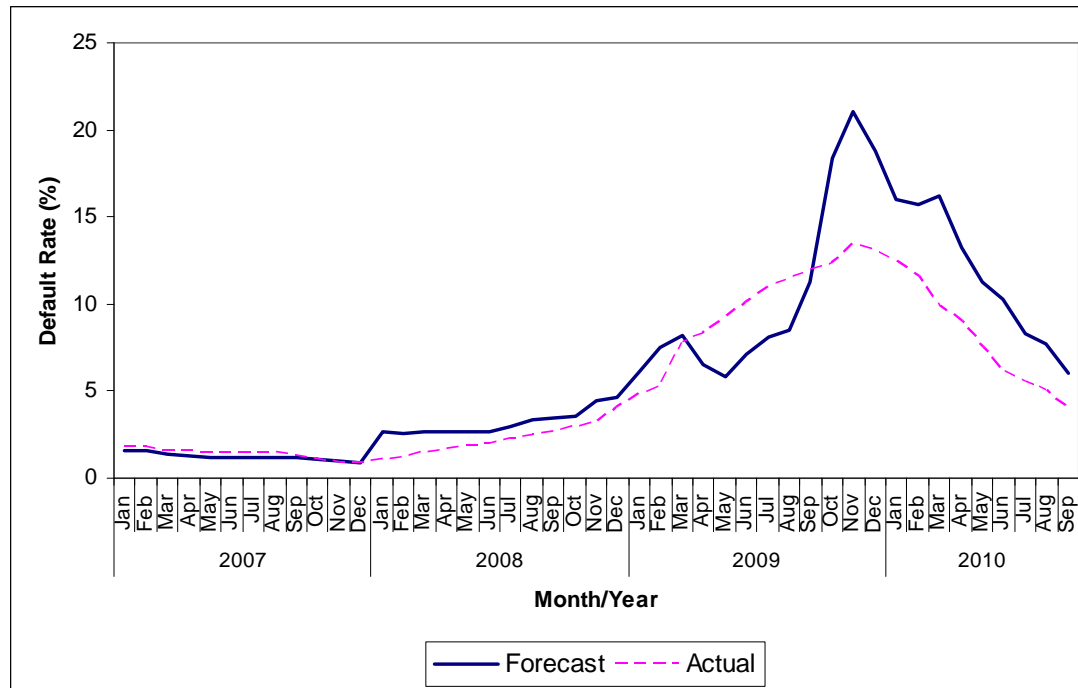
\* Source: Martin Fridson, Kevin P. Covey, and Karen Sterling, "Performance of Distressed Bonds," The Journal of Portfolio Management (Spring 2008).

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

<i>Price Return</i>			
	Cheap	Fair	Rich
Count	15	129	5
Average	21.99%	-5.01%	-2.29%
Stdev	18.38%	9.32%	5.62%
<i>Total Return</i>			
	Cheap	Fair	Rich
Count	15	129	5
Average	35.73%	3.53%	6.09%
Stdev	21.53%	9.76%	6.06%
<b>Total Sample</b>			
Count	149		
<u><i>Price Return</i></u>			
Average	-2.20%		
Stdev	13.19%		
<u><i>Total Return</i></u>			
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

<b>Variables</b>
Fed Survey
Capacity Utilization
Industrial Production
Trailing 3-month Default Rate



# Disclaimer

This document is issued by BNP Paribas Asset Management, Inc. (the “Firm”), which is a wholly-owned subsidiary of BNP Paribas. Within BNP Paribas, the Firm is a North American investment advisor registered with the Securities & Exchange Commission. The Firm is an affiliate of BNP Paribas Asset Management (BNPP AM), an investment manager registered with the Autorité des marchés financiers in France. This document is produced for information purposes only and does not constitute an offer to buy nor a solicitation to sell, nor shall it form the basis of or be relied upon in connection with any contract or commitment whatsoever or be taken as investment advice. Past performance is not a guide to future results. The value of a portfolio may go down as well as up. Returns may be affected by, among other things, investment restrictions, strategies or objectives of the portfolio and material market or economic conditions. Gross performance figures do not reflect the deduction of management fees. An investor’s return will be reduced by management fees and other expenses that may be incurred in the management of a portfolio. Management fees are described in Part II of the Firm’s Form ADV. Management fees compounded over a period of years will affect the total value of an investor’s portfolio (e.g., a 0.40% fee over five years, compounded quarterly, would reduce performance by 2.02%).

The comparative benchmarks represent past performance and are utilized on the statement solely for comparative purposes and may not be indicative of future results. The data presented has been gathered from sources believed to be reliable; however, their accuracy, completeness, or reliability cannot be guaranteed. We make no warranties and bear no liability for your use of this information. The volatility of the comparative benchmark is materially different from the volatility of the composite. Model results do not represent actual trading. The Merrill Lynch High Yield Master II Index is a commonly used benchmark index for high yield corporate bonds. It is a measure of the broad high yield market. The Master II is an unmanaged unleveraged index that tracks the performance of below investment grade U.S. dollar-denominated corporate bonds publicly issued in the U.S. domestic market. Issues included in the index have remaining maturities of at least one year, have credit rating lower than BBB-/Baa3, and are not in default. The index does not reflect fees and expenses and is not available for direct investment.

