

spreads. These patterns seem to suggest that before the attacks, the run-up in junk bond spreads was driven by concerns about rising credit risk. However, following the attacks, the spread skyrocketed almost 200 basis points to 968 basis points, just 46 basis points shy of the peak recorded during the 1990–1991 recession. While there is no question that a large part of the rise in junk bond yields reflects investors' reassessment of credit risk, the comovement in bond yield spreads, shown in Figure 2, shot up to a level not seen before. Both the rate of the increase and the level of comovement in yield spreads after September 11 indicate that some of the sizable jump in yield spreads may be attributable to the limited liquidity in the junk bond market.

Of the four sectors examined earlier, between January 2000 and August 2001, junk bond spreads in the energy sector had risen only 21% (or 100 basis points) while spreads in the health care sector had actually declined 15% (or 56 basis points). This reflects the positive developments in these two sectors, as evidenced by the 48% one-year return on energy stocks and the 70.5% return on the health care stocks of the junk bond borrowers. During that time, junk bond investors clearly were discriminating between good and poor performers as judged by the stock market. The junk bond spread rose 225% (1129 basis points) in the telecom sector and 116% (553 basis points) in the technology sector. The one-year stock returns of the junk bond borrowers in the telecom sector and the technology sector were –57.4% and –72.5%, respectively. This further suggests that the increase in junk bond yields before the attacks was driven by credit concerns about specific companies, most notably telecom firms and technology companies.

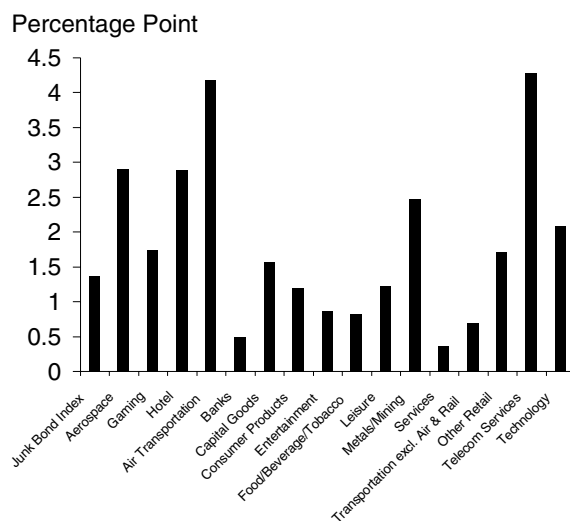
After the terrorist attacks, the widening of risk spreads on junk bonds was evident in most sectors, but especially among firms in the air travel and tourism industries. Figure 3 shows changes in risk spreads based on Merrill Lynch's index for firms in 16 sectors with junk bonds outstanding, from September 10 to October 10, 2001. While investors are reassessing the credit risk of different borrowers in different sectors as a result of the attacks, the fact that all sectors among junk bond issuers show some increase in risk spreads suggests that a deterioration of liquidity in the junk bond market may have exacerbated borrowing costs.

Conclusion

Junk bonds provide financial market signals about current and future economic activity because their

Figure 3

Changes in junk bond yield spreads by industry (9/10/01–10/10/01)



yields reflect the market's assessment of the credit prospects of the borrowing firms, whose marginal credit quality is highly sensitive to changing economic conditions. However, in addition to credit concerns, junk bond yields also are driven by systemic factors, among which the level of liquidity in the bond market is perhaps the most important. In interpreting junk bond yields, it is necessary to separate the systemic factors from the idiosyncratic factors. Before September 11, the run-up in junk bond yields in 2001 seems to have reflected specific credit concerns about the borrowing firms, as firms whose stocks were performing well generally did not see their junk bond yields go up, and the comovement in bond yields was not that high. After September 11, the sharp rise in junk bond yields clearly reflects the heightened credit risk of the borrowers. At the same time, the comovement in bond yields spiked up to a level not seen before, suggesting that deteriorating liquidity in the junk bond market may have pushed borrowing costs up further.

Simon Kwan
Research Advisor

Reference

Kwan, S.H. 1996. "Firm-specific Information and the Correlation between Individual Stocks and Bonds." *Journal of Financial Economics* 40, pp. 63–80.

Research Department Federal Reserve Bank of San Francisco

PRESORTED
STANDARD MAIL
U.S. POSTAGE
PAID
PERMIT NO. 752
San Francisco, Calif.

P.O. Box 7702
San Francisco, CA 94120
Address Service Requested

Printed on recycled paper
with soybean inks



Index to Recent Issues of *FRBSF Economic Letter*

DATE	NUMBER	TITLE	AUTHOR
4/6	01-09	What's Different about Banks—Still?	Marquis
4/13	01-10	Uncertainties in Projecting Federal Budget Surpluses	Lansing
4/20	01-11	Rising Price of Energy	Daly/Furlong
4/27	01-12	Modeling Credit Risk for Commercial Loans	Lopez
5/4	01-13	The Science (and Art) of Monetary Policy	Walsh
5/11	01-14	The Future of the New Economy	Jones
5/18	01-15	Japan's New Prime Minister and the Postal Savings System	Cargill/Yoshino
5/25	01-16	Monetary Policy and Exchange Rates in Small Open Economies	Dennis
6/1	01-17	The Stock Market: What a Difference a Year Makes	Kwan
6/15	01-18	Asset Prices, Exchange Rates, and Monetary Policy	Rudebusch
7/6	01-19	Update on the Economy	Parry
7/13	01-20	Fiscal Policy and Inflation	Daniel
7/20	01-21	Capital Controls and Exchange Rate Stability in Developing Countries	Glick/Hutchison
7/27	01-22	Productivity in Banking	Furlong
8/10	01-23	Federal Reserve Banks' Imputed Cost of Equity Capital	Lopez
8/24	01-24	Recent Research on Sticky Prices	Trehan
8/31	01-25	Capital Controls and Emerging Markets	Moreno
9/7	01-26	Transparency in Monetary Policy	Walsh
10/5	01-27	Natural Vacancy Rates in Commercial Real Estate Markets	Krainer
10/12	01-28	Unemployment and Productivity	Trehan
10/19	01-29	Has a Recession Already Started?	Rudebusch
10/26	01-30	Banking and the Business Cycle	Krainer
11/2	01-31	Quantitative Easing by the Bank of Japan	Spiegel
11/9	01-32	Information Technology and Growth in the Twelfth District	Daly