Monetary Trends

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A Yield Spread Perspective of the Financial Crisis

Increasing—yet still much-debated—evidence indicates the worst of the recent financial crisis is behind us. This marks the first payoff of a series of aggressive and coordinated steps by the Federal Reserve, Treasury, FDIC, and Congress to (i) stem the financial panic following the Lehman Brothers' bankruptcy and (ii) restore the flow of credit. Additional payoffs in the medium term are expected from the Fed's decision to cut its key policy rate to near zero and greatly expand the monetary base.

One of the most popular indicators of financial stress are yield spreads—both default risk spreads (e.g., between Baa- and AAA-grade corporate debt) and liquidity spreads (e.g., between interbank deposits and Treasury bills). Low bond yields are instrumental to the goals of an expansionary policy: They stimulate growth by reducing costs of capital to firms and households.[1] Yields on T-bills and notes have decreased notably in response to a number of the Fed's credit-easing policies. However, transmission of monetary impulses from Treasury yields to private sector yields—such as short-term interbank deposits and long-term corporate bonds—may be difficult. Default spreads in corporate bonds remain elevated: It has proven difficult to reduce the yields of corporate bonds with a rating below investment-grade. Meanwhile, rates on deposits used to trade short-term funds have followed abnormal paths, reflecting persistent concern over borrowers' solvency.

Do yield spreads now suggest an end to the crisis? The table lists some statistical facts for two key yield spreads. The first, the 3-month London Interbank Offering Rate–Overnight Index Swap (LIBOR-OIS) spread, indicates the magnitude of the liquidity premium for immediate convertibility of an asset into cash. The second spread, the Moody's spread between corporate bonds with Baa and Aaa ratings, indicates the premium required to compensate for the higher default probability of bonds without an investment-grade rating (such as Baa).

The mean yield spreads in the table (the coefficient γ) suggest the means underwent substantial increases during the crisis versus the pre-crisis period with a gradual return since November 2008 toward pre-crisis levels.[2] But a more careful analysis reveals a less-tranquilizing picture. We have estimated simple dynamic regressions (coefficient β in the table) that capture the speed at which a shock (i.e., an unpredictable change in the current level of a spread) to any of the spreads dissipates. A negative β suggests that a yield spread, once shocked, will return to its long-run mean; the larger the coefficient (in absolute value), the faster the effect of the shock vanishes.

The table shows that so far the good news is limited to the liquidity (LIBOR-OIS) spread; β returns significantly negative and to levels close to the pre-crisis standards (–0.15 vs. –0.17), starting in late 2008. However, recent developments for the default (Moody's Baa-Aaa) spread remain indecisive. While in the pre-crisis period, the β estimate was small in absolute value (–0.012) but highly statistically significant, during the crisis β becomes positive. Even though β has returned to negative since December 2008, there is little evidence that it may actually be different from zero. This is consistent with some recent, substantial volatility in the U.S. corporate bond market and leaves open the possibility that additional, future shocks to default premia may have long-lived effects.

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[1] See Guidolin, Massimo and Tam, Yu Man. "Taming the Long-Term Spreads." Federal Reserve Bank of St. Louis *Economic Synopses*, No. 26, May 22, 2009; http://research.stlouisfed.org/publications/es/09/ES0926.pdf.

[2] Our estimates in the table concern three distinct subsamples: December 2001–August 2007 is the pre-crisis period; August 2007–October 2008 captures the heights of the crisis, culminating with Lehman Brothers' demise in September 2008. The November 2008–July 2009 period marks a return to normality.

Default Spreads Dynamics

	Regression coefficients			
Subsample	α	β	γ **(unconditional mean)**	R^2
3-Month LIBOR-OIS liquidity spread				
12/21/2001–8/10/2007	–0.082	–0.174**	0.109**	0.083
8/17/2001–10/17/2001	0.668**	–0.061	1.068*	0.318
10/24/2008–8/31/2009	–0.026	–0.146**	0.530**	0.415
Moody's Baa-Aaa default spread				
12/21/2001–8/10/2007	0.156**	–0.012**	0.898**	0.030
8/17/2001–10/17/2001	1.132**	0.034	1.048**	0.638
10/24/2008–8/31/2009	0.577**	–0.007	0.104	0.462

NOTE: * and ** indicate significance at the 10 and 1 percent levels. The model estimated is $\Delta s_t = \alpha \Delta s_{t-1} + \beta(s_{t-1} - \gamma) + \varepsilon_t$, where s_t is the spread at time t. The dating was obtained by applying the standard Andrews-Quandt break test and selecting dates as averages of break dates for the two series.