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What the Libor-OIS Spread Says

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The term London interbank offer rate (Libor) is the rate at which banks indicate they are willing to lend to other banks for a specified term of the loan. The term overnight indexed swap (OIS) rate is the rate on a derivative contract on the overnight rate. (In the United States, the overnight rate is the effective federal funds rate.) In such a contract, two parties agree that one will pay the other a rate of interest that is the difference between the term OIS rate and the geometric average the overnight federal funds rate over the term of the contract. The term OIS rate is a measure of the market's expectation of the overnight funds rate over the term of the contract. There is very little default risk in the OIS market because there is no exchange of principal; funds are exchanged only at the maturity of the contract, when one party pays the net interest obligation to the other.

The term Libor-OIS spread is assumed to be a measure of the health of banks because it reflects what banks believe is the risk of default associated with lending to other banks. Indeed, former Fed Chairman Alan Greenspan stated recently that the "Libor-OIS remains a barometer of fears of bank insolvency." He then noted that "that fear has been substantially reduced since mid-October, but the decline has stalled well short of any semblance of normal markets," suggesting that the still-high Libor-OIS spreads were an indication of problems in the banking industry. There is no doubt that changes in the Libor-OIS spread reflect changes in *risk premiums* rather than changes in *liquidity premiums*—premiums that reflect banks' desire for liquidity: The difference between the rate on term certificates of deposit (CD) and the equivalent-term Libor rate is very small. If banks were liquidity constrained, borrowing banks would have to pay a higher rate when they borrow from each other than when they borrow in the CD market, where lenders are not "liquidity constrained."

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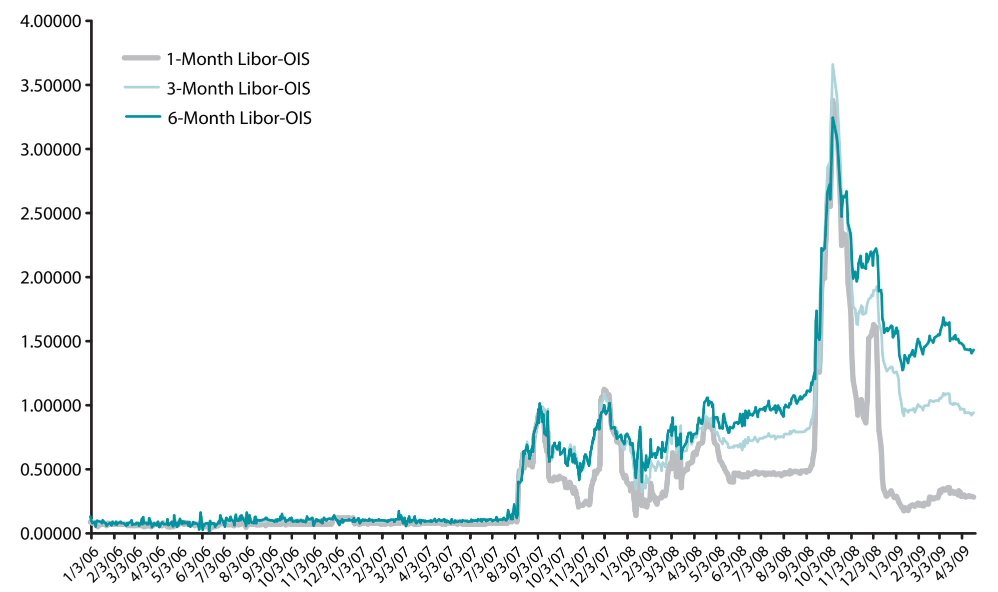
—Alan Greenspan

Risks premiums generally tend to increase in an environment of increased uncertainty, such as periods of financial turmoil and recession. In the case of recession, the risk premium increases because the rate on the default-risk-free asset falls relative to the rate for the risky asset as interest rates decline—there is a *flight to safety*.

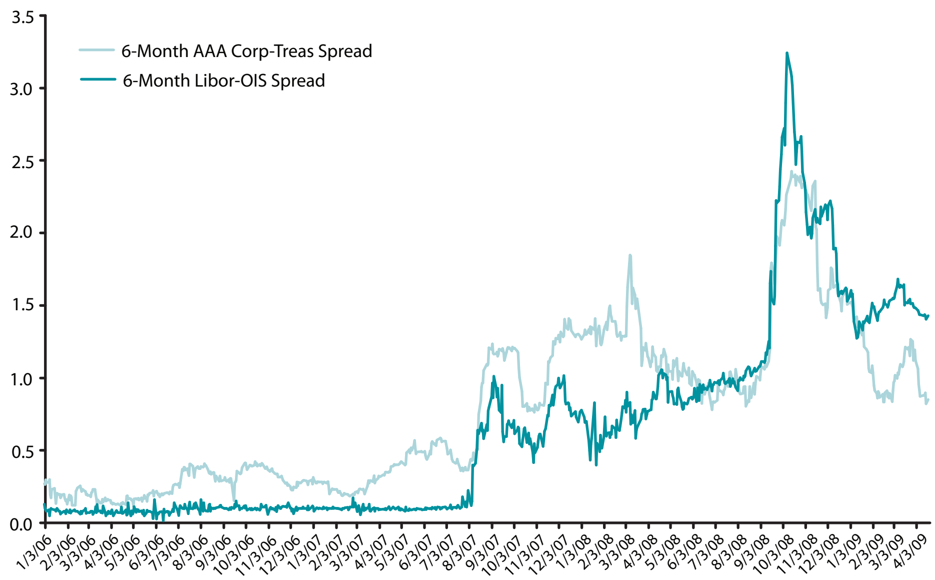
Figure 1 shows the daily term Libor-OIS spreads for terms of 1, 3, and 6 months: There was a sharp rise in the term spreads on August 9, 2007, after a lengthy period of

Figure 1



being small and relatively constant. Indeed, there was little difference in the spreads across terms of the assets. This sharp rise in the term spreads is associated with market concerns that problems in the subprime mortgage market were spreading to the broader mortgage market. These term spreads fluctuated around a much higher level until September 17, 2008, following the announcement that Lehman Brothers had filed for Chapter 11 bankruptcy. The spreads increased to very high levels—about 350 basis points—for a period after the Lehman announcement, but have subsequently narrowed. Indeed, the 1-month Libor-OIS spread on April 6, 2009, was about 28 basis points, only about 15 basis points higher than it was before early August 2007. However, the 3- and 6-month Libor-OIS spreads remain much higher than they were before the Lehman announcement.

Figure 2



It appears that the spreads reflect the market's perception of increased risk endemic to the economy more generally. Figure 2 shows the 6-month Libor-OIS spread and the spread between the rate on 6-month AAA-rate corporate bonds and the 6-month T-bill rate. The spread between lower-rated corporate bonds and equivalent-maturity Treasuries behaves similarly; however, the spread is much wider. The 6-month corporate-Treasury spread reflects the risk premium in the economy generally. Both risk premiums increased dramatically in early August 2007. Hence, news that the subprime problems were spreading beyond the subprime market appears to have affected risk premiums in the economy generally and not simply the banking industry. Moreover, both risk premiums rose dramatically on news of Lehman's bankruptcy. Perhaps not surprisingly the Libor-OIS spread increased somewhat more than the corporate-Treasury spread. Both spreads remain elevated relative to their pre-August 2007 levels, which likely reflects the concerns associated with the recession. The fact that the Libor-OIS spread has averaged about 40 to 50 basis points more suggests that the risks might now be somewhat higher in banking than the economy more generally. However, this interpretation suggests that risks have risen more so in the banking industry despite considerable efforts of the government and the Fed to aid that industry.

Finally, it is worth noting that there was considerable variation in the 6-month corporate-Treasury spread relative to the Libor-OIS spread before August 2007. Indeed, the Libor-OIS spread was very small and nearly constant. This behavior is consistent with the idea that financial markets were not adequately gauging the risk associated with mortgage lending during the period. ■

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