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## What Prolonged the Crisis

**THE FINANCIAL CRISIS** became acute on August 9 and 10, 2007, when the money market interest rates rose dramatically. Figure 7 illustrates this using a measure that has since become the focus of many studies. That measure is the spread between the three-month London Inter-bank Offered Rate (Libor) and the three-month overnight index swap (OIS). The OIS is a measure of what the markets expect the federal funds rate to be over the three-month period comparable to the three-month Libor. Subtracting OIS from Libor effectively controls for expectations effects, which are a factor in all term loans, including the three-month Libor. The difference between Libor and OIS is thus due to things other than interest-rate expectations, such as risk and liquidity effects.

If you look at the lower left of Figure 7 you see a spread of about 10 basis points (0.1 percentage point). If you extended that to the left, you would see a similar level of about 10 basis points. On August 9 and 10, 2007, this spread jumped to

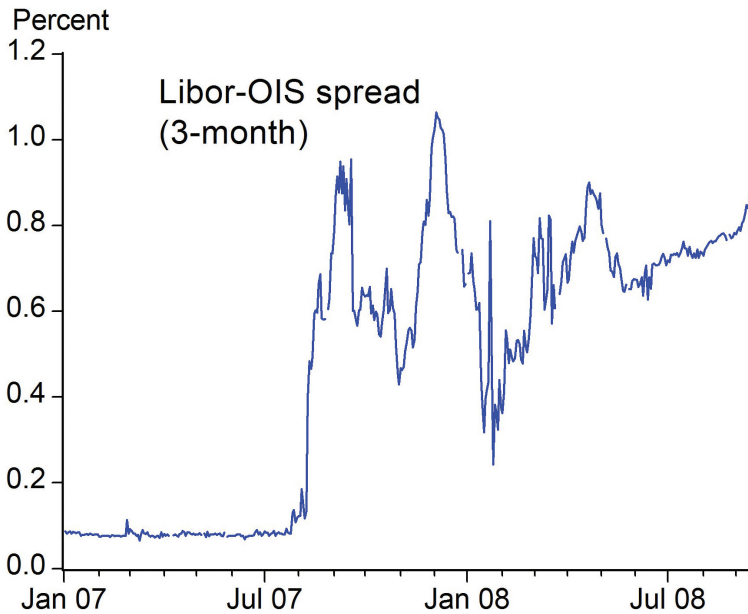


FIGURE 7. The Libor-OIS (overnight index swap) Spread during the First Year of Crisis

unusually high levels and has remained high ever since. In our research [3] on this episode, John Williams and I called the event “A Black Swan in the Money Market” because it appeared to be so unusual. Figure 7 focuses on the first year of the crisis; the worsening situation in September and October 2008 is covered in the next chapter.

In addition to being a measure of financial stress, the spread affects the transmission mechanism of monetary policy to the economy because trillions of dollars of loans and securities are indexed to Libor. An increase in the spread, holding the OIS constant, will increase the cost of such loans and have a con-

tractionary effect on the economy. Bringing this spread down therefore became a major objective of monetary policy, as well as a measure of its success in dealing with the market turmoil.

### ***Diagnosing the Problem: Liquidity or Counterparty Risk?***

Diagnosing the reason for the increased spreads was essential, of course, to determining the necessary policy response. If it was a liquidity problem, then providing more liquidity by making discount window borrowing easier or opening new windows or facilities would be appropriate. But if the issue was counterparty risk, then a direct focus on the quality and transparency of the banks' balance sheets would be appropriate, by requiring more transparency, by dealing directly with the increasing number of mortgage defaults as housing prices fell, or by looking for ways to bring more capital into the banks and other financial institutions.

In the fall of 2007 John Williams and I embarked on what we thought would be an interesting and possibly policy-relevant research project [3] to examine the issue. We interviewed traders who deal in the interbank market and we looked for measures of counterparty risk. The idea that counterparty risk was the reason for the increased spreads made sense because it corresponded to the Queen of Spades theory and other explanations for uncertainty about banks' balance sheets. At the time, however, many traders and monetary officials thought it was mainly a liquidity problem.

To assess the issue empirically, we looked for measures of risk in those markets to see if they correlated with the spread. One good measure of risk is the difference between interest rates