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Fixed Income Arbitrage in a Financial Crisis (D): TED Spread and Swap Spread in May 2009

On May 22, 2009, Albert Mills was at his desk studying the thirty-year U.S. dollar fixed-floating swap spread. Over the last six months, Mills' quiet pose, and his bafflement, had become a familiar sight to his colleagues at Kentish Town Capital (KTC). The spread was –30.40 basis points (–0.304%), roughly thirteen basis points less negative than it had been ten days ago, but still far below zero, which Mills thought should have been the lower bound. (**Exhibit 1** reproduces the movements that Mills had observed in the spread over the prior months.)

Mills found the negative thirty-year swap spread baffling, because he thought that an investor could enter the swap as payer and simultaneously purchase a thirty-year Treasury bond using low-interest repo financing. From the variable leg of the swap he would receive LIBOR, which would be more than the repo loan rate he was paying, and on the fixed leg of the swap he would pay a rate less than he would be receiving from the Treasury. It seemed like the kind of free-money opportunity that should not exist, at least not for the extended period of time that the thirty-year spread had been negative.

Based on this intuition, in early November Mills had put on a trade that would have profited if the swap spread had returned to its historical level of 30 to 50 basis points. At the time the spread had been about 6, and Mills, thinking that zero was a reasonable lower bound, had thought the downside risk was minimal. Mills had entered the swap as payer with notional $500 million and had bought the 2038 Treasury bond in an amount that made his initial position DV01-neutral with respect to market interest rates, leaving KTC exposed only to changes in the yield spread.

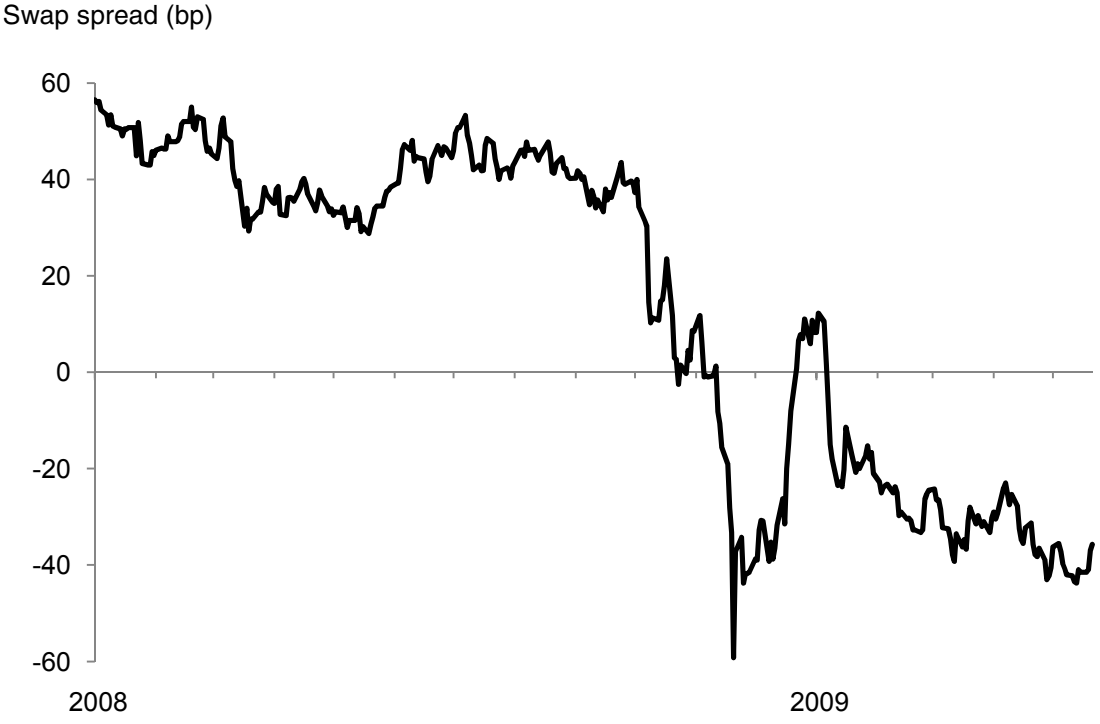
Over the succeeding two weeks, Mills had been stunned to watch the spread move down to –28.13. At that level, Mills had been stopped out of the trade at a loss to KTC of about $30 million. Those two weeks in November had been brief but extremely painful.

Two days later, the spread had moved further downward to –59.25, but the fact that Mills' stop had protected him against additional losses was cold comfort. Remarkably, the spread sprung back to positive values in late December before again plunging to negative values and continuing a downward drift through early May. Mills struggled to explain these movements and was still convinced the spread eventually would become positive again.

Professor Ryan Taliaferro and Stephen Blyth, Managing Director, Harvard Management Company prepared this case. HBS cases are developed solely as the basis for class discussion. Cases are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management.

Over the last few days the spread had seemed to be inching its way back toward zero, and Mills wondered if now was the time to try again. If the spread returned to its historic levels, he could more than recover his earlier losses. Adding to Mills' motivation was the fact that other anomalies finally seemed to be correcting. For example, an unusually large and persistent spread between two Treasury bonds of identical duration had finally returned to zero.[1] If normalcy soon would be returning to the swap spread as well, shouldn't KTC position itself to take advantage of the adjustment?

Exhibit 1 Thirty-year U.S. dollar fixed-for-floating swap spread[a], for the period January 1, 2008 through May 21, 2009. Spread is the rate on the fixed leg of the swap less the yield-to-maturity of a 30-year U.S. Treasury bond.



Source: Bloomberg, accessed December 2010.

[a] Bloomberg: USSP30<Curncy>GY<GO>.

[1] For a full description of this anomaly, see the (A) and (B) cases of Taliaferro and Blyth, 2011, "Fixed Income Arbitrage in a Financial Crisis," HBS case numbers 211-049 and 211-050, respectively.