

# COMMENTARY

Much of what was discussed in Michael Fleming’s paper and those that preceded it was, in my opinion, interesting, but methodologically flawed. Of course, the data in the papers are all correct, but I would like to present an alternative view that explains what happened to the fixed-income markets in the fall of 1998 as well as shows that the concern over Treasuries’ benchmark status is sort of a black flag without much meaning.

To begin, there is not enough historical perspective in these papers. We have been here many times before. The major problem we encounter is that Treasuries are a poor hedging vehicle. One reason for this problem is that people always assume that the representative investor is long securities and wants to short on-the-run Treasuries as a hedge. In the first half of 1998, the spread between on-the-run and off-the-run Treasuries was almost zero. The question, then, is who would want to be long an off-the-run security and short an on-the-run security at a yield spread approaching zero? This is a position in which a trader will make no money if things go well (if spreads remain narrow) and one in which a trader will get hurt badly if spreads widen. Moreover, history tells us that under such conditions there is a very big possibility that a large “event” will cause spreads to widen. This is exactly what happened in the second half of 1998.

Part of the problem leading up to fall 1998 was the poor use of econometrics, particularly by certain hedge funds. Modern risk management systems rely heavily on calculating value at

risk and other measures of potential losses using statistics based on data from the recent past. Of course, these statistics cannot evaluate gains and losses for events that did not happen. As a result, if we develop a value-at-risk statistic during relatively stable times with narrow spreads, many spread trades will look relatively safe, and market participants—in this case, certain hedge funds—will start investing in them on a heavily leveraged basis.

Furthermore, the increased speed of trading and data analysis in recent years has made this problem more complex. All traders use essentially the same methodology to evaluate risk. In addition, everyone analyzes the same data on a daily basis. Thus, everyone conducts the same basic trades and arbitrages. In such a marketplace, when a large (negative) shock to the system occurs, the risk management systems indicate that traders should liquidate their positions at approximately the same time. By doing so, of course, the traders push prices down even further, which causes them to liquidate even more positions, and so on.

This situation was complicated last year by the structure of the Treasury repo market. First, this market is, at least during normal times, almost 100 percent leveraged. This is a poorly understood fact of the market. Dealers themselves do not pay any margins, and market making is so competitive (in good times, at least) that anyone making large trades can shop around until a dealer is found who is willing to finance at nearly 100 percent. During the 1998 crisis, some of the leverage

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disappeared. Large traders, such as hedge funds and relative-value firms, very quickly were asked to put up 2 percent margin, rather than almost zero. As a result, many relative-value trades, which had looked attractive when financed at 100 percent, became *de minimis* trades when financed at 98 percent. This issue highlights the nature of arbitrage: trading huge amounts of securities for a miniscule spread on a highly leveraged basis. A small change in the cost of leverage will force traders out of arbitrage because of their risk management constraints.

By the way, one reason why margins rose and leverage fell was that the dealer community and the bank community had exactly the same kinds of trades as the hedge funds did. When dealers and banks began to post their own spread losses, their risk management systems indicated that they should reduce their positions and their lending, which raised margins.

My conclusion is that there was no flight to quality into Treasuries in the fall of 1998: instead, there was a liquidation of short Treasury positions by massively leveraged hedge funds. These actions drove spreads up to such an extent that other market participants, many of whom had entirely different trading strategies, were forced to sell or close positions when their value-at-risk models indicated that their hedges had deteriorated. The irony is that the existence of a Treasury benchmark worsened the situation. As Treasury yields were pushed lower, all spreads widened, making even more positions unprofitable and causing dealers to raise margins on repos, which in turn caused even more liquidation of short Treasury positions, pushing Treasury yields even lower, and so on.

As a result of these events, it is important to think about hedging within a more generic framework. The basic risk borne by the financial marketplace—that is, the dealer community—is not “level” risk, but correlation risk. For example, how does the yield spread of one country move against that of another country? What happens to the shape of the entire yield curve under different scenarios? How does one price a Bermuda swaption in the United States? For these risks, the key criterion is the correlation between asset-price movements and spreads. Therefore, Treasuries often end up being the worst hedges for such complicated risks, in part because large shocks can significantly change their correlations with other asset prices.

I believe that the usefulness of employing Treasuries for hedging purposes has already passed. I have to agree with those who argue that swaps, as the market is now structured, are almost risk free and in some ways probably less risky than Treasuries. Certainly, the credit risk in the underlying LIBOR is very small, because poorly performing banks are dropped out of that index by the British Bankers Association. In addition, nearly all swap transactions are now (or soon will be) marked to market daily. Thus, no matter what the underlying credit

problem is, a trader will have at most one day’s price movement risk on a swap, which is essentially the same risk that traders have on Treasury and repo transactions. That is to say, when you buy a Treasury issue or you do a repo, your credit risk is the risk that the dealer might not be around the next day to deliver the security. Furthermore, in good times at least, the Treasury repo market—like the swaps market—is almost 100 percent leveraged.

It seems clear to me that a benchmark futures contract based on LIBOR swaps will be able to replace Treasuries. In this sense, the United States will be following Europe. When the European swaps market first began to develop, I recall visiting European institutions and explaining how we priced instruments from government benchmarks. People there found this practice surprising—nobody knew what a government benchmark was. The institutions traded their securities from swaps and futures benchmarks rather than from governments. Today, the European marketplace has the largest futures trading in the Eurex, far surpassing U.S. futures contracts and fixed-income securities. Furthermore, because the swaps market in the euro is the universal market, swaps spreads usually trade below government spreads. This is completely rational for the euro because swaps are far more liquid than instruments such as European government bonds.

Interestingly enough, the benchmark shift has already started in the United States. The thirty-year Treasury bond is no longer the lead contract for the U.S. futures markets. About four weeks ago, the ten-year note futures became the dominant futures contract in the United States, trading more open interest and volume than the thirty-year bond futures did. In addition, corporate bond debt and mortgage-backed debt traders are now hedging their collateral with interest-rate swaps. This is certainly not a risk-free game and, looking forward, we are likely to see the swaps market change its characteristics. For example, swap rates may be influenced by mortgage prepayment risk, if mortgage-backed securities are hedged in swaps first and then filtered through to the Treasury market.

In point of fact, the benchmark status of the Treasury market has been changing over the past ten to twelve years. Within five to ten years, it seems almost certain that we will have a swaps-based financial marketplace, where only the cash flows will matter, and where market participants will not be concerned with how the flows are bundled. This scenario will be an improvement over the uncertain supply conditions that often drive Treasuries and, more importantly, the Treasury repo market.

In fact, the Treasury repo market is unique: no other country has or is developing the kind of liquid repo markets that we have in the United States, and these markets certainly

do not serve as benchmarks. Elsewhere, when a government security position is financed, it is done at about the swaps or the LIBOR rate. Yet it is precisely this phenomenal institutional repo system in the United States that drives the market for Treasuries and, as such, sometimes makes Treasuries appear to be so strange and distorted in their relationships with other instruments. If the Treasury market's benchmark status is

changed, and there is much less need to borrow and lend Treasuries directly, I believe we will see a much more stable environment for trading and hedging. In addition, the combination of Treasuries being "risk-free" and being a benchmark is detrimental to hedging, because only the government can actually borrow risk-free. By changing benchmarks, we will alleviate some of that hedging problem.

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