

COMMENTARY

When thinking about how different asset classes might take over benchmark status from Treasury securities, it is useful to look back at history. We have been here before. Twenty-five years ago, Treasury securities were the benchmark securities for the fixed-income markets at *all maturities*. Today, they are benchmarks only at the intermediate and long ends of the yield curve. In the late 1970s, the Eurodollar (LIBOR) cash market began to take over the benchmark status that Treasury bills had occupied. Starting in the mid-1980s, the Eurodollar futures market became the hedging and trading vehicle of choice for the entire short end of the market. While some of the factors that have led to the migration of the benchmark from Treasury bills to Eurodollars are not particularly relevant to the situation today, other lessons from that experience may be instructive for the issues we will face in the coming months.

One of the reasons—perhaps *the* reason why Treasury bills lost their benchmark status—is that they are not ideal hedging vehicles. Treasury bills are subject to very substantial supply shocks and the supply of bills is interest-inelastic. Thus, the Treasury market is a less efficient market than other fixed-income markets in which both supply and demand respond to changes in interest rates. Inelastic supply is also a feature of the markets for intermediate- and long-term Treasury coupon securities.

In the Treasury bill sector, inelastic supply has been exacerbated by large shifts in supply—month to month, year to year, and over the course of the business cycle. For example, if tax receipts are extraordinarily high, the supply of bills may fall dramatically in the spring, effectively decoupling the Treasury

bill from private sector interest rates. As a result of uncertainties in supply, the bill market's benchmark status became vulnerable as soon as more liquid, private sector short-term securities became available.

A related issue, alluded to in Michael Fleming's paper, is the fact that risk-free assets like Treasury securities can be poor hedging vehicles for other fixed-income securities because they do not have the same credit risk characteristics. At the end of the yield curve, LIBOR and Eurodollar futures are inherently superior hedging vehicles (relative to Treasury bills) for most private securities because they incorporate a sort of generic private sector risk premium.

As an aside, I would like to note that what we commonly call the credit risk spread—the difference between private fixed-income yield and comparable Treasury yield—is actually only half of a credit risk premium. The other half is a supply effect reflecting the fact that supply in the Treasury market, particularly the supply of bills, is arbitrary and interest-inelastic, and thus creates a distortion. A lot of things that we historically have called a credit risk spread are in fact just the result of shifts in the supply of Treasuries.

While the market for Treasury coupon securities has some of the same attributes as the bill market, the coupon sector did not lose its benchmark status in the 1980s for two main reasons: market liquidity and the lack of deep alternative markets. First, the Treasury traditionally has worked to keep coupon sector supply as regular and predictable as possible. This (relatively) fixed supply schedule has been very important in developing liquidity in the Treasury market over the years.

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While no private sector borrowers would commit to a fixed supply schedule because it is not optimal for them, a fixed supply has paid off for the Treasury in terms of vastly increased liquidity and an accompanying liquidity premium. In addition, the fact that Treasury coupon supply is inelastic may have increased trading volume and liquidity over the years, because it leaves a small market inefficiency for traders in Treasury securities to arbitrage away. Thus, the Treasury may benefit from forgoing the opportunity to exploit inefficiencies in its own market.

Looking ahead, it is not clear that supply even in the coupon sector can stay predictable. That is precisely the reason why people are asking whether coupons, like bills, are going to cease to be the benchmark.

The other reason why Treasury coupon securities did not lose their benchmark status in the 1980s is that there were no deep alternative private markets. That has changed. With the improvement of information technology and credit monitoring techniques, a much broader array of private sector borrowers now issue fixed-income securities with long maturities.

I will now turn to why LIBOR and Eurodollar futures replaced bills as short-term benchmarks fifteen or twenty years ago. From there, I will draw lessons from what might happen if coupon Treasuries now begin to lose their benchmark status.

What were the factors that gave Eurodollars the advantage over other private sector alternatives? The first factor was pricing transparency, particularly the fact that the Eurodollar market had a published reference rate (LIBOR) that was commonly accepted. The British Bankers Association LIBOR fixings were crucial to the acceptance of LIBOR as a pricing standard—and, ultimately, when a futures contract was offered, as a transaction and hedging vehicle.

The second factor was that the Eurodollar futures contract was designed as a cash-settled rather than a deliverable contract. Previous attempts to develop short-maturity private sector alternatives—commercial paper futures, domestic CD futures—died because of the messiness of deliverability. For Eurodollars, the futures market capitalized on the success of the published reference rate—LIBOR—to create a hugely liquid vehicle that traded just as a derivative.

What does that tell us about the options for alternative benchmarks going forward? One general lesson is that the better match between the credit risk of Eurodollars and that of other short-term securities gave Eurodollars a leg up in liquidity (relative to Treasury bills), particularly in times of

market stress. Also, the Treasury bill market did not disappear when Eurodollars took over the benchmark status. It kept thriving as a store of liquidity and as a place to put money in tough times. It continued to be an extremely cheap source of funding for the Treasury. In other words, the Treasury does not have to worry about losing the benchmark status. Treasury securities will still have a role to play as a safe haven; they will still have very low rates even if they cease to be a primary trading vehicle.

Going forward, swaps may have an edge as benchmarks over agencies in part because it would be very easy to develop a widely recognized and accepted swap reference series. There is already an International Swaps and Derivatives Association swap series that could be improved and promoted and could become the basis of organized futures trading. This has not happened yet, and attempts to make it happen thus far have not been successful. However, if an improved hedging vehicle that does not decouple from private sector instruments in times of stress is needed, it would not be hard to create such a reference rate.

Finally, I believe that the same lesson applies to agency securities. Agencies right now are a hot candidate to be benchmarks because their individual issue sizes come close enough to Treasury issue sizes to be liquid and tradable. However, history suggests that an agency futures contract based not on messy deliverability considerations but on an index of agency yields (with no balance-sheet implications for those who use it only as a hedging vehicle) is probably superior to a system in which individual cash agency securities are treated as the benchmark. The agencies would love to see this happen because such a system does not rely on large trading volume in the underlying security, but rather on the development of an index-based futures contract.

One of the major lessons learned from October 1998 concerned the use of Treasuries as hedging vehicles for private sector securities that have different credit risk as well as different supply characteristics. If we accept the notion that a derivatives instrument based on an index of securities is a desirable benchmark for hedging, then the corporate bond market is also attractive. If the corporate bond market develops an index made up of large issue sizes—such as Ford's global bonds—then you will have an ample supply of issuers trying to participate in that index. As a result, a futures contract on such an index could easily be traded, and might ultimately be the best hedging vehicle for those who underwrite corporate issuance.

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