

COMMENTARY

This thought-provoking paper by Michael Fleming raises several interesting issues in light of my experience, and makes an effort to establish some empirical regularities relating to different benchmark securities. After a brief review of the paper’s major conclusions, I will address a set of public policy issues that the paper raises.

MAJOR CONCLUSIONS OF THE PAPER

First, the premise of the Fleming paper is that the value of the Treasury market as a benchmark will be called into question by improved fiscal performance. This conclusion is itself predicated on a trend shift in productivity growth and greater fiscal restraint that will lead to extensive efforts to pay down debt over a protracted period.

Second, the paper contends that recent worldwide shocks and events including the Long-Term Capital Management (LTCM) crisis “heightened concerns about the Treasury market’s benchmark role.”

Third, the paper argues that increasingly there will be alternative benchmarks emerging for the pricing and hedging of securities, including the agency debt, corporate debt, and swaps markets. Much of this argument is based on the idea that these forms of debt are characterized by credit risks that will be

more correlated with spread products and that these forms of debt will be a better hedge than Treasuries—despite disadvantages in such areas as market size and liquidity.

PUBLIC POLICY ISSUES RAISED BY THE PAPER

Although the Fleming paper presents some interesting empirical correlations, relationships, and trends, it leaves the reader asking several questions—all of which have a public policy implication and none of which are actually discussed that explicitly.

These questions include:

- What characteristics should a benchmark security actually have and, more basically, what do we mean by a “benchmark”?
- Is the premise of the paper, which suggests the need for new benchmarks versus a Treasury benchmark, actually relevant?
- Might it be that the Treasury market (on-the-run and off-the-run issues) actually functioned quite well during the fall 1998 crisis and during the run-up to Y2K in recent months?

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- Are the recent changes relating to the repo market and the eligibility of agency debt as collateral in Federal Reserve System open market operations worth maintaining in light of the discussion of alternative benchmarks, or are there reasons why this would be dangerous public policy?
- What are some of the specific advantages and disadvantages of each form of alternative “market benchmark” noted in the paper?
- Can we expect systemic and other forms of risk to increase with the introduction or proliferation of many different benchmarks and with the advent of many types of trading formats—such as ECNs and the new E-bond market?

WHAT DO WE WANT IN A BENCHMARK SECURITY?

A benchmark is a concept that can have a variety of meanings. One definition used in portfolio management refers to a benchmark portfolio of securities against which performance can be measured. Another meaning refers to a benchmark security whereby the market determines what specific issue or form of security can serve in such a capacity. Several characteristics seem critical: the credit quality of the issuer must be very strong, the issue must be very liquid (transactions should not materially impact the price of the security), and the overall structure of the market for the contract or security in question must have what we might call “integrity.” Therefore, the market for a benchmark security should have minimal prospects of being squeezed or cornered by participants.

Benchmark securities are also important for properly measuring and calculating the value of other securities in the same class or other financial contracts more broadly. Often, Treasury securities are useful because they reflect a riskless rate of return. As such, these securities can be compared with other nongovernment-backed securities subject to greater credit risks. In this way, Treasury securities help to define the shape of the credit curve by pinning down the overall level of the credit curve that all lenders and borrowers can see. It is important to note, however, that even Treasury spreads (and securities) reflect a large number of risks—including duration (or average life risks), financing risks, haircuts in repurchase-related transactions, and supply and demand pressures—for on-the-run and off-the-run issues.

Fleming’s paper often tends to confuse the roles and functions of a benchmark security with hedging, pricing, and

liquidity. Although these many aspects of a security or market can be interrelated, it is clear that markets are evolving in the United States to separate these risks. For example, the swaps markets are critical for hedging and immunizing against certain forex or interest rate risks. However, swap rates themselves are based on underlying cash flows on fixed-income instruments or foreign exchange contracts—in spot or cash markets. Moreover, credit counterparty risk in swaps—thanks to International Swaps and Derivatives Association (ISDA) conventions—is being reduced as a form of variation, and initial margining is beginning to make these contracts similar to exchange-traded contracts. Hence, swaps or other derivatives are somewhat difficult to think of as benchmark securities under the kind of definition one might normally use.

The above considerations highlight the concern that the paper needs to be a bit more precise in defining what is meant by a benchmark security. It seems clear that a benchmark security should above all be liquid. Such a security should have simple properties and should be capable of being used as a building block in valuing other, more complex financial contracts or securities. In this context, it is *critical* that this financial contract and the market in which it trades have integrity, as I indicated above.

WHY WILL THE TREASURY BENCHMARK CEASE TO EXIST?

One premise of the Fleming paper rests on the assumption that a business cycle as we know it will not be present in the next decade. Instead, economic growth combined with a small but persistent trend shift in productivity to about 1.7 to 2.0 percent per annum will generate very large fiscal surpluses. If the trend shift were to be larger (all else being equal)—as implied by some recent studies—then the speed at which the size of the Treasury market would be reduced would accelerate. Such assumptions have always proved questionable, as explicitly mentioned in Office of Management and Budget and Congressional Budget Office projections. Changes in tax and expenditure policies as well as possible modifications to the U.S. health and pension systems could greatly alter many such forecasts. In addition, despite the unprecedented strength of the current business cycle, a slowing in economic growth needs to occur—given current rates, which are close to 5 percent in real terms—with implications for future surpluses.

Even if one feels that the U.S. debt-to-GDP ratio and the absolute debt level will fall dramatically, there are many actions that could be taken to preserve Treasury securities as a liquid

benchmark. Among these would be a number of simple steps that, if combined, could act as a powerful force to improve the depth and liquidity of the Treasury market.

These actions could include:

- Further efforts could be made to reduce the effective Federal Reserve holdings of on-the-run Treasury securities. Here one can ask if the current holdings are justified from the vantage point of monetary control versus the obvious fiscal gains associated with holding a greater proportion of off-the-run Treasury securities, given the Federal Reserve's role as fiscal agent of the Treasury.
- The selective reopening of key Treasury issues or the removal of issues from the calendar and the concentration of issues to create liquid benchmarks, which has already begun, could be continued or intensified. The Canadian authorities and many other treasuries throughout the world are adopting this type of strategy.
- A reevaluation of the issuance of Treasury Inflation Protection securities could be conducted. There is a variety of other, more liquid contracts trading that could be used to gauge inflation expectations.
- The investment guidelines for the Social Security trust fund could be changed to permit a somewhat greater range of investments, which would free up room for private market participants to gain greater access to the on-the-run and off-the-run Treasury markets. Ginnie Mae mortgage-backed securities, Fannie Mae mortgage-backed securities, and Federal Home Loan Mortgage Corporation mortgage-backed securities (subject to proper structures) are examples. The investment guidelines would have to be specified very carefully and stress capital preservation. Such activities versus equity investment would certainly not seem unsound—particularly in the case of Ginnie Mae securities.
- In the extreme case—where the supply of Treasury securities becomes very small and where the Federal Reserve feels uncomfortable undertaking repo transactions based on the use of agency or other debt as collateral and sees value in a Treasury market—other alternatives could be contemplated. Specifically, the Federal Reserve could act to issue debt that it backs and simultaneously sterilize this debt issuance by originating an asset. Under these circumstances, changes in the U.S. legislative framework would be needed, as the central bank presently can act only as the fiscal agent of the Treasury. This idea presumes that having a government Treasury benchmark security is important enough to change the nature of the relationship between the fiscal authorities and the central bank. Such arrangements are not at all uncommon in both developed and developing

countries throughout the world. This alternative is obviously not an option that needs to be considered in the short term.

The above considerations highlight the notion that there need not be a rapid deterioration in the effectiveness of the U.S. Treasury market as a benchmark for either on-the-run or off-the-run Treasury securities.

THE FALL LTCM CRISIS AND THE TREASURY MARKET

Fleming's paper does a good job of documenting the complex issues raised by the crisis in 1998 and the problems of Long-Term Capital Management, as well as the total seizing up of credit markets and the flight to quality into on-the-run Treasuries. However, it is very difficult to see how those events call into question the effectiveness of the Treasury market as a benchmark.

First, even prior to the crisis, spreads between swaps and off-the-run Treasuries were wide.

Second, and more importantly, the widening of yield spreads between on-the-run and off-the-run Treasuries is in fact the kind of reaction one can expect in a generalized market panic, where many counterparties were unclear as to the extent of risks being undertaken.

Third, recent movements in swap and other spreads have had more to do with large anticipated borrowing requirements prior to Y2K and less to do with systemic risks.

Perhaps most importantly, the LTCM crisis illustrates the fact that the Treasury market enabled markets to absorb an unprecedented shock. The lessons, in my view, have much more to do with the risk management techniques being used and the inability of models and techniques such as value-at-risk to account properly for extreme cases of liquidity risk, than they have to do with defects in the Treasury market per se.

Finally, the role of hedge funds and prop desks in providing liquidity to the Treasury market is also important. Ironically, this will require very careful changes in disclosure policies, as the very nature of trading in any market requires that the participants have no knowledge of the size of the other participants' positions. Moreover, recommendations relating to the disclosure of positions to regulatory agencies could also be problematic depending on how and for what purpose such information is used. It is very clear that the credit evaluation process used in lending to hedge funds like LTCM is among the more critical areas where improvements have been and will continue to be made.

EXTENDING Y2K-RELATED CHANGES AND BENCHMARKS

As part of the effort to mitigate problems related to Y2K monetary authorities, the United States undertook a number of actions, including a broadening of the set of securities that can serve as eligible collateral in repos with the Federal Reserve. It is worth noting that these changes in procedure will be reviewed to see if they should be kept in force beyond April 2000.

Although not discussed in Fleming's paper, the implications of allowing most forms of agency debt to be eligible collateral in repos with the Federal Reserve represent a significant step. This action provides added liquidity and credibility to these markets and might be viewed by market participants as enhancing the liquidity of the special benchmark security programs initiated by the agencies.

Ironically, and in contrast with the argument above, in many emerging markets questions would typically be raised if the monetary authorities were thought to be taking on credit risk by dealing in these securities. In the U.S. context, some would argue that this is a kind of back-door method for these agencies to assert that their securities are in fact backed by the central bank and U.S. government, thereby lowering funding costs. Such arguments might apply even if the U.S. authorities made haircuts when such paper is pledged as collateral. The public policy issues surrounding extension of this policy would be worthy of study, either separately or in Fleming's paper. One could even look at the impact on the liquidity of the agency and other markets that these policies have implied to date.

ALTERNATIVES TO THE TREASURY BENCHMARK

Fleming suggests that agency debt, swaps, and corporate debt markets will all become more important as benchmarks. Evidence does suggest that these markets are growing quickly, and agencies have been quick to see that their funding costs can be reduced through careful and strategic placements of debt, including the use of benchmark notes (for example, Fannie Mae) or reference notes (Freddie Mac). In the paper, some of the arguments made for the effectiveness of these benchmarks rest on their correlation with the U.S. Treasury market. In this context, much of the data in the paper are a bit confusing because at times it is unclear if the correlation coefficients are derived on the basis of first differences or levels when the paper refers to the correlation of daily yield changes. In other sections on market liquidity, it is unclear that proper account has been taken of seasonal impacts. In sum, I have some trouble seeing

how the empirical work done in the paper supports the contentions made about the effectiveness of specific benchmarks.

The fact is that agency debt carries credit risk, and its correlation with spread products does not automatically make such debt a better hedge, as is claimed in the paper. Rather, the issue here is which financial contracts provide the best means at the lowest costs, including liquidity and other risks of hedging specific forms of risk. In this context, the swaps market offers advantages under many circumstances if such contracts are ISDA-conforming relative to agency debt.

Finally, the adequacy of each of these markets must also be assessed in terms of the credit quality of the underlying issuer and the implications for market integrity and systemic risks. Here, even the agency benchmark market could be viewed with some question. For example, the agencies have to increase the size of their mortgage loans and make other changes in their asset-side origination policies to be able to meet continually their supply commitments on benchmark issues. In addition, as interest rates continue to rise and as mortgage loan origination and refinancing drop off, credit quality could in effect be hurt and the integrity of the new benchmarks could be damaged.

In sum, many of the new benchmark securities may be subject to credit quality issues that are business-cycle-dependent.

THE INTERNET, E-BONDS, AND BENCHMARK SECURITIES

A last area not addressed by the Fleming paper, but a fruitful area for future research, is the confluence of risks that may start to be created by internet banking and the much more active use of electronic trading formats (for example, Trade Web). These risks would apply to the market for new bond issues as well as to secondary-market and after-market trading coupled with the development of many forms of portfolio benchmarks and many different benchmark securities.

These developments will present great challenges in the design of regulations for the Securities and Exchange Commission and even for the Federal Reserve. Although such technological developments can create tremendous scope for reductions in transaction costs and can reduce the operational costs faced by financial institutions on the sale side of the business, the maintenance of market integrity could become challenging.

It would not take much imagination to envision situations in which a shock leads to a flight to quality and many benchmark securities begin to fall in price simultaneously.

Importantly, the transmission of a shock to asset-price movements and the extent of volatility might be much more rapid as technological advances in trading formats become more commonplace. In such cases, the authorities' latitude in

ways to deal with the problem might be limited—purely because the speed of reaction necessary would not be feasible. More generally, issues relating to operational and systemic risk would become important.

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