THE REPO MARKET--A FORMER PARTICIPANT'S PERSPECTIVE
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Educational Seminar on Repurchase Agreements
St. Louis, Missouri and Little Rock, Arkansas
September 25-26, 1985

During the period 1980-1984, I was the Managing Director in charge of the U.S. Government Securities department at Morgan Stanley. This department was comprised of four groups: cash traders, salespeople, futures and options traders and a financing or repo desk. In giving you a former participant's perspective of the Government securities market, and specifically the repo market, I would like to address the following: 1) the relationship of the repo desk to each of these other three dealer activities; 2) procedures followed by the repo desk to minimize credit risk and 3) some observations about what has transpired in the market since the ESM and Bevill, Bresler failures.

A repo desk typically engages in two types of activity--a service function for each of the other three groups in the department and market-making/positioning for its own account. First, let me describe the service function. With respect to the cash traders, or the market-makers in Treasury bills, notes and bonds as well as Agency securities, the repo desk arranges, through repurchase agreements,

financing for long positions held in inventory. The securities in inventory are pledged as collateral for financing which is typically on an overnight basis. In addition, short positions arising out of uncovered sales made to meet customer demand or hedge long positions are temporarily covered by the repo desk through reverse repurchase agreements. In these transactions, the dealer puts up the cash and receives securities as collateral, the reverse of a repurchase agreement transaction. The collateral is then used to make delivery on the short sales.

For the sales force, the repo desk provides financing services to certain of their customers who participate in the market on a leveraged basis. While these services are identical to those provided the cash traders, typically the customer would be charged a spread to compensate for costs, credit risks and capital usage. Often such customers would be doing arbitrage trades where they buy one security and sell another short, often of a different maturity. These trades are intended to take advantage of anticipated shifts in the yield curve.

The cash traders, or others at the dealer who devote full time to this specialty, might be doing similar arbitrage trades. Often, because these trades require time to achieve their anticipated objective, the cost of financing is critical to their profitability. As a result, financing may be arranged on a term basis through repurchase and reverse repurchase agreements having longer than overnight maturities. In fact, unavailability of collateral to cover the short side of the trade at a reasonable cost often causes an otherwise attractive trade to be ruled out.

The repo desk's relationship with a futures/options activity is quite comparable. This area also does arbitrage trades, often buying or selling cash market positions against offsetting futures and options positions. Therefore, financing and collateral are required in connection with these trades just as with cash market arbitrages.

These various service activities cause the repo desk in a major dealer to become an active participant in the financing and collateral markets. Many investors would have contact with a repo desk through its financing activity, as they seek to employ excess cash in very short-term

investments. In fact, from overnight out to two weeks in maturity, the repo represents the principal instrument of the money markets. Others with unutilized collateral as opposed to excess cash may have contact with the repo desk through its collateral rather than financing activities. In any case, a repo desk develops a customer base of its own seeking to invest money or possibly raise money by pledging collateral. As a result of this involvement in the marketplace and the demands of its customer base, a repo desk often engages in market-making activities that go beyond what results from its service functions alone.

In addition a repo desk might take positions in the market which are unrelated to making markets or providing service internally. In other words, the desk might "buy" or reverse in collateral at one rate and repo it out or finance it at another rate, seeking to earn a positive financing spread. In this fashion, a two-sided financing book, also known as a matched book, can be established. Often, however, the book is not matched, or in other words, there is an inherent maturity risk in the structure of the book based on an interest rate view. The size of the

book can become quite large, and as a result, proprietary trading of repo and reverse repo often far exceeds that which is done in connection with providing service to other areas.

If nothing else, this description of how a repo desk operates should provide some insight into the potential magnitude and complexity of the activity. As a customer, the question, "Do you know where your securities are?" indeed seems appropriate.

This leads to the second area of discussion--minimizing credit risk. While repurchase and reverse repurchase agreements are actively traded and it is tempting to think of them as securities, they should in fact be viewed as secured borrowing and lending arrangements. Accordingly, the first step in minimizing credit risk, beyond perfecting a security interest in the collateral, is approval of counterparties and establishment of appropriate limits.

At Morgan Stanley, the analysis leading to approval and limits was performed by an independent credit department, although as Managing Director in charge of Governments, I had the ultimate responsibility for credit decisions. Direct involvement of a senior person in these

decisions proved extremely desirable, as there was ongoing pressure from salesmen, traders and others to make exceptions--pressure that a credit analyst or manager might find hard to resist. Eventually, as problems in the repo market began to surface, there was greater appreciation for a tough-minded policy.

One additional thought on credit approvals--we had limited resources devoted to credit analysis and in fact were not being compensated to take much, if any, credit risk. Our business was trading securities, and accordingly, we typically turned down relationships with counterparties when there was any question as to their creditworthiness. Five or 10 basis points in additional spread would not come close to justifying the risk.

In connection with approving a name, we also established limits on the size and type position we would carry with a counterparty. The size limit depended on the maturity of the collateral we received. In other words, we were willing to run a larger position with a counterparty if we had bills as collateral rather than bonds because of the lower price volatility of bills. Should we ever have been forced to realize on our

collateral in a declining market, the bills would go down less in price than bonds for a given increase in yield.

In addition, we would limit the term of the repo agreements we would enter into. For example, for some counterparties we would do only overnight or open repo; for the higher rated ones we would do term agreements as well. However, it was unusual for us to do agreements of more than three months, and the average maturity of our book was less than one month. Clearly the longer the maturity of these positions, the more unexpected things that can happen to create exposure.

While the approval of counterparties and establishment of limits is very important, the balance sheets and fortunes of dealers can change quite quickly. Therefore, we considered it important to manage credit exposure actively on an ongoing basis and did this in two ways. First, we marked counterparties' positions to the market every day, and whenever net exposure reached a certain level, between $100,000 and $500,000 depending on the counterparty, we would call for additional cash or collateral that day. Second, we would be sensitive to any rumors in the marketplace about dealers having problems and, when appropriate, reduce

our gross and net positions accordingly by not rolling them over. Often such a rumor might arise not because the dealer itself had incurred a loss and was directly in jeopardy, but because it had large repo positions on with another dealer who had.

The combination of these various measures, while perhaps not without some flaws in concept or implementation, proved very effective in 1980-84. Despite a number of dealer failures during this period, Morgan Stanley did not incur a single credit loss in its repo activity. In those couple of situations where we did have some involvement, the exposure was minimized through the day-to-day monitoring process, and considered action taken immediately avoided any loss. Clearly, however, the most satisfying situation to be in was totally on the sidelines as the result of a rigorous approval process.

Well, with this as background, what are some of the ramifications of the most recent failures? First of all, to the extent that the repo instrument itself, or perhaps more appropriately the practices in the marketplace, were flawed, this problem was largely corrected well before ESM or Bevill, Bresler. As you may recall, following the Drysdale

debacle, the pricing of repos was changed to include accrued interest on the underlying collateral. This eliminated the ability of a dealer to raise cash by selling a security short in the market at its price plus accrued interest and then borrowing the security to make delivery by putting up only the price (and no accrued interest) in the repo market. There was a time when dealers could actually generate working capital from their matched book activities in the normal course of business. Some--Drysdale in particular--abused this ability, although now better market conventions prevail.

The ESM and Bevill, Bresler situations, then, did not reveal any fundamental problems with the instrument, but rather, continued lax procedures on the part of certain investors with respect to credit considerations. Subsequently, there has developed a permanent tiering in the repo market which differentiates major bank and securities dealers from other smaller, non-regulated participants. In the past, some tiering has developed immediately following a crisis, but it tended to disappear over time. Accordingly, it would appear that participants are now being more careful in approving counterparties.

Second, there has been more emphasis on collateralization of repurchase agreements. Many investors are now requiring repos to be collateralized at 102 percent of market price, whereas in the past 100 percent was the convention. In addition, all participants have become more aggressive about marking positions to the market. Again, it would appear that participants are more actively monitoring their exposures.

Also, serious work is underway at the Public Securities Association to develop a standardized repo agreement. This has long been talked about, but seems now to have the necessary impetus to achieve fruition. While it is difficult to get agreement on standard provisions among diverse interest groups, at this juncture a standard agreement would facilitate participation in the market and reduce time and expense. In addition, as discussed earlier, under the new bankruptcy law, a written agreement is necessary to establish the desired status should a bankruptcy occur.

Another development has been an increase in the use of three-party agreements, also discussed earlier. While actual delivery of collateral may not be economic in certain cases, three-party agreements achieve comparable protection on a basis that is often feasible.

A final comment on regulation of the Government securities market, which has become more likely as the result of this year's failures. In the past, I have not favored such regulation because the functioning of the primary market, which dominates activity in Government securities, has not been jeopardized by any of the failures subsequent to 1982. However, to the extent that these failures, and particularly those this year, have begun to erode confidence in the Government securities market, it is at least cause for concern. Perhaps some form of regulation is necessary to maintain this confidence. In any case, a better-informed customer base can go a long way toward disciplining the market. To that end, I hope today's discussions have been helpful.