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## Term Deposits

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### Summary

If the FOMC finds it appropriate to raise the federal funds rate before the quantity of reserve balances that depository institutions (DIs) hold at the Reserve Banks shrinks substantially from peak levels projected for late this year, expanded use of Interest on Reserves (IOR) authority can be part of the tool kit for getting the funds rate up to the higher target level. In particular, the Federal Reserve could establish a term deposit facility that would allow DIs to place funds on deposit at the Reserve Banks for a fixed term no shorter than a reserve maintenance periods and so earn a higher interest rate than they receive on excess reserves. A term deposit facility could sequester a portion of the stock of reserve balances and so reduce the quantity of balances potentially available for sale in the fed funds market. Thus, a term deposit facility, in combination with other steps to reduce the supply of reserve balances (asset sales, reverse RPs, Fed bills, etc.)—or in combination with steps to increase the demand for reserve balances—could help the Desk hit a higher target for the overnight funds rate.

DIs that earn interest on their excess reserves will continue to have no incentive to sell fed funds at a rate below the IOER rate. If a term deposit facility and other tools were to shrink the level of excess reserves enough, and if DIs' cost of obtaining liquidity from Federal Reserve facilities were above the target funds rate, then DIs that seek to buy fed funds would find it necessary to pay more than the IOER rate to induce other DIs to sell. GSEs also would earn the higher rate (and would account for a smaller fraction of fed funds transactions), so the effective funds rate would rise above the IOER rate. The level of excess reserves that would achieve that outcome is unknown. The demand for excess reserves is likely to be larger—perhaps appreciably larger—than before August 2007 because the payment of interest on excess reserves has made the opportunity cost of excess reserves much lower than was the case historically. That said, if liquidity risks ease, DIs likely will seek to hold appreciably smaller excess reserves than they hold today.

DIs will have an incentive to hold a large amount of term deposits rather than leaving excess reserves in their master accounts only if the interest rate they earn on term deposits is higher than the rate they earn on excess reserves (the IOER rate). To avoid directly subsidizing DIs, the rate paid on term deposits must be no higher than the lowest rate at which DIs can borrow from the Federal Reserve. Since January, the Federal Reserve has been lending sizable

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<sup>1</sup> Many helpful comments were provided by Staff of the Board of Governors of the Federal Reserve System and of the Federal Reserve Bank of New York.

amounts to DIs through the TAF at the minimum allowable bid of 25 basis points while paying 25 basis points on excess reserves. Thus, to make a term deposit facility feasible, the Federal Reserve will have to raise the TAF minimum bid rate or reduce the size of TAF auctions to get the TAF rate above the IOER rate.

## **Two Basic Approaches to Term Deposit Facilities**

The Federal Reserve could post the rate or rates it will pay on term deposits and allow DIs to hold whatever quantities they wish. Alternatively, the Federal Reserve could set a target quantity of term deposits and use auctions to determine the rate and the allocation across DIs that bid. Both approaches are within the Federal Reserve's existing legal authority. Both are operationally feasible. Either could be implemented on short notice with existing software and staff. Neither approach would prevent the Desk from returning to its pre-crisis methods for implementing monetary policy (with the added feature that the Federal Reserve will continue to pay interest on required and excess reserve balances), but neither approach would stand in the way of adopting alternative ways of implementing monetary policy.

In the simplest implementation of either the posted-rate or auction-rate approach, balances could be deposited in the term facility only at the beginning of a reserve maintenance period and could not be withdrawn before maturity at the end of a maintenance period. Term deposits would not satisfy reserve requirements or serve to meet clearing balance agreements, and would not be treated as balances for purposes of calculating overdrafts. The penalties the Federal Reserve imposes for overnight overdrafts and reserve deficiencies would give DIs an incentive to hold some balances in their master accounts; the payment of interest on required and excess reserve balances would lower the opportunity cost of holding those balances. The spread between the term deposit rate and the IOER rate would give DIs an incentive to shift surplus balances into the term deposit facility. If actual balances are much larger than DIs' desired level of balances when a term deposit facility is implemented, DIs might well shift the bulk of their excess reserves into the term facility. If they do so, the resulting reduction in the level of excess reserves would reduce the need for the Desk to conduct very large open market operations to get the funds rate up to a target rate that is well above zero.

### *Posted-rate Approach*

The simplest way to implement the posted-rate approach is to offer a term deposit facility with a single tenor that pays interest at a rate somewhat above the FOMC's target for the federal funds rate (and thus above the IOER rate) but somewhat below market rates for unsecured interbank loans of the same tenor.<sup>2</sup> To the extent that DIs prefer the liquidity of excess reserves

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<sup>2</sup> As noted earlier, the term deposit rate would also have to be no higher than the primary credit rate and, if TAF auctions continue, no higher than the TAF rate.

and overnight fed funds sales to the relative illiquidity of term deposits, they would shift a sizable quantity of balances from their master accounts into the term deposit facility only if the posted term deposit rate were above the average IOER rate and federal funds rate expected to prevail during the term of the deposit. On the other hand, to the extent that DIs perceive that they incur greater credit risk if they sell term fed funds or term Eurodollars than if they hold term deposits at the Reserve Banks the term deposit rate could be lower than the term fed funds rate and term Libor for the same tenor. The Board would adjust the term deposit rate in line with changes in the FOMC's target for the funds rate. In addition, the Board could adjust the term deposit rate up or down relative to the fed funds target rate if it were necessary to give DIs a larger or smaller incentive to hold term deposits.

The single tenor for term deposits might be 14 days or 28 days, lining up with one or two reserve maintenance periods. By some stated time before the end of each two-week maintenance period, a DI that wants to hold term deposits would notify its FRB how much it wants to transfer from its master account to the term deposit facility. The FRB would transfer that amount from the DI's master account into a term deposit account at the beginning of the subsequent maintenance period. Unless the DI instructs the Reserve Bank to roll over maturing term deposits, funds would be transferred back into the DI's master account on the day its term deposit matures; interest would be credited at the same time. A 14-day tenor would give DIs more opportunities to withdraw term deposits than would a 28-day tenor, perhaps making DIs somewhat more willing to hold term deposits. But a 28-day tenor would reduce the potential magnitude of changes in the level of term deposits from one maintenance period to the next, making it somewhat easier for the Desk to forecast the level of term deposits.<sup>3</sup>

#### *Auction-rate Approach.*

A simple way to implement the auction-rate approach is to auction a fixed quantity of term deposits shortly before the end of each two-week reserve maintenance period, with settlement occurring at the beginning of the subsequent maintenance period. The Federal Reserve might auction 14-day or 28-day term deposits. As noted above, DIs might find the shorter tenor more appealing because it would give them greater flexibility to shift funds out of term deposits if necessary. However, the shorter tenor would mean larger auctions (for a given size term deposit facility) and potentially a larger probability of undersubscribed auctions. It would be feasible to auction more than one tenor of term deposits to attract deposits at more than one point on the yield curve if DIs were to express interest in multiple tenors.<sup>4</sup>

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<sup>3</sup> It would be feasible to offer a shorter or longer tenor if DIs preferred tenors other than 14 or 28 days.

<sup>4</sup> Auctions of multiple tenors could be staggered, with, for example, an auction of 14-day term deposits held one week and an auction of 28-day term deposits held the next week. Or auctions of multiple tenors could be conducted simultaneously, with, for example, auctions of 14-day and 28-day term deposits held every second week. However, simultaneous auctions would increase the risk of operational error.

If the auction were a single-price auction, it could use the same procedures as TAF auctions. Bidders would submit an interest rate and the quantity of term deposits they wish to hold at that rate; they could be allowed to submit several bids per auction. To ensure that DIs do not earn a higher rate on balances they hold at the Fed than they pay to borrow from the Fed, and to comply with the statutory provision that allows the Reserve Banks to pay interest on deposits “at a rate or rates not to exceed the prevailing level of short-term rates,” the Board would set a maximum bid rate that would be no higher than the primary credit rate. The auction agent would collect all bids and then, starting at the lowest rate and working up, accept all quantities offered at each rate until the total reaches the amount offered or the rate reaches the maximum. All DIs whose bids are accepted would receive the highest accepted rate. Bids submitted at lower spreads would be filled in full; bids at the stop-out rate would be allocated pro-rata. Auctions could be undersubscribed if the perceived benefit of holding term deposits at the maximum allowable rate rather than leaving balances in the master account (where they earn the IOER rate or can be sold at the fed funds rate) is small.

#### *Auction-rate vs. Posted-rate*

The auction-rate approach may be preferred if certainty about the size of the term deposit facility is important because the Desk has returned to using operating procedures like those it employed quite successfully until the Fall of 2008. However, the possibility that auctions can be undersubscribed means that the auction approach may not give policymakers complete control over the quantity of term deposits, especially if the spread between the maximum bid rate and the IOER rate is small. The fixed-rate approach may be preferred if there is a need to absorb a very large quantity of excess reserves when the Committee begins to raise its target for the funds rate. In that situation, setting the term deposit rate at the highest feasible level and then accepting all deposits would be a way to use the term-deposit facility to drain the maximum amount of excess reserves.

#### **Legal Issues**

Discussions with the Board's Legal division reveal no legal impediments to establishing a facility that would accept term deposits from depository institutions that are eligible to earn interest on deposits they hold at the Reserve Banks, so long as the rate or rates paid on term deposits “do not exceed the prevailing level of short-term interest rates.” (That restriction is imposed by Section 19, paragraph 12.A of the Federal Reserve Act.) A DI’s term deposits would be liability of the Reserve Bank at which the DI maintains its master account. The Board has the authority to promulgate regulations to implement either the fixed-rate approach or the auction-rate approach. In either case, the Legal division suggests including a mechanism – perhaps a rate cap linked to some market rate or rates – that would ensure that the rates Reserve Banks pay on term deposits “do not exceed the prevailing level of short-term interest rates.” The

Act does not define “prevailing level of short-term interest rates,” so policymakers have some flexibility on that score.

### **Economic Issues**

DIs might be reluctant to convert a large quantity of excess reserves into term deposits if they have no way to access term deposits before maturity. In that case, the Federal Reserve could make term deposits more attractive without allowing early withdrawal by allowing DIs to pledge term deposits as collateral for a primary credit loan: If a DI borrows against a term deposit, no haircut would be applied to the collateral and the borrowed funds would be available on the day the DI requests the loan.<sup>5</sup>

A sizable term deposit facility might lead DIs to reduce the amounts they lend in the term interbank markets, and thus lead to an increase in term funding rates relative to overnight rates, for two reasons. First, introducing a term deposit facility may well lead market participants to expect that the FOMC will be pushing up the federal funds rate in subsequent months; that expectation will cause short-term rates to rise relative to the then-current funds rate. Second, if banks respond to the introduction of a term deposit facility by reducing appreciably their term lending in the interbank markets (holding term deposits instead), the result might well be a larger increase in term rates than would be suggested by the change in the path of expected future overnight rates. An increase in term interbank rates is likely to spill over to other short-term rates, including CP rates. The resulting increase in money market rates relative to expected future funds rates is likely to be small if the money markets are reasonably liquid, but could be noticeable if liquidity in those markets remains impaired. Of course, the rise in term funding rates could be a desirable part of the transmission mechanism as the Committee begins to tighten policy.

### **Operational Feasibility**

The Federal Reserve’s Statistics and Reserves software application (STAR) and the Integrated Accounting System (IAS) already can handle the accounting entries and interest calculations necessary for a term-deposit facility. Reserve Bank staff could be prepared to implement either the posted-rate or the auction-rate approach in a matter of weeks using the procedures used for the TAF: DIs call Reserve Banks; Reserve Bank staff screen bids and enter the necessary information into The Federal Reserve’s Statistics and Reserves software

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<sup>5</sup> Alternatively, DIs could be allowed to withdraw term deposits before they mature, but be charged a penalty that makes the cost of early withdrawal equal to the cost of borrowing at the primary credit rate. Allowing early withdrawal would require significant changes to existing software; allowing DIs to use term deposits as collateral for a discount window loan would not.

application (STAR). If policymakers chose to implement the auction-rate approach, the Desk would identify the winning bids, as in TAF auctions. To avoid overloading this partly manual process, it would be necessary to impose a high minimum size on bids or requests to transfer funds into the term deposit facility. The effect of setting a sizable minimum might well be to prevent small DIs from using the term deposit facility.

Beginning in October, however, STAR will contain an automated interface that, if activated, will enable each DI that maintains an account to enter electronically an instruction to transfer funds from its master account to a posted-rate term-deposit facility, or to submit electronically its bid or bids for an auction-rate facility. That interface will make it feasible to process bids or requests of any size. By December, it will be feasible to allow DIs to submit either competitive bids or noncompetitive bids to an auction-rate facility. Noncompetitive bids would be designed to accommodate small DIs, would be limited to a maximum size of perhaps \$1 million per bid, and would be treated as add-ons to the stated amount of the auction.

#### *Early implementation*

The Committee might wish to introduce a small-scale term deposit facility so that DIs, markets, and the Federal Reserve can gain some experience with a term deposit facility before it becomes necessary to employ it on a large scale as a tool to raise the funds rate. It would be feasible to implement a term deposit facility in the near term, with no increase in the target for the federal funds rate. One approach would be to leave the IOER rate at its current setting (25 basis points) to avoid a drop in the funds rate from its current level, but raise the primary credit and the minimum TAF bid rate by 25 basis points (to 75 basis points) to allow “headroom” for term deposit rates to be above the IOER rate but no higher than the TAF and primary credit rates, and simultaneously announce that the Federal Reserve will implement a small term deposit facility as a first step in preparing to remove excess liquidity as financial conditions improve. Markets, however, probably would interpret even a small term deposit facility as a signal that the Committee is getting ready to begin raising the funds rate.