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# "Exit" in the FOMC Transcripts[1]

In this note, I summarize the discussion of "exit" from nontraditional monetary policy in FOMC meetings from 2009 through mid-2011 when participants agreed to the exit strategy principles that were published in the minutes of the June 2011 meeting. I used the meeting agendas to identify relevant discussions. In 2009, there were six meetings[2] at which the staff briefed on balance sheet management, high reserve balances, or reserve management tools during the financial developments portion of the meeting. The first four meetings of 2010 included discussion on the strategies for removal of policy accommodation, reserve management tools, asset sales, or redemptions, also as part of the financial developments review. In the April and June 2011 meetings, there were separate agenda items for the exit strategy.[3]

Some general points:

- At the June 2009 meeting, Chairman Bernanke defined the exit strategy as "how we're going to unwind the policies that we have put in place." At that time, asset purchases were a relatively small component of those policies.[4] Initial discussions of exit were focused on the winding down of liquidity facilities and on developing the means to raise short-term interest rates in the face of sizable reserve balances; there is little mention of asset sales or redemptions as part of exit until late 2009.
- Participants who favored the eventual adoption of a corridor system for monetary policy tended to be those who preferred earlier asset sales and a more rapid normalization of the Federal Reserve's balance sheet. Those preferring a corridor system seemed to assume that the adoption of a floor system would be equivalent to agreeing to keep reserve balances permanently high and could entail political risks.
- Initially, there seemed to be a lack of consensus about how large scale asset purchases were affecting the economy. In particular, participants who favored asset redemptions seemed not to realize or at least acknowledge that these redemptions would affect duration and therefore monetary accommodation. More generally, those who favored early asset sales tended to see asset purchases as yet another emergency policy action that, like the emergency liquidity facilities, needed to be unwound before raising short-term interest rates. Little attention was devoted to the possibility of no outright sales.
- There was little mention of remittances apart from staff briefings; the term "deferred asset credit" was first used in the January 2011 meeting.

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[1] Peter Garavuso provided assistance.

[2] March, June, August, September, November, and December.

[3] For the most part, I only reviewed specific sections of a transcript and not the entire document, although I did search entire transcripts for relevant terms, such as "asset sales," "redemptions," "remittances," and so on.

[4] Furthermore, until September 2010, there was no reinvestment of agency debt or mortgage-backed securities.

In the remainder of this note, I provide some detail on several aspects of exit: draining tools; monetary tightening and the longer-run operating framework; asset sales, redemptions, and sequencing; remittances and interest payments.

Draining tools

Policy tools that could be used to remove excess reserve balances were discussed extensively in FOMC meetings in 2009, beginning with an initial staff review of possible options in March. At the June 2009 meeting, there was wide-ranging review of a number of issues related to exiting the liquidity facilities, reducing the expanded the balance sheet, and raising interest rates. Chairman Bernanke noted that "many people have called for us to communicate about this" and he pointed to a section on exit in the forthcoming MPR, saying that it would be helpful to detail some of the tools that would be used.[5] In the go-round that followed, five participants[6] expressed support for continuing work on reverse repurchase operations (two of them saying that tools to sterilize or reduce reserves would complement the interest rate on reserves when it became appropriate to tighten policy), one[7] supported term deposits, and one[8] thought reserve collateral accounts were "clever." Three participants[9] strongly opposed the pursuit of Federal Reserve bills citing political concerns, and one[10] countered that reserve collateral accounts amounted to "clever tinkering" to avert the problems associated with GSE lending in the federal funds market. In his summary, the Chairman said reverse repos, time deposits, and collateralized lending were interesting possibilities to be pursued.

Staff briefings at the August, September, and November meetings reported on progress with the development of these three tools; one participant continued to express strong aversion to collateralized lending, and another[11] characterized it as "radical" and "redundant" when coupled with the possibility of engaging in reverse repos with GSEs. At the November meeting, four participants[12] strongly agreed with a staff proposal to put RCAs on hold pending further progress with reverse repos and term deposits; staff provided updates on development of these two tools at the December 2009 and January 2010 meetings.[13] [14]

[5] Although not discussed in this note, participants also discussed communicating via a press release (which was released on June 25, 2009) about their plans for winding down the special liquidity facilities.
[6] Governor Kohn and Presidents Bullard, Evans, Plosser, and Yellen.
[7] Governor Kohn.
[8] President Yellen.
[9] Presidents Fisher, Lacker, and Plosser.
[10] President Lacker.
[11] President Lacker and Governor Kohn, respectively.
[12] Governor Kohn, Vice Chairman Dudley, and Presidents Lacker and Plosser.
[13] At the March 2010 meeting, reserve collateral accounts were re-visited and eight participants expressed reluctance about moving forward with this tool; I did not find any discussion of this topic in subsequent meetings.
[14] There is continued review of draining tools—their testing, readiness, and capacity—in later meetings, but I do not cover this discussion.

- At the March 2009 meeting, although one staff briefing listed the gamut of possible draining tools that could be pursued, a later briefing focused specifically on the issuance of Federal Reserve bills and the Supplementary Financing Program. In subsequent commentary, Chairman Bernanke indicated that "the Fed and the Treasury have agreed on the need for sterilization tools that will allow the Fed to prevent any increases in its balance sheet from affecting its ability to conduct normal monetary policy" and that legislative language had been developed to get approval for the issuance of Fed bills or the SFP program. Thus, it seems there had been active work on these two tools; at the June meeting, staff indicated that legislation for Fed bills and the SFP was "problematic" and, as noted above, several participants voiced opposition to FR bills.
- The discussion of exit in the July 2009 MPR listed three tools that could be used to reduce the level of reserve balances, but they were not the same three tools that the Chairman pointed to in his summary at the June meeting. Instead of reserve collateral accounts, the MPR mentioned Treasury-issued bills and explained that the proceeds of these bills would be deposited with the Federal Reserve.

Monetary tightening and the longer-run operating framework

At times, questions about the procedure for initiating monetary tightening were inter-mixed with comments about the longer-run operating framework.

During the discussions of policy tools in 2009 and early 2010, participants questioned the capacity for draining of the various tools[15] and expressed some uncertainty about the procedure for monetary tightening and whether initial efforts would be successful. Participants mentioned two specific issues repeatedly: first, the amount of draining that would be required before short-term market rates would respond to an increase in the IOER, and second, the viability of a return to funds rate targeting in light of the sizable GSE activity in that market and the problems experienced during fall 2008.

Chairman Bernanke was less skeptical than some on the first issue. At the August 2009 meeting, he referred to the exit strategy as "a belt-and-suspenders approach, a two-pronged approach" with interest payments on reserves as the belt, and "management of reserve balances" as the suspenders.[16] He commented at the September meeting that paying interest on reserves might be "leaky," but would work if the interest rate were high enough; reverse repos and term deposits

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[15] In the fall of 2009, staff estimates put the draining capacity of reverse repos with primary dealers at somewhere between \$100 and \$200 billion, and indicated that an increase in the number of counterparties would be necessary to raise that capacity. A January 2010 staff presentation incorporated reserve draining of \$500 billion prior to raising the IOER; Brian Sack noted at that meeting that there was "very little analysis that you can use to nail down" the level of draining required before liftoff.

[16] From the context of his remarks and the staff briefings that preceded it, it seems likely that Chairman Bernanke was referring to draining tools for managing reserve balances and not to asset sales or redemptions. In subsequent meetings, he continued to use the belt and suspenders analogy.

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would help the to sterilize reserves and, finally, assets could be sold.[17] Furthermore, at both meetings, Chairman Bernanke opened the door to moving away from targeting the federal funds rate. He noted in August that, in light of the "idiosyncrasies" in the funds market, "we may have to consider alternative ways of expressing our policy target," and expanded on that idea in September by saying it would be possible to target "another short-term interest rate, like the repo rate" or "make the interest rate on reserves and the primary credit rate the announced variables."[18]

There were two meetings at which the longer-run monetary framework was discussed as part of a go-round on the exit strategy. From the January 2010 transcript, it seems clear that participants generally recognized that policy would need to operate via a floor system for a time while reserve balances remained high. Four participants[19] argued that it was important to decide the longer-run policy framework early because that decision could have implications for the exit strategy. One[20] thought it was "premature" to make that decision because exit would provide useful information about policy under a floor system. While most of the participants favored a return to targeting a short-term market rate, four[21] explicitly called for a corridor system, while two[22] indicated they might be comfortable replacing the funds rate with the IOER in a floor system.

The longer-run operating framework was discussed again when exit was revisited in April 2011. At that meeting, a staff briefing indicated that this framework was independent of exit itself and would eventually depend on the size of reserve balances and the extent of draining. Before the go-round began, Chairman Bernanke noted that the topic was not necessarily on the agenda but did have possible implications for "how quickly we reduce the size of the balance sheet." During the go-round, six participants[23] advocated a corridor system, two[24] preferred to postpone the decision, and the two participants who had favored a floor system in the January 2010 meeting were less clear about their preference.[25] In his summary, Chairman Bernanke suggested

[17] Chairman Bernanke expressed confidence in the Committee's ability to initiate tightening with similar comments at the November and December 2009 meetings as well.
[18] It should be noted that at the June 2009 meeting, President Lacker commented that "the most logical and natural path forward on this issue of reserve management is to use this opportunity to back away from federal funds rate targeting." He suggested the repurchase rate as a possible alternative.
[19] Governor Duke and Presidents Bullard, Plosser, and Yellen.
[20] Vice Chairman Dudley.
[21] Presidents Bullard, Fisher, Lockhart, and Plosser. Not to pick nits, but my participant count differs from that in the January 2010 minutes, which said that "many" participants "thought" a corridor system "would be beneficial."
[22] Presidents Rosengren and Yellen.
[23] Presidents Bullard, Fisher, Kocherlakota, Lockhart, Plosser, and Williams. In light of President Lacker's preference for a smaller balance sheet, it is somewhat surprising that he was not among those advocating a corridor system.
[24] Vice Chairman Dudley and President Hoenig.
[25] President Rosengren spoke only about the operating system over the short run, and President Yellen said she could support either framework although she saw some advantages to a floor system.

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using "normal framework" in public discourse, a term that "most people would interpret as something close to a corridor system."

The most vocal advocate for a corridor system at both meetings was President Plosser; he spoke prior to a go-round at the June 2011 meeting and reiterated his concern that a floor system would be problematic because the "potentially unlimited size" of the balance sheet would make the balance sheet a discretionary policy tool and subject the Federal Reserve to political pressures (to fund government initiatives). In addition, he noted that the Committee needed to know where it was going in terms of its longer-run framework in order to determine the pace of asset sales and other aspects of its exit strategy, and that determining the framework would allow the public to understand what policy "normalization" entailed. Finally, he questioned the governance of monetary policy and the potential contravention of the Federal Reserve Act if the main policy tool were an interest rate set by the Board and not the Committee.[26] Presenting the counter-argument, Vice Chairman Dudley said that it was premature to commit to a longer-run framework, as exit would provide much information about operating under a floor system. Potential advantages to such a system included less market congestion and fewer settlement fails because of large excess balances and operational ease from less fine tuning. Although there was little discussion in the go-round, the majority of participants preferred to drop a reference to "corridor system" that had been inserted in the draft exit strategy principles. Chairman Bernanke indicated that the adoption of a corridor system had not been ruled out and that his "own personal view is that it's likely the preferred system."[27]

Asset sales, redemptions, and sequencing

Until fall 2009, there were only a few references to asset sales—as noted earlier, the term "exit" included the winding down of the liquidity facilities. What seems apparent from the transcripts is that participants had not given much prior consideration to asset sales: For example, in June 2009, one participant asked staff if "the plan is basically buy and hold? In other words, when we're buying now, we're basically committing to a very large balance sheet for a very long period of time."[28] Another participant[29] at that meeting noted that the exit strategy should be

[26] President Plosser indicated that he did not fear a problem under Chairman Bernanke's watch, but that governance could prove difficult under subsequent chairmen.
[27] A key question may be the time frame over which the Committee decides to move to its longer-run framework. Pushing the decision into the future makes sense, but deferring it indefinitely will be a passive decision to operate under a floor system. President Plosser raised a concern about internal governance, but there could be an external governance issue as well if the Congress were to take the view that operating via the IOER did indeed contravene the Federal Reserve Act during the period between liftoff in late 2015 and the normalization of reserve balances in 2019 (according to the January Tealbook, Alternative B simulation).
[28] President Bullard asked Trish Mosser this question. She responded that buy and hold "has been the staff's maintained hypothesis," although selling, particularly if inflation were high, would be a possibility.
[29] President Hoenig.

extended to include LSAPs, with a third[30] pointing out that the size of the balance sheet was something that should be determined by the Committee.

By November, one participant[31] complained that the exit scenarios in the Bluebook relied too heavily on draining tools and held "asset sales in abeyance," and asked if it would not make sense to sell assets as part of the exit strategy. Other participants agreed;[32] one of them[33] suggested that application of the "last in−first out" principle was consistent with selling assets prior to raising short-term interest rates.

Asset sales and their sequencing received attention in the go-round on exit at the January 2010 meeting.[34] To broadly generalize that discussion, one group of participants[35] advocated early asset sales (prior to raising interest rates) and some of those participants were not convinced that the interest rate effects of sales would be all that large. Another group[36] wanted to sell assets eventually after raising interest rates; some of that group indicated concern about the pace of economic recovery and recognized that asset sales would constitute tightening which they were not yet prepared to undertake. Pretty much across the board, participants wanted to "normalize" the balance sheet over time in terms of size and composition.

One issue that figured importantly in the early 2010 meetings was the redemption policy for SOMA holdings. While participants at the January meeting were generally either comfortable with the policy in place at that time—redeeming all agency, but not Treasury, securities—or wanted to begin redeeming Treasuries as well, redemptions alone were not sufficient to satisfy the desires of the more hawkish participants to trim the balance sheet. The redemption issue had first been broached at the December 2009 meeting when the Desk sought to "verify the Committee's preference" as to whether agency securities should be reinvested or allowed to run off the balance sheet. This decision was deferred; the Desk sought a determination regarding redemption policy at both the March and April meetings. The redemption discussion at these meetings is quite confusing to the outside reader. A possible interpretation is that at the time of the March meeting, Chairman Bernanke regarded redemptions as a purely technical issue that could be decided independent of asset sales. But one participant was particularly critical of treating them independently.[37] Although redemptions and sales were discussed in tandem at the

[30] President Stern.
[31] President Lacker.
[32] Presidents Bullard, Fisher, Hoenig, Kocherlakota, and Yellen.
[33] President Bullard.
[34] Another important part of this discussion, which I do not address here, was an increase in the discount window's primary credit rate and coordination of that announcement with an increase in the TAF's minimum bid rate (these changes were announced on February 18, 2010).
[35] Governor Warsh and Presidents Bullard, Fisher, Kocherlakota, Lacker, and Plosser. President Hoenig wanted to start with raising interest rates and then follow with gradual sales, but he wanted that process to begin very soon.
[36] Governors Duke, Kohn, and Tarullo, Vice Chairman Dudley, and Presidents Evans, Lockhart, Pianalto, Rosengren, and Yellen.
[37] President Lacker.

April meeting, legal and operational challenges associated with a possible shortening of the maturity structure of Treasury holdings introduced additional complexities, so the Chairman recommended another postponement pending further staff analysis.

- At the March meeting, Brian Sack compared the current redemption policy (under which the balance sheet was gradually shrinking) with several possible alternatives, including one that rolled maturing agency debt and MBS prepayments into short-term Treasuries (which would keep the size of the balance sheet constant but change its composition back in the direction that participants had indicated a preference for at the January meeting), and another that redeemed all holdings. Chairman Bernanke asked participants to indicate if they had any objections to the current redemption policy and to provide feedback on the possibility of Treasury redemptions for future consideration. President Lacker commented that he was "struck that this is brought to us in isolation," and Presidents Fisher and Hoenig seemed to agree. In his summary, the Chairman noted no objection to a continuation of the current "interim" redemption policy, and proposed to revisit redemptions together with asset sales at the next meeting.
- At the April meeting, staff presented alternative scenarios for asset sales, all of which assumed redemptions of Treasury securities (in addition to the on-going redemptions of agency securities). In response to questions, the Desk provided information about the redemption profile of Treasury holdings, and raised various legal and technical issues associated with reinvesting maturing coupon Treasury securities into shorter term Treasury instruments. At that point, Chairman Bernanke apologized to participants, saying the "Treasury redemptions idea was a little half-baked," and proposed to have staff provide a full description of the pertinent issues at the June meeting.

The analysis presented in June covered the finer technical points that would need to be addressed were the Committee to decide to reinvest maturing coupon-bearing Treasury securities into new shorter-term issues only or to allow maturing Treasury securities to be redeemed, relative to the standard practice of reinvesting maturing coupon-bearing issues pro rata across all newly issued coupon securities. The Desk also asked for permission to engage in coupon swap transactions for particular unsettled MBS purchases. While five of the hawkish participants wanted to shift the reinvestment policy towards shorter maturities and one wanted to cease reinvestments altogether,[38] the majority of participants decided to make no change to the reinvestment policy for Treasuries and to move forward with the coupon swaps.

Returning to the general exit strategy, discussion at the April 2010 meeting garnered broad support for "key objectives" for asset sales and redemptions that were noted in the minutes (the strategy should be consistent with achieving the dual mandate and normalizing the size and

[38] The former were Governors Duke and Warsh, and Presidents Hoenig, Lacker, and Plosser; the latter was President Kocherlakota.

composition of the balance sheet over time).[39] Ten participants[40] either directly or indirectly associated themselves with a scenario in which a gradual pace of asset sales followed interest rate liftoff and agency securities were sold off over five years. Some of them[41] noted that the dual mandate—not the balance sheet—was driving their policy choices and two[42] emphasized that selling assets was very different from winding down the liquidity facilities. As in January, the hawkish participants[43] tended to see asset sales as separate from monetary policy or thought that interest-rate liftoff would be aided by a smaller balance sheet, and some expected that the interest-rate effects of asset sales would be small or were overstated in staff analysis.

Only two participants[44] pointed to the scenario that assumed no asset sales and both of them were uncomfortable with the idea of keeping the balance sheet large for a long period of time.

Discussion of exit resumed again in April 2011. Participants were presented with two options: one similar to the strategy that was actually adopted in June 2011, and the other that put asset sales before liftoff. More participants expressed an explicit preference for the former than the latter;[45] a series of questions that nearly all of them addressed served to ferret out their more detailed preferences. Thirteen participants[46] agreed that the first step in the exit process should be to halt reinvestments, but not all of them wanted to cease reinvestment of both Treasury and agency securities at the same time. Two participants[47] wanted to treat reinvestments and sales symmetrically and pursue them simultaneously; Chairman Bernanke noted that redemptions, unlike outright sales, were "passive" and "predictable," suggesting there might be some communications advantages to proceeding with them first. On sequencing, two participants[48] preferred to sell assets before liftoff in accordance with the LIFO principle, three[49] preferred to sell and lift off at the same time, and nine[50] preferred to raise short-term interest rates prior to

[39] In addition, the minutes noted that "most participants" agreed to eventually sell agency debt and MBS, and that those sales would be communicated in advance, done at a gradual pace, and potentially adjusted in response to economic conditions.
[40] Governors Duke, Kohn, and Tarullo, Vice Chairman Dudley, and Presidents Evans, Hoenig, Lockhart, Pianalto, Rosengren, and Yellen. Unlike the others, President Hoenig wanted to begin removing policy accommodation very soon.
[41] Governor Tarullo and Presidents Evans, Lockhart, and Rosengren.
[42] Governor Kohn and President Lockhart.
[43] Governor Warsh and Presidents Bullard, Kocherlakota, Lacker, and Plosser (Fisher did not attend the meeting).
[44] Governor Warsh and President Bullard.
[45] Governor Duke, Vice Chairman Dudley, and Presidents Evans, Kocherlakota, Pianalto, and Williams preferred the first option, while Presidents Bullard and Lacker preferred the second.
[46] Governors Duke, Raskin, and Yellen, Vice Chairman Dudley, and Presidents Bullard, Evans, Fisher, Hoenig, Lacker, Lockhart, Pianalto, Plosser, and Rosengren.
[47] Presidents Kocherlakota and Williams.
[48] Presidents Bullard and Lacker. The former said he wanted to wait as long as possible before raising the funds rate.
[49] Presidents Fisher, Lockhart, and Plosser.
[50] Governors Duke and Raskin, Vice Chairman Dudley, and Presidents Evans, Hoenig, Kocherlakota, Pianalto, Rosengren, and Williams.

selling assets. One participant[51] commented that it was not absolutely necessary to sell assets and that he was not "hung up" about holding agency MBS on the balance sheet.

An interesting aspect of the April 2011 discussion in contrast to earlier meetings is that raising short-term interest rates and selling assets were generally regarded as substitutable policy tools. Both hawkish and dovish participants spoke of the substitutability, and there was back-and-forth about a particular rule of thumb—that $200 billion in assets equated to 25 basis points on the funds rate—and some participants used that rule of thumb in referencing the pace of asset sales. Two participants[52] who acknowledged the substitutability preferred to rely primarily on short-term interest rates for policy tightening, citing uncertainty among the public or the Committee about the precise effects of asset sales.

At the June meeting, participants were asked to comment on a set of "broad, high-level" exit strategy principles that would appear in the meeting minutes. Leaving aside the topic of the longer-run operating framework (addressed in the previous section of this note), the vast majority of comments concerned the time references between steps in the draft exit strategy. Participants initially focused on the "three to six months" between the modification of the forward guidance and liftoff of policy rates, and agreed to replace the time period with economic conditionality. While six participants wanted to drop all remaining temporal references, another[53] was adamantly opposed to eliminating the time period over which agency securities would be sold off. In the end, all but one participant[54] agreed to principles that included a period of three to five years for the sell-off of agency securities. The participant who opposed the principles altogether preferred an exit strategy in which assets were sold prior to liftoff, consistent with the last in−first out convention.

<u>Remittances and interest payments</u>

In the transcripts I examined, there was fairly little concern expressed about two political risks posed by exiting from nontraditional monetary policy: remittances to the Treasury, and interest payments to banks.

At the June 2009 meeting, staff outlined a high interest rate scenario in which remittances were projected to drop to zero for two years,[55] and noted that System accountants were working on the possibility of booking a prepaid asset that could be "pushed back an extra year." Only three participants commented on this issue: One[56] noted that a period of zero or negative remittances

[51] Vice Chairman Dudley.
[52] Presidents Hoenig and Williams.
[53] President Lacker.
[54] President Bullard.
[55] Those years were 2011-2013!
[56] Governor Warsh.

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could endanger Federal Reserve credibility; another[57] remarked that exit could potentially entail political risks if losses arose from "unwinding positions;" the third[58] pointed to adverse public commentary if negative remittances were to call into question the wisdom of large-scale asset purchases.

In summarizing a go-round on exit at the January 2010 meeting, Chairman Bernanke noted that many participants wanted to sell mortgage-backed securities, but "if we take unnecessary large capital losses, that would also probably be a big problem for us politically." By November, however, the Chairman made a different argument in assessing possible implications of a new large-scale asset purchase program, saying:

"… we already have quite a cushion, of course, in terms of the unrealized gains on our balance sheet and the income we've already remitted to the Treasury. So I think that we're fairly well hedged against that risk… the one scenario in which we might have some capital losses would be one in which the economy does very well and rates rise; in that case, I think that from a political perspective our position will be pretty good."

The booking of a "deferred credit asset" first appeared in a scenario of high interest rates and rapid MBS sales presented at the January 2011 meeting; in that scenario, remittances fell to zero for two years and a deferred asset of $5 to $35 billion was realized on the balance sheet. Few participants remarked on this, although one[59] noted that the Committee's goal was not to maximize remittances to the Treasury but to achieve the dual mandate.

Finally, two participants[60] commented at the January 2010 meeting that there could be political risks associated with large interest payments to depository institutions, constituting one rationale for selling assets prior to the liftoff of short-term interest rates. This was the earliest mention of this concern as far as I could tell; the concern was noted again intermittently during subsequent discussions of exit, but not by more than a handful of participants.

[57] Governor Duke.
[58] Vice Chairman Dudley.
[59] Vice Chairman Dudley.
[60] Presidents Bullard and Plosser; the former has made the same point in several recent FOMC meetings.