Prefatory Note

The attached document represents the most complete and accurate version available based on original files from the FOMC Secretariat at the Board of Governors of the Federal Reserve System.

Please note that some material may have been redacted from this document if that material was received on a confidential basis. Redacted material is indicated by occasional gaps in the text or by gray boxes around non-text content. All redacted passages are exempt from disclosure under applicable provisions of the Freedom of Information Act.

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Class I FOMC – Restricted Controlled (FR)

Report to the FOMC on Economic Conditions and Monetary Policy

Book B

Monetary Policy: Strategies and Alternatives

March 10, 2011

Prepared for the Federal Open Market Committee
by the staff of the Board of Governors of the Federal Reserve System

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Monetary Policy Strategies

Most of the staff's estimates of short-run *r**—the real federal funds rate that, if maintained, would return output to its potential in twelve quarters—rose slightly over the intermeeting period but remain low by historical standards and also below the actual real federal funds rate. In most cases, the increase reflects a modest narrowing in the staff's projection of the output gap. For example, as shown in the exhibit "Equilibrium Real Federal Funds Rate," the short-run *r** that is estimated using the FRB/US model conditioned on the staff outlook and estimates of slack (the "Tealbook-consistent" measure) has increased 10 basis points. The Tealbook-consistent estimate of *r** generated by the EDO model has shifted up by a greater amount—50 basis points—because the staff's projection of the output gap is narrower despite a shift up in the assumed longer-run path for the real federal funds rate, which the model interprets as an indication that the equilibrium federal funds rate has increased. The estimates of short-run *r** generated by the single-equation model and the small structural model, and the estimates based on the EDO model using that model's own projections and estimates of slack, all rose by 20 to 30 basis points.[1] By contrast, the estimate of short-run *r** generated by the FRB/US model using its own projections has declined by 30 basis points, reflecting a widening in the FRB/US model's output gap estimate.[2]

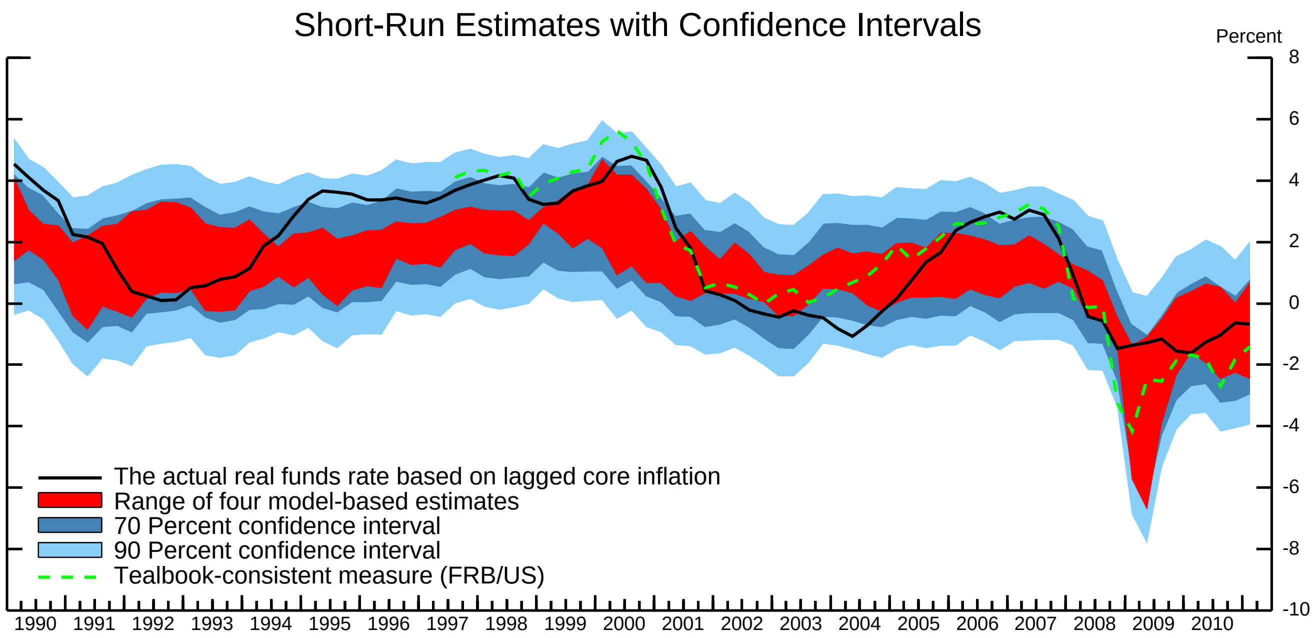
In addition to marking down its estimates of slack in labor and product markets, the staff has revised up modestly its projection for inflation over the next two years. Consequently, both elements of the dual mandate now point to somewhat less need for monetary stimulus. This outcome is reflected in the exhibit "Constrained vs. Unconstrained Monetary Policy," which displays the policy prescriptions arising from optimal control simulations of the FRB/US model using the extended staff baseline projection.[3] In these simulations, policymakers are assumed to place equal weight on

[1] The EDO model has undergone changes in specification and estimation since the January Tealbook. To facilitate comparison with current Tealbook estimates, both "Previous Tealbook" *r** estimates using the EDO model reported in the table refer to the *r** estimates computed using the new specification of the EDO model with the data available at the time of the January Tealbook.

[2] The FRB/US model's own estimate of the output gap has widened, in contrast to the narrowing in the staff's estimate of the gap, because the FRB/US estimates of potential output have responded less to the recent reductions in unemployment and the participation rate than the staff estimates.

[3] The staff's baseline forecast incorporates the effects of the Federal Reserve's large-scale asset purchases as announced in November, and these effects are held at their baseline levels in the optimal policy simulations.

Equilibrium Real Federal Funds Rate

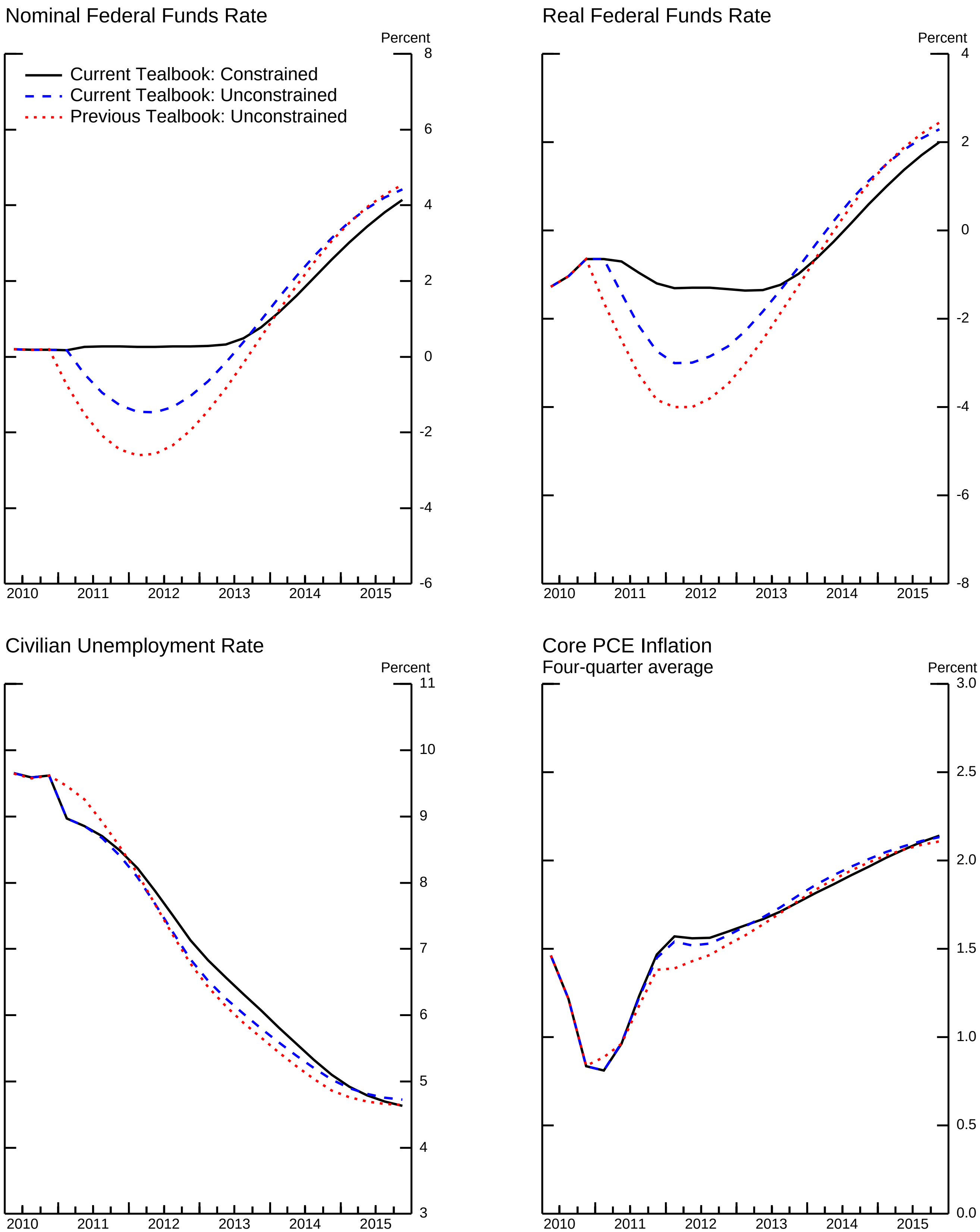


Short-Run and Medium-Run Measures

	Current Tealbook	*Previous Tealbook*
Short-Run Measures		
Single-equation model	-1.4	*-1.6*
Small structural model	-1.2	*-1.5*
EDO model	0.7	*0.4*
FRB/US model	-2.4	*-2.1*
Confidence intervals for four model-based estimates		
70 percent confidence interval	-3.0 to 0.8	
90 percent confidence interval	-3.9 to 2.0	
Tealbook-consistent measures		
EDO model	-0.3	*-0.8*
FRB/US model	-1.4	*-1.5*
Medium-Run Measures		
Single-equation model	1.1	*1.1*
Small structural model	1.2	*1.4*
Confidence intervals for two model-based estimates		
70 percent confidence interval	0.2 to 2.0	
90 percent confidence interval	-0.4 to 2.7	
TIPS-based factor model	2.0	*2.0*
Memo		
Actual real federal funds rate	-0.7	*-0.7*

Note: Explanatory Note A provides background information regarding the construction of these measures and confidence intervals. The actual real federal funds rate shown is based on lagged core inflation as a proxy for inflation expectations. For information regarding alternative measures, see Explanatory Note A. Since January, the EDO model has been re-specified and re-estimated. EDO estimates for the "Previous Tealbook" have been computed from the revised model, using the data available at the time of the January Tealbook.

Constrained vs. Unconstrained Monetary Policy
(2 Percent Inflation Goal)



keeping core PCE inflation close to 2 percent, on keeping the unemployment rate close to the effective NAIRU, and on minimizing changes in the federal funds rate. As has been true for some time, the simulations indicate that the optimal path of policy is affected significantly by the lower-bound constraint on the nominal funds rate. With this constraint imposed, the funds rate does not begin to rise appreciably until the third quarter of 2013, the unemployment rate remains above the staff estimate of the effective NAIRU until the second quarter of 2014, and inflation stays below its target rate until the first quarter of 2015 (black solid lines).[4] Reflecting the revisions to the staff forecast, the constrained optimal funds rate path now departs from the effective lower bound somewhat earlier than in the January Tealbook, which did not call for increases in the funds rate until mid-2014. If the nominal funds rate could fall below zero, optimal policy would see the nominal funds rate decline to around minus 1.5 percent in the second quarter of 2012, before rising back up to positive levels by the third quarter of 2013 (blue dashed line), thereby yielding somewhat more favorable macroeconomic conditions than under the constrained simulations. Relative to January, the unconstrained optimal path now calls for a less-pronounced reduction in the funds rate; as noted above, this upward shift partly reflects revisions to the staff outlook for real activity and inflation. Furthermore, the unconstrained optimal path for the funds rate has changed because the simulations used in this Tealbook condition on the actual value of the funds rate prevailing in the first quarter of 2011.[5]

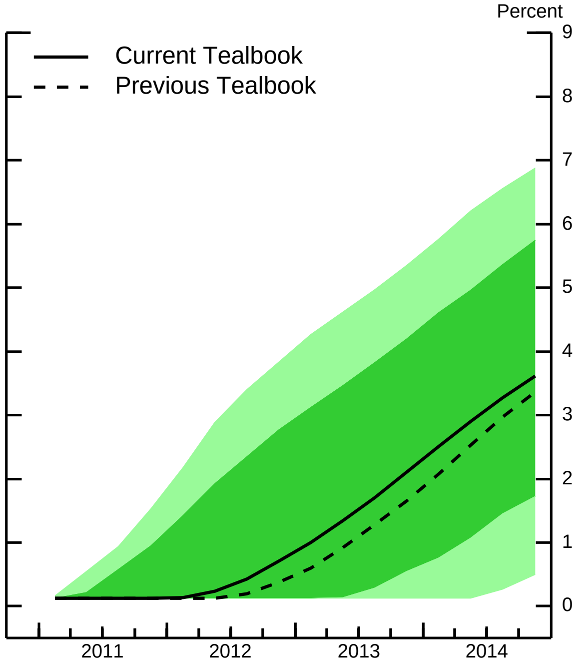
Reflecting the staff's revised projections for inflation and the output gap, the estimated outcome-based policy rule implies a significant departure of the federal funds rate from its lower bound during the third quarter of 2012, a few months earlier than in the previous Tealbook. As shown in the exhibit "The Policy Outlook in an Uncertain Environment," the path associated with this rule—which is employed in the staff's baseline forecast—has the funds rate reaching 3.6 percent by the end of 2014. As shown to the right, information from financial markets suggests that the expected path for the federal funds rate through 2012 has changed little over the intermeeting period. Market participants continue to expect the federal funds rate to move above the current target

[4] The staff's estimate of the effective NAIRU falls from 6½ percent in the fourth quarter of 2010 to 6 percent by the first quarter of 2013, and then to 5¼ percent by the end of 2015, as the extended unemployment benefits expire and labor market functioning improves.

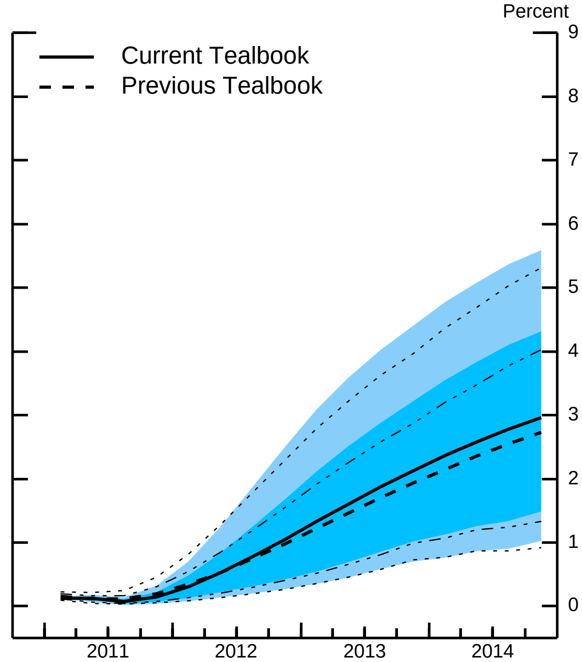
[5] The January Tealbook simulations, on the other hand, treated the funds rate in the first quarter of 2011 as a choice variable rather than as observed data. Because the assumed objective function penalizes interest-rate changes, the setting of the first-quarter funds rate to its observed positive value moderates the degree of policy stimulus prescribed by the unconstrained policy over the remainder of 2011.

The Policy Outlook in an Uncertain Environment

FRB/US Model Simulations of Estimated Outcome-Based Rule



Information from Financial Markets



Note: As in the January Tealbook, the staff baseline projection for the federal funds rate is based on the outcome-based policy rule. Accordingly, the top-left panel does not report a separate series for the staff's projected funds rate. In both panels, the dark and light shading represent the 70 and 90 percent confidence intervals respectively. Financial market quotes are as of March 9.

Near-Term Prescriptions of Simple Policy Rules

	Constrained Policy		Unconstrained Policy	
	2011Q2	2011Q3	2011Q2	2011Q3
Taylor (1993) rule	**0.13**	**0.13**	**-0.44**	**0.02**
Previous Tealbook	*0.13*	*0.13*	*-0.77*	*-0.42*
Taylor (1999) rule	**0.13**	**0.13**	**-3.17**	**-2.53**
Previous Tealbook	*0.13*	*0.13*	*-3.64*	*-3.14*
Estimated outcome-based rule	**0.13**	**0.13**	**-0.18**	**-0.45**
Previous Tealbook Outlook	*0.13*	*0.13*	*-0.28*	*-0.71*
Estimated forecast-based rule	**0.13**	**0.13**	**-0.03**	**-0.16**
Previous Tealbook Outlook	*0.13*	*0.13*	*-0.18*	*-0.48*
First-difference rule	**0.48**	**0.84**	**0.48**	**0.84**
Previous Tealbook Outlook	*0.36*	*0.62*	*0.36*	*0.62*

Memo	2011Q2	2011Q3
Staff assumption	0.13	0.13
Fed funds futures	0.11	0.11
Median expectation of primary dealers	0.13	0.13
Blue Chip forecast (March 1, 2011)	0.20	0.20

Note: In calculating the near-term prescriptions of these simple policy rules, policymakers' long-run inflation objective is assumed to be 2 percent. Explanatory Note B provides further background information. For rules which have the lagged policy rate as a right-hand-side variable, the lines denoted "Previous Tealbook Outlook" report rule prescriptions based on the previous Tealbook's staff outlook, but jumping off from the average value for the policy rate thus far in the quarter.

range in early 2012. Thereafter, the federal funds rate rises gradually to about 3 percent by the end of 2014, about 25 basis points higher than in January.

The lower panel of the exhibit provides near-term prescriptions from simple policy rules. As shown in the left-hand columns, prescriptions from all of the rules, other than the first-difference rule, remain at the effective lower bound. The right-hand columns report the prescriptions that would arise from these rules in the absence of the lower-bound constraint. Reflecting the reduced slack and higher inflation incorporated into the staff projection, most of the unconstrained rules now prescribe tighter monetary policy than in January, although their prescriptions still remain at or below the lower bound.[6] For the rules other than the first-difference rule, reduced slack and higher inflation contribute about equally to the modest increases in the rules' prescriptions. In contrast, the first-difference rule calls for an appreciable monetary policy tightening over the next two quarters. This reflects the fact that the first-difference rule responds to the staff's forecast of a narrowing output gap and—most importantly—a higher inflation profile, and does not depend on the still-elevated level of slack. Moreover, the prescriptions from the first-difference rule are higher than in the January Tealbook, reflecting primarily the shift upward in the staff's inflation forecast.

[6] Because the Taylor (1993) rule places relatively more weight on the prior four-quarter core inflation rate, this rule's funds-rate prescription for the third quarter of 2011 is now just above zero. The prescribed value is, however, within the current target range for the federal funds rate.

Monetary Policy Alternatives

This Tealbook presents three policy alternatives—labeled A, B, and C—for the Committee's consideration. Alternatives A and B reaffirm the intended increase in securities holdings as announced in November. Under Alternative A, however, the Committee would indicate that it is prepared to expand its asset purchases beyond the amounts and the time frame announced in November to foster its monetary policy objectives. Under Alternative C, the asset purchase program would be scaled back by reducing the pace of purchases through the end of the second quarter of 2011. All of the alternatives maintain the existing target for the federal funds rate. Alternative B continues to indicate that the Committee anticipates that it will maintain the funds rate at its effective lower bound for an "extended period." Alternative A would provide more explicit forward guidance concerning the likely duration of the period over which the Committee expects to maintain exceptionally low levels of the funds rate. The language in Alternative C, in addition to reducing the rate of asset purchases, would signal that the Committee may discontinue the reinvestment of principal payments from its securities holdings and raise the federal funds rate sooner than market participants now expect.

The statement issued under Alternative B would update the Committee's assessment of the current economic situation, characterizing the information received over the intermeeting period as suggesting that "the economic recovery is on a somewhat firmer footing." It points to some improvement in labor market conditions, solid increases in consumer spending, and the expansion of business spending on equipment and software, but tempers the good news by noting that residential and nonresidential construction are still weak. Alternative B recognizes the recent increases in the prices of oil and other commodities while reporting that longer-run inflation expectations have remained stable and that measures of underlying inflation "have been subdued." Consistent with the more optimistic assessment of the economic recovery and the stability of inflation expectations, Alternative B states that the recent increases in commodity prices are temporarily boosting headline inflation, but that the Committee expects only "limited pass-through to underlying inflation" and "continues to anticipate a gradual return to higher levels of resource utilization in a context of price stability." Under this alternative, the FOMC would reiterate its intention to purchase $600 billion of longer-term Treasury securities by the end of the second quarter of 2011 and to maintain its existing policy of reinvesting the principal payments from agency debt and mortgage-backed securities (MBS) in longer-term Treasuries. Finally, the statement for Alternative B would reaffirm that the Committee "will regularly review" the pace of its securities purchases and the overall size of the program in light of incoming information and "will adjust the program as needed to best foster maximum employment and price stability."

Compared with Alternative B, the statement for Alternative C presents a more upbeat view of current and prospective economic activity, stating that the economic recovery "is strengthening." Although it indicates that housing remains depressed, it presents a generally less qualified assessment of the incoming economic information, highlighting the improvement in labor market conditions and the ongoing rise in consumer and business spending. Like Alternative B, the statement for Alternative C recognizes the effect that the recent run-up in the prices of oil and other commodities will have on headline inflation in the near-term while noting that longer-term inflation expectations have remained stable and that measures of underlying inflation have been subdued. However, Alternative C would indicate a heightened concern about inflation by stating that the Committee will employ its policy tools "to ensure" (rather than "to help ensure," as in recent statements) that inflation, over time, is at levels consistent with its mandate. To achieve the Committee's objectives, Alternative C would call for a gradual reduction in the pace of securities purchases to limit the increase in its holdings "to a total of $450 billion by the end of the second quarter." The statement would also indicate that the Committee will maintain its reinvestment policy only "for the time being" and that it anticipates that economic conditions "are likely to warrant low levels for the federal funds rate for some time" rather than "exceptionally low levels" for "an extended period."

The Committee's assessment of economic conditions under Alternative A would indicate a greater concern about the slow progress toward its objectives and would indicate that "downside risks to the economic outlook remain significant." It states that the incoming economic information confirms that the recovery "is continuing" and cites, as does Alternative B, gradual improvement in labor market conditions and increases in consumer spending and in business purchases of equipment and software, but also points to continued weakness in nonresidential and residential construction. The statement for Alternative A, largely repeats language from the Committee's recent statements expressing concern that household spending "remains constrained by high unemployment, lower housing wealth, and tight credit." Moreover, it observes that higher energy costs "may be weighing on household spending" even as it recognizes the effect of the recent rise in prices of energy and other commodities on headline inflation. Alternative A reports that longer-term inflation expectations have remained stable and characterizes measures of underlying inflation as having "trended downward." Under this alternative, the Committee would state that it "will" purchase $600 billion of longer-term Treasury securities by the end of the second quarter of 2011 and "is prepared to expand and extend the purchase program if needed" to best foster its objectives.

The next page tabulates key aspects of each alternative. It is followed by complete draft statements and a presentation of the arguments for each alternative. Finally, a box entitled "A Review of Exit Strategy Discussions" provides background for the Committee's discussion of exit strategies at coming meetings.

Table 1: Overview of Alternatives for the March 15 FOMC Statement

Key Components	January Statement	March Alternatives		
		A	**B**	**C**
Economic Activity				
Economic Recovery	is continuing; rate has been insufficient to bring about a significant improvement in labor market conditions	is continuing	economic recovery is on a somewhat firmer footing	is strengthening
Labor Market	employers remain reluctant to add to payrolls	although improving gradually, employment remains at low levels	overall conditions appear to be improving gradually	conditions are improving
	unemployment rate is elevated	unemployment rate is elevated	unemployment rate remains elevated	
Household Spending	picked up late last year, but remains constrained by …	has been increasing at a solid rate, on net, but remains constrained; recent increases in energy costs weighing on spending	has been increasing at a solid rate, on net	
Inflation				
Recent Developments	commodity prices have risen; expectations have remained stable; measures of underlying inflation have been trending downward, are somewhat low	energy and other commodity prices have risen significantly, boosting headline inflation; expectations have remained stable; measures of underlying inflation have trended downward, are somewhat low	commodity prices have risen significantly; sharp run-up in oil prices in recent weeks; expectations have remained stable; measures of underlying inflation have been subdued, continue to be somewhat low	
Outlook and Progress				
Outlook	gradual return to higher resource utilization with price stability	gradual return to higher resource utilization with price stability; downside risks remain significant	gradual return to higher resource utilization w/ price stability, although recent increases in the prices of energy and other commodities are temporarily putting upward pressure on headline inflation; expects limited pass-through to underlying inflation	
Progress Toward Objectives	has been disappointingly slow	n.a.		

Table 1: Overview of Alternatives for the March 15 FOMC Statement
(*continued*)

Key Components	January Statement	March Alternatives A	March Alternatives B	March Alternatives C
Target Federal Funds Rate				
Intermeeting Period	0 to ¼ percent	0 to ¼ percent		
Forward Guidance	exceptionally low levels for an extended period	exceptionally low levels at least through mid-2012	exceptionally low levels for an extended period	low levels for some time
SOMA Portfolio Policy				
Approach	intends to purchase $600 billion of Treasuries by end of 2011:Q2	will purchase $600 billion of Treasuries by end of 2011:Q2	intends to purchase $600 billion of Treasuries by end of 2011:Q2	will gradually reduce pace of purchases of Treasuries; limit increase to $450 billion by end of 2011:Q2 ($150 billion less than announced in Nov.)
	maintain reinvestment policy	maintain reinvestment policy		for the time being, maintain reinvestment policy
Future Policy Action				
Purchase Program	will regularly review and adjust as needed	is prepared to expand and extend if needed	will regularly review and adjust as needed	will continue to review and adjust as needed
Overall	will monitor and employ policy tools as necessary to support the recovery and help ensure inflation consistent with mandate	will monitor and employ policy tools as necessary to support the recovery and help ensure inflation consistent with mandate		will monitor and employ policy tools as necessary to support the recovery and ensure inflation consistent with mandate

Alternatives

JANUARY FOMC STATEMENT

1. Information received since the Federal Open Market Committee met in December confirms that the economic recovery is continuing, though at a rate that has been insufficient to bring about a significant improvement in labor market conditions. Growth in household spending picked up late last year, but remains constrained by high unemployment, modest income growth, lower housing wealth, and tight credit. Business spending on equipment and software is rising, while investment in nonresidential structures is still weak. Employers remain reluctant to add to payrolls. The housing sector continues to be depressed. Although commodity prices have risen, longer-term inflation expectations have remained stable, and measures of underlying inflation have been trending downward.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. Currently, the unemployment rate is elevated, and measures of underlying inflation are somewhat low, relative to levels that the Committee judges to be consistent, over the longer run, with its dual mandate. Although the Committee anticipates a gradual return to higher levels of resource utilization in a context of price stability, progress toward its objectives has been disappointingly slow.

3. To promote a stronger pace of economic recovery and to help ensure that inflation, over time, is at levels consistent with its mandate, the Committee decided today to continue expanding its holdings of securities as announced in November. In particular, the Committee is maintaining its existing policy of reinvesting principal payments from its securities holdings and intends to purchase $600 billion of longer-term Treasury securities by the end of the second quarter of 2011. The Committee will regularly review the pace of its securities purchases and the overall size of the asset-purchase program in light of incoming information and will adjust the program as needed to best foster maximum employment and price stability.

4. The Committee will maintain the target range for the federal funds rate at 0 to ¼ percent and continues to anticipate that economic conditions, including low rates of resource utilization, subdued inflation trends, and stable inflation expectations, are likely to warrant exceptionally low levels for the federal funds rate for an extended period.

5. The Committee will continue to monitor the economic outlook and financial developments and will employ its policy tools as necessary to support the economic recovery and to help ensure that inflation, over time, is at levels consistent with its mandate.

MARCH FOMC STATEMENT—ALTERNATIVE A

1. Information received since the Federal Open Market Committee met in ~~December~~ **January** confirms that the economic recovery is continuing. ~~, though at a rate that has been insufficient to bring about a significant improvement in~~ **Although overall conditions in the** labor market ~~conditions~~ **appear to be improving gradually, employment remains at low levels**. ~~Growth in~~ Household spending **has been increasing at a solid rate, on net, in recent months** ~~picked up late last year~~, but remains constrained by high unemployment, ~~modest income growth,~~ lower housing wealth, and tight credit. **Recent increases in energy costs may be weighing on household spending on non-energy goods and services.** Business spending on equipment and software is rising, ~~while~~ **but** investment in nonresidential structures is still weak. ~~Employers remain reluctant to add to payrolls.~~ The housing sector continues to be depressed. Although **energy and other** commodity prices have risen **significantly since the summer, boosting headline inflation,** longer-term inflation expectations have remained stable, and measures of underlying inflation have ~~been~~ trend**ed** ~~ing~~ downward.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. Currently, the unemployment rate is elevated, and measures of underlying inflation are somewhat low, relative to levels that the Committee judges to be consistent, over the longer run, with its dual mandate. Although the Committee anticipates a gradual return to higher levels of resource utilization in a context of price stability, ~~progress toward its objectives has been disappointingly slow~~ **downside risks to the economic outlook remain significant**.

3. To promote a stronger pace of economic recovery and to help ensure that inflation, over time, is at levels consistent with its mandate, the Committee decided today to continue expanding its holdings of securities as announced in November. In particular, the Committee is maintaining its existing policy of reinvesting principal payments from its securities holdings and **will** ~~intends to~~ purchase $600 billion of longer-term Treasury securities by the end of the second quarter of 2011. The Committee ~~will regularly review the pace of its securities purchases and the overall size of the asset-purchase program in light of incoming information and will adjust~~ **is prepared to expand and extend the purchase program** ~~the program as~~ **if** needed to best foster maximum employment and price stability.

4. The Committee will maintain the target range for the federal funds rate at 0 to ¼ percent and ~~continues to~~ **currently** anticipate**s** that economic conditions, including low rates of resource utilization, subdued inflation trends, and stable inflation expectations, are likely to warrant exceptionally low levels for the federal funds rate **at least through mid-2012** ~~for an extended period~~.

5. The Committee will continue to monitor the economic outlook and financial developments and will employ its policy tools as necessary to support the economic recovery and to help ensure that inflation, over time, is at levels consistent with its mandate.

MARCH FOMC STATEMENT—ALTERNATIVE B

1. Information received since the Federal Open Market Committee met in ~~December~~ **January suggests** ~~confirms~~ that the economic recovery is **on a somewhat firmer footing, and** ~~continuing, though at a rate that has been insufficient to bring about a significant improvement in~~ **overall conditions in the** labor market ~~conditions~~ **appear to be improving gradually**. ~~Growth in~~ Household spending **has been increasing at a solid rate, on net, in recent months, and** ~~picked up late last year, but remains constrained by high unemployment, modest income growth, lower housing wealth, and tight credit~~ business spending on equipment and software ~~is rising~~ **has been expanding**. **However**, ~~while~~ investment in nonresidential structures is still weak**, and** ~~Employers remain reluctant to add to payrolls.~~ the housing sector continues to be depressed. ~~Although~~ Commodity prices **have risen significantly since the summer, and concerns about global supplies of crude oil have contributed to a sharp run-up in oil prices in recent weeks**. **Nonetheless**, longer-term inflation expectations have remained stable, and measures of underlying inflation have been ~~trending downward~~ **subdued**.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. Currently, the unemployment rate **remains** ~~is~~ elevated, and measures of underlying inflation ~~are~~ **continue to be** somewhat low, relative to levels that the Committee judges to be consistent, over the longer run, with its dual mandate. ~~Although~~ **The recent increases in the prices of energy and other commodities are temporarily putting upward pressure on headline inflation, but** the Committee **expects limited pass-through to underlying inflation and continues to** anticipate~~s~~ a gradual return to higher levels of resource utilization in a context of price stability~~, progress toward its objectives has been disappointingly slow~~.

3. To promote a stronger pace of economic recovery and to help ensure that inflation, over time, is at levels consistent with its mandate, the Committee decided today to continue expanding its holdings of securities as announced in November. In particular, the Committee is maintaining its existing policy of reinvesting principal payments from its securities holdings and intends to purchase $600 billion of longer-term Treasury securities by the end of the second quarter of 2011**[, a pace of about $80 billion a month]**. The Committee will regularly review the pace of its securities purchases and the overall size of the asset-purchase program in light of incoming information and will adjust the program as needed to best foster maximum employment and price stability.

4. The Committee will maintain the target range for the federal funds rate at 0 to ¼ percent and continues to anticipate that economic conditions, including low rates of resource utilization, subdued inflation trends, and stable inflation expectations, are likely to warrant exceptionally low levels for the federal funds rate for an extended period.

5. The Committee will continue to monitor the economic outlook and financial developments and will employ its policy tools as necessary to support the economic recovery and to help ensure that inflation, over time, is at levels consistent with its mandate.

March FOMC Statement—Alternative C

1. Information received since the Federal Open Market Committee met in ~~December~~ **January** confirms that the economic recovery is **strengthening and conditions in the labor market are improving**. ~~continuing, though at a rate that has been insufficient to bring about a significant improvement in labor market conditions. Growth in~~ Household spending **has been increasing at a solid rate, on net, and** ~~picked up late last year, but remains constrained by high unemployment, modest income growth, lower housing wealth, and tight credit~~ business **investment has been expanding**. ~~spending on equipment and software is rising, while investment in nonresidential structures is still weak. Employers remain reluctant to add to payrolls.~~ **However,** the housing sector continues to be depressed. ~~Although~~ Commodity prices **have risen significantly since the summer, and concerns about global supplies of crude oil have contributed to a sharp run-up in oil prices in recent weeks**. **Nonetheless**, longer-term inflation expectations have remained stable, and measures of underlying inflation have been ~~trending downward~~ **subdued**.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. Currently, the unemployment rate ~~is~~ **remains** elevated, and measures of underlying inflation ~~are~~ **continue to be** somewhat low, relative to levels that the Committee judges to be consistent, over the longer run, with its dual mandate. ~~Although~~ **The recent increases in the prices of energy and other commodities are temporarily putting upward pressure on headline inflation, but** the Committee **expects limited pass-through to underlying inflation and continues to** anticipate~~s~~ a gradual return to higher levels of resource utilization in a context of price stability~~, progress toward its objectives has been disappointingly slow~~.

3. To **support the** ~~promote a stronger pace of~~ economic recovery and to help ensure that inflation, over time, is at levels consistent with its mandate, the Committee decided today to continue expanding its holdings of securities ~~as announced in November~~. **However, in light of incoming economic information, the Committee will gradually reduce the pace of its purchases of longer-term Treasury securities with the intention of limiting the increase in its holdings to a total of $450 billion by the end of the second quarter of 2011—$150 billion less than announced in November.** ~~In particular~~ **For the time being**, the Committee is maintaining its existing policy of reinvesting principal payments from its securities holdings ~~and intends to purchase $600 billion of longer-term Treasury securities by the end of the second quarter of 2011~~. The Committee will **continue to** ~~regularly~~ review the pace of its securities purchases and the overall size of the asset-purchase program ~~in light of incoming information~~ and will adjust the program as needed to best foster maximum employment and price stability.

4. The Committee will maintain the target range for the federal funds rate at 0 to ¼ percent and continues to anticipate that economic conditions, including low rates of resource utilization, subdued inflation trends, and stable inflation expectations, are likely to warrant ~~exceptionally~~ low levels for the federal funds rate for **some time** ~~an extended period~~.

5. The Committee will continue to monitor the economic outlook and financial developments, and will employ its policy tools as necessary to support the economic recovery and to ~~help~~ ensure that inflation, over time, is at levels consistent with its mandate.

Alternatives

The Case For Alternative B

If policymakers believe that the medium-term outlook for real activity and inflation remains broadly in line with their expectations at the time of the January meeting, they may judge that the current stance of policy is still appropriate, and thus choose to issue a statement along the lines of Alternative B. Such a statement would convey the Committee's judgment that the economic recovery appears to be on a somewhat firmer footing and that employment and inflation are likely to continue to move toward mandate-consistent levels over time.

The Committee, like the staff, may interpret the incoming information on spending and production as suggesting that, on balance, the economic recovery is progressing as anticipated. Policymakers may believe that the combination of adverse weather in January and the unexpected run-up in energy prices will damp the rise in consumer spending only temporarily, and that, as these factors fade, the pace of consumer spending will pick up again, supported by lower payroll taxes and improved consumer sentiment. In addition, the foreign exchange value of the dollar has declined somewhat further over the intermeeting period, and the outlook for economic activity abroad remains generally positive, despite the political disruptions in the Middle East and North Africa. Regarding inflation, although the recent increases in the prices of energy and other commodities are boosting the headline figures, underlying measures of inflation continue to be subdued, unit labor costs have changed little, and longer-run inflation expectations remain in the ranges observed in recent years. Moreover, although the global oil market remains volatile, quotes from crude oil futures markets suggest that market participants expect that supply dislocations will ease over time and that prices will stabilize. Thus, the Committee may anticipate that the recent rise in commodity prices will lead to only a temporary and relatively modest increase in consumer price inflation. If the Committee judges that the medium term outlook for real activity and inflation has not changed significantly, it may decide that completing the $600 billion purchase program by mid-year, as in Alternative B, remains appropriate to provide support for the recovery and to help ensure that inflation, over time, is at a level that policymakers believe to be consistent with the Committee's dual mandate.

Policymakers may see some risk that higher prices for oil and other commodities could not only push near-term inflation higher but also could lead to a rise in longer-run inflation expectations, suggesting the need for tighter policy. They may be reassured, however, that, so far, long-term inflation expectations have remained stable. And they may judge that, if they remain so, tighter policy is not warranted. The alternative simulation, "Greater Commodity Price Increases," in the Tealbook considers a scenario in which commodity prices rise noticeably further, and takes into consideration the extent to which such increases might both boost headline inflation and reduce real income and spending. The scenario shows that, under the prescriptions of standard policy rules and with the $600 billion asset purchase program completed at mid-year, the net effect of a further increase in oil and non-oil commodity prices on short-term interest rates is likely to be small when longer-run inflation expectations remain well anchored. This outcome is reminiscent of the 2007-08 period when transitory increases in energy prices and headline inflation left only a small imprint on core inflation.

Alternatively, recent economic developments may have increased policymakers' uncertainty about the pace and durability of the expansion. In particular, the political unrest in the Middle East and North Africa and the attendant jump in oil prices may have increased the risks of an adverse shock to economic activity through lower real income and greater household and business uncertainty. And, with global economic and political prospects more uncertain, investors could become less willing to hold risky assets, as discussed in the "Greater Geopolitical Risks" scenario in the Tealbook. In addition, the outlook for government spending remains quite unclear, with the possibility of substantial reductions at both the federal and the state and local levels this year. While recognizing the greater uncertainty, the Committee may see important benefits in waiting for additional information on developments abroad and the strength of the recovery before signaling its willingness to expand and extend its asset purchase program.

More broadly, policymakers may continue to have a high threshold for making an adjustment to the purchase program because they see fine tuning as undesirable or because they want to minimize financial market volatility. In particular, policymakers may judge that unexpectedly discontinuing or reducing the current program, as in Alternative C, would be unsettling to financial markets, particularly at a time of heightened uncertainty about the economic consequences of political developments in the Middle East and North Africa. That said, as discussed in the Box, "Tapering of Purchases," the Committee may want to consider, as part of its regular reviews of the asset purchase program going forward, the possible benefits and costs of tapering its purchases as the program draws to a close.

Tapering of Purchases

The statement under Alternative B again indicates that the Committee will regularly review the pace and overall size of the asset purchase program. As part of those reviews, the Committee may want to consider the possibility of tapering its Treasury purchases as the program draws to a close. A decision to taper would require an extension of the program into the third quarter, under the assumption that the Committee decided to complete the intended $600 billion of purchases announced last November.[1] Such an approach would be similar to that taken at the end of the earlier Treasury and agency MBS purchase programs.

If the effect of Treasury purchases on yields depends only on the total stock of securities purchased under the program, then an abrupt end to the purchases once that stock is reached will not affect yields, and so tapering is unlikely to be necessary, especially if investors understand when the program will end. However, if the flow of purchases has a significant effect on yields, then a sudden cessation of purchases could cause a "cliff effect," with yields rising sharply in response to the end of the program. Evidence from the asset purchase programs thus far suggests that it is primarily the stock of purchases that affects asset prices. Moreover, flow effects from the recent purchases are probably quite small, given the depth and liquidity of the Treasury market. These considerations suggest that there may be limited value to tapering purchases made under the current program.

The risk that an abrupt end to purchases would be disruptive to markets would appear higher if market participants expected the Federal Reserve to taper. However, sixteen of the twenty dealers in the Desk survey indicated that they expected the current $600 billion in asset purchases to end in June, suggesting that they do not expect any tapering.

Nonetheless, policymakers might see some value to tapering the current program because they cannot be sure that an abrupt end to Federal Reserve purchases will not trigger an undesirable rise in Treasury yields. In addition, tapering purchases into the third quarter might be seen as beneficial because it would give the Committee more time to make adjustments to the size of the program if that became appropriate. However, some policymakers may be worried that tapering could increase public uncertainty about the Committee's intentions regarding its asset purchases. Finally, the Committee might be concerned that an extension of the period over which purchases are completed could, if macroeconomic conditions changed sufficiently rapidly, lead to an inappropriate delay in the start of the removal of policy accommodation.

[1] We rule out here a temporary rise in purchases followed by a tapered decline to zero by the end of the second quarter. Under Alternative C, the Committee would reduce total purchases and taper them so that the purchase program is completed at the end of the second quarter.

Market participants are generally expecting the Committee to make no changes to the asset purchase program or the "extended period" language at its March meeting. The statement is also anticipated to include no major changes beyond updates to the economic situation. As a result, the adoption of a statement along the lines of Alternative B would likely result in little change in bond yields, equity prices, or the foreign exchange value of the dollar.

THE CASE FOR ALTERNATIVE C

Policymakers may view the rapid decline in the unemployment rate over the past three months and the rise in headline inflation as suggesting that the upside risks to real activity and inflation have increased, justifying some reduction in policy accommodation, along the lines of Alternative C. Even though the incoming data on economic activity have been somewhat mixed, policymakers may judge that many of the fundamental factors supporting the expansion, including accommodative financial conditions, rising business and consumer optimism, and strong foreign economic growth are likely to lead to an acceleration in economic activity this year. Indeed, some policymakers may see a sizable probability that real activity will rebound strongly from the temporary factors that may have held back spending early this year and then continue to accelerate, as in the "Faster Recovery" alternative presented in the Tealbook. Under that scenario, the self-reinforcing dynamics of a pickup in hiring, stronger spending, increased credit availability, and greater optimism generate a more robust recovery and buoy financial markets. In addition, some policymakers may want to offset some, or all, of the decline in short-term real interest rates that occurred in recent weeks as near-term inflation expectations moved up.[1] And some participants may find a reduction in policy accommodation at this meeting attractive because they see possible signs of increased leverage in some parts of the financial system that could contribute to financial instability.[2] As a result, the Committee may want to scale back its asset purchases to $450 billion and modify the statement language to indicate a somewhat earlier commencement of policy tightening, as in Alternative C.

For now, longer-term inflation expectations appear well anchored despite the steep run-up in prices of oil and other commodities. However, policymakers may see a

[1] The yields on two-year TIPS declined about 40 basis points over the intermeeting period.

[2] On leverage in the financial system, see the discussion of the Senior Credit Officer Opinion Survey on Dealer Financing Terms in the appendix to the Financial Developments section of Book A and the memorandum "Asset Valuations," which was sent to the Committee on March 10, 2011.

significant risk that these price increases may persist or continue and that inflation expectations might begin to move up noticeably in the context of accelerating real activity and diminished economic slack, as suggested in the "More Persistent Inflation" Tealbook alternative simulation. That scenario highlights the risks that if supply conditions in the U.S. and abroad were tighter than in the baseline, the upward pressure on commodity prices could intensify as the recovery gains strength, driving headline inflation higher, eroding confidence in the Committee's commitment to price stability, and, thus, raising longer-term inflation expectations. In light of such risks, participants may view an earlier-than-expected scaling back of policy accommodation as necessary to keep longer-term inflation expectations well anchored.

As noted earlier, the Desk's survey of primary dealers suggested that market participants anticipate that the Committee will reiterate its intention to expand its securities holdings by $600 billion and will retain the "extended period" language. A statement that reduces the size of the asset purchase program, drops the "extended period" language, and makes other changes to the statement along the lines of Alternative C, would consequently be a significant surprise to investors. As a result, longer-term interest rates would likely increase, although the Committee's move to tighten policy sooner than investors currently anticipate might lead to some reduction in inflation risk premiums. Stock prices would likely decline and the foreign exchange value of the dollar would probably increase.

THE CASE FOR ALTERNATIVE A

Policymakers may view economic developments as suggesting that downside risks to the pace of the expansion remain significant and thus think it appropriate to indicate that they are prepared to provide additional policy accommodation, if it is needed, to promote the FOMC's dual mandate. If so, the Committee may wish to express its willingness to expand and extend its program of asset purchases beyond the amounts announced in November. At the same time, the Committee may wish to provide more explicit forward guidance concerning the likely duration of the period of exceptionally low federal funds rates, as in Alternative A.

The Committee may have read the incoming economic indicators as suggesting that the recovery has not been as strong as anticipated at the time of the January meeting. The rise in consumer spending early this year may have disappointed some policymakers, and, along with the continued weakness in housing markets, may have raised concerns about the strength and durability of the recovery. Moreover, the run-up in energy costs, if it persists, may weigh on household spending on non-energy goods and services, and the ongoing political turmoil in the Middle East and North Africa could depress consumer and business confidence. In addition, federal fiscal policy appears likely to be tighter than previously thought, and spending by state and local governments may be weaker. With longer-term inflation expectations continuing to be well anchored, policymakers may want to emphasize that the door is open to expand and extend the asset purchase program in light of the increased downside risks to the recovery in real activity and employment. Even if members continue to anticipate that the economy is likely to gradually return to higher levels of resource utilization in the context of price stability without further monetary stimulus, they may view a statement along the lines of Alternative A as providing reassurance to businesses and households that the Committee is committed to support the recovery, particularly in light of the recent unsettling economic news.

Alternatively, policymakers may continue to view the progress toward their longer-run objectives as disappointingly slow and judge that Alternative A appropriately recognizes the likely need for more policy stimulus before long. In particular, despite the surprising decline in the unemployment rate, other measures of labor utilization, including employment and hours worked, have moved up only gradually. Moreover, the optimal control simulations presented in the Monetary Policy Strategies Section of the Tealbook call for additional policy easing in order to best foster the Committee's objectives. Policymakers may interpret these results as suggesting that additional stimulus could help contribute to higher levels of employment without allowing an excessive rise in inflation. They also may judge that the risks associated with further expansion of the balance sheet are low relative to the benefits, and in particular, may be confident that the Committee's tools for draining reserves are ready for use at the appropriate time.

The Committee may also want to communicate more explicitly its expectations for the path of the federal funds rate by stating that it anticipates that economic conditions, including low rates of resource utilization, subdued inflation trends, and stable inflation expectations, are likely to warrant exceptionally low levels for the federal funds rate at least through mid-2012. In light of the modest shift over the intermeeting period in market expectations toward an earlier date for the first increase in the federal funds rate, members may be concerned about a further shift, and a possible unwarranted rise in interest rates, if the recovery strengthened. An explicit indication of the Committee's intention could help limit investor uncertainty and reduce term premiums and, thus, lower intermediate and longer-term Treasury yields, thereby providing support for aggregate demand.

An announcement indicating that the Committee is open to expanding and extending the asset purchase program would likely surprise market participants. Longer-term yields could decline, although this effect would likely be limited if investors were to perceive the statement as adding to the upside risks to inflation. Equity prices would probably rise, and the foreign exchange value of the dollar would likely decline.

Review of Exit Strategy Discussions

Last April, the Committee discussed approaches for exiting from the very accommodative policy stance in place at that time. The weakening of the economy over the summer shifted the Committee's focus away from exit and toward providing additional policy accommodation to promote a stronger recovery and return inflation to levels consistent with the dual mandate. With the recovery potentially back on track, the Committee may soon want to resume its discussion about exit issues.

Summary of Past FOMC Discussions

Participants at the April 2010 meeting expressed broad support for a strategy of normalizing the size and composition of the balance sheet over time. They noted that a reduction in the size of the Federal Reserve's balance sheet could help lower reserve balances to levels consistent with more normal operations of money markets and monetary policy. They also observed that a portfolio consisting solely of Treasury securities would likely minimize the extent to which the Federal Reserve might be affecting the allocation of credit across sectors of the economy.

Most participants favored eventual sales of agency debt and mortgage-backed securities (MBS) as a means for achieving a more normal size and composition of the Federal Reserve's portfolio. Most judged that selling agency debt and MBS at a pace that would bring holdings of these securities down to zero over a five-year period would normalize the portfolio sufficiently quickly while not disrupting financial markets. Participants agreed that sales should be implemented in accordance with a framework communicated in advance and at a pace that could be adjusted in response to changes in economic and financial conditions. Some participants suggested that, in addition to selling agency debt and MBS, holdings of Treasury securities might also be reduced by temporarily suspending the Committee's policy of rolling over maturing Treasury securities.[1]

Most participants indicated a preference to begin asset sales when the economic recovery has been firmly established and at some point after the first increase in the Committee's short-term interest rate target. This strategy would make raising short-term interest rates the Committee's key policy tightening tool, while reductions in holdings of agency debt and MBS would be gradual and less prominent as an instrument of short-run monetary policy. Participants envisioned that an increase in short-term rates would be achieved by raising the interest rate the Reserve Banks pay on excess reserves. They acknowledged that use of temporary reserve draining tools, such as term reverse repurchase agreements and term deposits, might also be needed to reduce the supply of reserve balances quickly and by a sizable amount in order to tighten the link between the rate paid on excess reserves and market rates.

Some participants, however, did not think it necessary to link the date of the initiation of asset sales to the first increase in the Committee's interest rate target. An alternative approach might involve a pre-announced schedule of asset sales that would start to

[1] Participants identified both advantages and disadvantages to redeeming Treasury securities as they mature. Although redemptions would contribute to a more expeditious normalization of the size of the balance sheet, they might also put upward pressure on long-term interest rates and would tend to work against the objective of returning the SOMA to an all-Treasuries composition.

normalize the size and composition of the balance sheet before interest rate tightening gets under way. In addition, a couple of participants suggested that selling agency debt and MBS over three years, rather than five, could reduce the potential for the high level of reserve balances associated with the elevated size of the Federal Reserve's securities holdings to have adverse effects.

NEW CONSIDERATIONS

The Committee's decisions, taken in the second half of 2010, to reinvest principal payments from agency debt and MBS into longer-term Treasury securities and to purchase additional Treasury securities have resulted in a larger quantity of reserve balances and a larger SOMA portfolio, which is more heavily concentrated in Treasury securities, than the Committee anticipated when it discussed exit strategy last spring.

The Committee may wish to revisit some exit strategy elements in light of the changes in its balance sheet over the past year. For one, the Committee will need to decide when to cease reinvestment of agency debt and agency MBS proceeds into longer-term Treasury securities, as well as whether and when Treasury redemptions might be appropriate. In addition, the Federal Reserve's larger balance sheet and higher level of reserves outstanding could incline some policymakers to begin asset sales sooner or to conduct them at a more rapid pace than had been previously contemplated. Policymakers might also examine the potential desirability of incorporating Treasury securities into an asset sales program. Sales of Treasury securities might be useful, for example, if the Committee wished to reduce the size of the Federal Reserve's balance sheet relatively rapidly and if sales of agency MBS proved to be disruptive to mortgage markets.

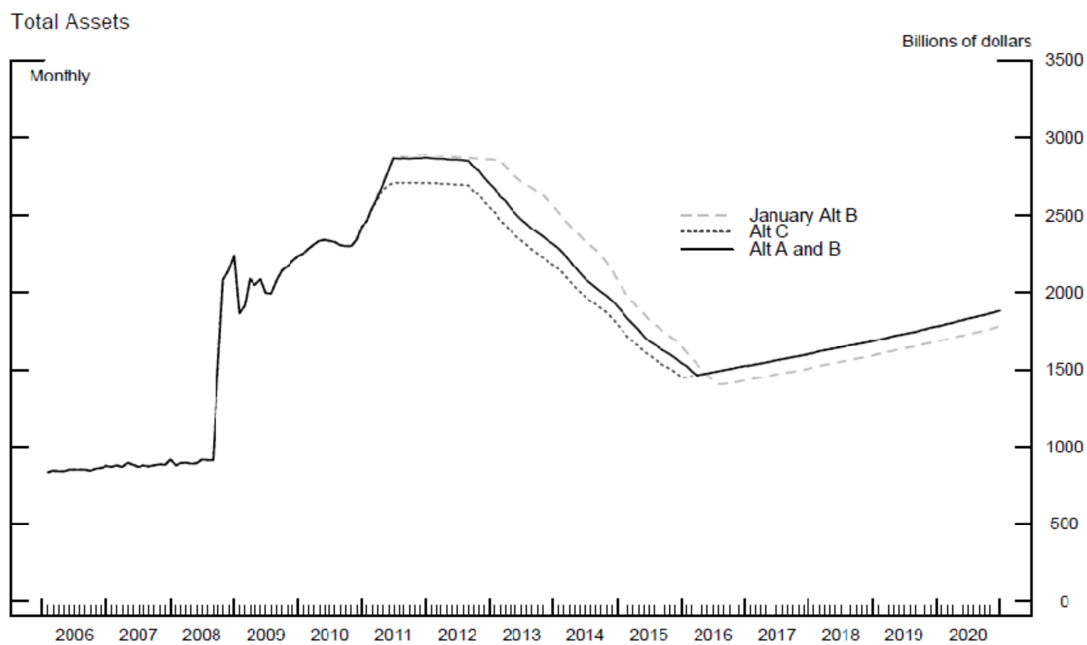
The Committee might also want to consider the early use of temporary draining tools to reduce the supply of reserve balances, either in conjunction with or before undertaking asset sales. For example, large-scale reserve-draining operations might enhance the Federal Reserve's control over short-term interest rates if an increase in the interest rate paid on excess reserves does not boost the federal funds rate to the desired extent. Alternatively, the temporary draining tools might be used to initiate a tightening of monetary conditions prior to an increase in the rate on excess reserves.

MARKET EXPECTATIONS

Results from the March survey of primary dealers indicate that dealers assign high probabilities to the Federal Reserve halting the reinvestment of principal payments at some point over the next two years, with median probabilities of 85 and 90 percent, respectively, for halting reinvestment of principal payments for agency debt and MBS, and 73 percent for halting reinvestments for maturing Treasury securities. Dealers assign a higher median probability to the likelihood of Treasury sales over the next five years than to sales of agency debt or MBS (65 percent, compared with 43 and 50 percent, respectively), reportedly reflecting concerns about the possible effect of sales of agency-related securities on the housing market.

LONG-RUN PROJECTIONS OF THE BALANCE SHEET AND MONETARY BASE

The staff has prepared two scenarios for the Federal Reserve's balance sheet that correspond to the policy Alternatives A, B, and C (though the language in the statements differs, Alternatives A and B have the same balance sheet projection). Projections under each scenario are based on assumptions about various components of the balance sheet.[3] Details of these assumptions, as well as projections for each major component of the balance sheet, can be found in Explanatory Note C.



For the scenario that corresponds to Alternatives A and B, we assume that the FOMC completes the intended expansion of its holdings of longer-term securities of $600 billion by the end of the second quarter of 2011. The proceeds from principal repayments from Treasury securities and agency securities continue to be reinvested in longer-term Treasury securities after that time. Under these assumptions, the size of the balance sheet reaches about $2.9 trillion by the end of the second quarter of this year and remains at about that level until the target federal funds rate increases in September of 2012. Immediately after liftoff, all maturing securities and prepayments of securities are allowed to roll off the portfolio, and the balance sheet begins to contract. Six months after the assumed rise in the target federal funds rate, the Committee begins to sell remaining holdings of agency MBS and agency debt securities at a pace that reduces the

[3] All scenarios assume the same path for the federal funds rate.

amount of these securities in the portfolio to zero in five years, by the end of the first quarter of 2018.[4, 5] This action also reduces the size of the balance sheet between 2013 and 2015.

After reserve balances have reached the assumed $25 billion floor and the U.S. Treasury's Supplementary Financing Account (SFA) has been wound down, the balance sheet begins to expand, with increases in holdings of Treasury securities matching the growth of Federal Reserve capital and notes in circulation.[6] The balance sheet reaches a size of nearly $1.9 trillion by the end of 2020.[7]

Under Alternative C, the purchases of longer-term Treasury securities are reduced to $450 billion, and are still assumed to be completed by the end of the second quarter of 2011. The size of the balance sheet peaks around $2.7 trillion when the purchase program ends. The timing of the other changes in the balance sheet is the same as in Alternatives A and B.

Compared with the January Tealbook projection, total assets in Alternatives A and B are roughly unchanged until the lift off of the federal funds rate. However, because the funds rate liftoff occurs earlier in this projection, total assets are lower than in the January Tealbook from September 2012 through the first quarter of 2016.[8] Further out in the projection, total assets under Alternatives A and B exceed the corresponding levels in the January Tealbook. This difference stems from an upward revision in the projection of currency in circulation, which is assumed to be matched by an increase in the size of the SOMA portfolio. On the liability side of the balance sheet, reserve

[4] Given the maturity schedule for agency debt securities, the volume of sales necessary to reduce holdings of these securities to zero over the five year period is minimal.

[5] Under all of the scenarios presented, the tools to drain reserve balances (reverse repurchase agreements and the Term Deposit Facility) are assumed to not be used. Use of these tools would result in a shift in the composition of Federal Reserve liabilities, but not an overall change in the size of the balance sheet.

[6] In the near term, the SFA is projected to be wound down to $5 billion as the level of public debt outstanding that is subject to the federal debt limit approaches the statutory ceiling. We assume that once the debt ceiling is raised the SFA is increased back to $200 billion by September 2011.

[7] The composition of Federal Reserve assets in these projections differs notably at times from historical patterns. Prior to August 2007, U.S. Treasury securities made up 100 percent of the domestic securities portfolio. By contrast, under Alternative B, Treasury securities are around 53 percent of the domestic securities portfolio at the end of February 2011. By the end of 2018, Treasury securities account for 100 percent of the domestic securities portfolio under all scenarios.

[8] The projections assume that all securities are allowed to roll off the portfolio as they prepay or mature once the federal funds rate lifts off. Prior to that date, all securities that prepay or mature are rolled over into Treasury securities.

balances are lower than in the previous Tealbook in the near term, largely reflecting the earlier date of rolling securities off the portfolio.

After expanding in 2011, on net, the monetary base is projected to contract through 2015 reflecting the decline in Federal Reserve assets and the associated downward trend in reserve balances.

Growth Rates for the Monetary Base

Date	Alternatives A and B	Alternative C	*Memo:* January Tealbook
		Percent, annual rate	
		Monthly	
Apr-10	-28.6	-28.6	-28.6
May-10	-20.1	-20.1	-20.1
Jun-10	-3.9	-3.9	-3.9
Jul-10	-5.1	-5.1	-5.1
Aug-10	-2.4	-2.4	-2.4
Sep-10	-10.1	-10.1	-10.1
Oct-10	-9.8	-9.8	-9.8
Nov-10	3.2	3.2	3.2
Dec-10	16.8	16.8	16.8
Jan-11	23.3	23.3	28.6
Feb-11	57.6	57.6	98.9
Mar-11	103.4	99.8	123.2
		Quarterly	
2010 Q2	-6.2	-6.2	-6.2
2010 Q3	-6.4	-6.4	-6.4
2010 Q4	-3.2	-3.2	-3.2
2011 Q1	37.5	37.0	52.2
2011 Q2	69.9	57.6	75.9
		Annual - Q4 to Q4	
2009	52.5	52.5	52.5
2010	0.9	0.9	0.9
2011	27.3	19.4	33.6
2012	-4.1	-4.4	-0.9
2013	-17.5	-17.9	-10.0
2014	-20.2	-20.5	-19.3
2015	-21.6	-15.5	-25.4

Note: Not seasonally adjusted.

Alternatives

DEBT, BANK CREDIT, AND MONEY FORECASTS

Domestic nonfinancial debt is expected to expand at an annual rate of 2½ percent in the first quarter of this year, driven by a rapid expansion in federal government debt and a gradual advance in private nonfinancial debt. Although federal government debt is expected to reach its statutory limit in the second quarter, the projections assume that the limit will be raised in a timely manner. Domestic nonfinancial debt is forecasted to grow at an annual rate of about 5¼ percent, on average, over the next two years, as federal debt continues to expand briskly and private nonfinancial debt accelerates modestly. Despite low mortgage rates, home mortgage debt is projected to continue to contract in 2011 and to be flat in 2012, reflecting projections of house prices declining through early 2012, lending standards easing slowly, and the housing sector remaining weak. Consumer credit growth is forecasted to be moderate this quarter and pick up in coming quarters, driven by growth in spending on consumer durables. Nonfinancial business debt is forecasted to rise gradually this year and expand at an annual rate of 4½ percent in 2012, reflecting a pickup in capital expenditures over the projection period.

Commercial bank credit is expected to contract at about a 2 percent pace in the current quarter, reflecting a continued decline in loans and a slight reduction in securities holdings. Bank credit is projected to begin to rise in the second quarter and increase about 1 percent for 2011 as a whole and about 3½ percent in 2012 as loans begin to grow at a modest pace and securities expand at a moderate rate. The persistent decline in commercial and industrial (C&I) loans appeared to end late last year. C&I loans are projected to advance moderately over the forecast period as a result of continued growth in investment outlays and a further gradual easing of lending standards. With the commercial real estate sector expected to face weak market fundamentals, commercial real estate loans are projected to decrease over the forecast period. Residential real estate loans are expected to exhibit tepid growth beginning in the second half of 2011 and continuing into 2012. Consumer loans are forecasted to contract during the first half of 2011 and then to increase modestly during the remainder of 2011 and 2012, with the gains driven, in part, by declines in charge-offs. Banks' securities holdings are projected to expand more slowly over the forecast horizon than in 2010, when securities growth reflected weak loan demand and ongoing deposit inflows.

M2 growth is projected to slow slightly to a 3 percent rate in 2011 before picking up a bit in 2012. The contour of this projection assumes that households will reallocate their portfolios away from safe and liquid M2 assets toward higher-yielding investments that are outside of M2 as the economic recovery gains strength through the course of this year. Thereafter, with the portfolio reallocation completed in early 2012, M2 is projected to grow at a modest rate in line with fundamentals: M2 growth is buoyed by the expansion of nominal GDP over 2012, but later in the year is damped somewhat by the projected rise in the opportunity cost of holding money. Within M2, liquid deposits are forecasted to grow at a more moderate pace than in 2009 and 2010. Small time deposits and retail money market mutual funds are projected to continue to contract, though at a diminished pace. Currency is anticipated to expand moderately, reflecting ongoing solid demand from both domestic and international sources.

M2 Growth Rates
(Percent, seasonally adjusted annual rate)

Monthly Growth Rates	Tealbook Forecast*
Jun 2010	4.3
Jul 2010	2.3
Aug 2010	6.3
Sep 2010	6.6
Oct 2010	5.5
Nov 2010	5.1
Dec 2010	4.2
Jan 2011	2.9
Feb 2011	7.1
Mar 2011	3.0
Apr 2011	3.0
May 2011	3.0
Jun 2011	2.5
Quarterly Growth Rates	
2010 Q3	4.5
2010 Q4	5.6
2011 Q1	4.4
2011 Q2	3.4
2011 Q3	2.2
Annual Growth Rates	
2009	5.0
2010	3.2
2011	3.0
2012	3.3

* This forecast is consistent with nominal GDP and interest rates in the Tealbook forecast. Actual data through February 2011; projections thereafter.

Alternatives

DIRECTIVE

The January directive appears below. Drafts for a March directive that correspond to each of the three policy alternatives appear on subsequent pages. The Directives for Alternatives A and B would instruct the Desk to continue carrying out the increase in the SOMA's securities holdings of $600 billion by the end of June 2011 through purchases of longer-term Treasury securities while also continuing the current policy of reinvesting principal payments on SOMA securities. The directive for Alternative C is for an increase in the SOMA's holdings totaling $450 billion by the end of June 2011 while continuing the current portfolio policy of reinvesting principal payments.

January 2011 FOMC Directive

The Federal Open Market Committee seeks monetary and financial conditions that will foster price stability and promote sustainable growth in output. To further its long-run objectives, the Committee seeks conditions in reserve markets consistent with federal funds trading in a range from 0 to ¼ percent. The Committee directs the Desk to execute purchases of longer-term Treasury securities in order to increase the total face value of domestic securities held in the System Open Market Account to approximately $2.6 trillion by the end of June 2011. The Committee also directs the Desk to reinvest principal payments from agency debt and agency mortgage-backed securities in longer-term Treasury securities. The System Open Market Account Manager and the Secretary will keep the Committee informed of ongoing developments regarding the System's balance sheet that could affect the attainment over time of the Committee's objectives of maximum employment and price stability.

March 2011 FOMC Directive — Alternative A

The Federal Open Market Committee seeks monetary and financial conditions that will foster price stability and promote sustainable growth in output. To further its long-run objectives, the Committee seeks conditions in reserve markets consistent with federal funds trading in a range from 0 to ¼ percent. The Committee directs the Desk to execute purchases of longer-term Treasury securities in order to increase the total face value of domestic securities held in the System Open Market Account to approximately $2.6 trillion by the end of June 2011. The Committee also directs the Desk to reinvest principal payments from agency debt and agency mortgage-backed securities in longer-term Treasury securities. The System Open Market Account Manager and the Secretary will keep the Committee informed of ongoing developments regarding the System's balance sheet that could affect the attainment over time of the Committee's objectives of maximum employment and price stability.

March 2011 FOMC Directive — Alternative B

The Federal Open Market Committee seeks monetary and financial conditions that will foster price stability and promote sustainable growth in output. To further its long-run objectives, the Committee seeks conditions in reserve markets consistent with federal funds trading in a range from 0 to ¼ percent. The Committee directs the Desk to execute purchases of longer-term Treasury securities in order to increase the total face value of domestic securities held in the System Open Market Account to approximately $2.6 trillion by the end of June 2011. The Committee also directs the Desk to reinvest principal payments from agency debt and agency mortgage-backed securities in longer-term Treasury securities. The System Open Market Account Manager and the Secretary will keep the Committee informed of ongoing developments regarding the System's balance sheet that could affect the attainment over time of the Committee's objectives of maximum employment and price stability.

March 2011 FOMC Directive — Alternative C

The Federal Open Market Committee seeks monetary and financial conditions that will foster price stability and promote sustainable growth in output. To further its long-run objectives, the Committee seeks conditions in reserve markets consistent with federal funds trading in a range from 0 to ¼ percent. The Committee directs the Desk to execute purchases of longer-term Treasury securities in order to increase the total face value of domestic securities held in the System Open Market Account to approximately ~~$2.6~~ **$2.5** trillion by the end of June 2011. The Committee also directs the Desk to reinvest principal payments from agency debt and agency mortgage-backed securities in longer-term Treasury securities. The System Open Market Account Manager and the Secretary will keep the Committee informed of ongoing developments regarding the System's balance sheet that could affect the attainment over time of the Committee's objectives of maximum employment and price stability.

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Explanatory Notes

A. Measures of the Equilibrium Real Rate

The equilibrium real rate is the real federal funds rate that, if maintained, would return output to its potential level sometime in the future. The short-run equilibrium rate is defined as the rate that would close the output gap in twelve quarters given the corresponding model's projection of the economy. The medium-run concept is the value of the real federal funds rate projected to prevail in seven years, under the assumption that monetary policy acts to bring actual and potential output into line in the short run and then keeps them equal thereafter.

Measure	Description
Single-equation Model	The measure of the equilibrium real rate in the single-equation model is based on an estimated aggregate-demand relationship between the current value of the output gap and its lagged values as well as the lagged values of the real federal funds rate.
Small Structural Model	The small-scale model of the economy consists of equations for six variables: the output gap, the equity premium, the federal budget surplus, the trend growth rate of output, the real bond yield, and the real federal funds rate.
EDO Model	Estimates of the equilibrium real rate using EDO—an estimated dynamic-stochastic-general-equilibrium (DSGE) model of the U.S. economy—depend on data for major spending categories, price and wages, and the federal funds rate as well as the model's structure and estimate of the output gap.
FRB/US Model	Estimates of the equilibrium real rate using FRB/US—the staff's large-scale econometric model of the U.S. economy—depend on a very broad array of economic factors, some of which take the form of projected values of the model's exogenous variables.
Tealbook-consistent	Two measures are presented based on the FRB/US and the EDO models. Both models are matched to the extended Tealbook forecast. Model simulations determine the value of the real federal funds rate that closes the output gap conditional on the extended baseline.

Measure	Description
TIPS-based Factor Model	Yields on TIPS (Treasury Inflation-Protected Securities) reflect investors' expectations of the future path of real interest rates. The TIPS-based measure of the equilibrium real rate is constructed using the seven-year-ahead instantaneous real forward rate derived from TIPS yields as of the Tealbook publication date. This forward rate is adjusted to remove estimates of the term and liquidity premiums based on a three-factor, arbitrage-free term-structure model applied to TIPS yields, nominal yields, and inflation.

The actual real federal funds rate is constructed as the difference between the nominal rate and realized inflation, where the nominal rate is measured as the quarterly average of the observed federal funds rate, and realized inflation is given by the log difference between the core PCE price index and its lagged value four quarters earlier. If the upcoming FOMC meeting falls early in the quarter, the lagged inflation measure ends in the last quarter. For the current quarter, the nominal rate is specified as the target federal funds rate on the Tealbook publication date.

Estimates of the real federal funds rate depend on the proxies for expected inflation used. The table below shows estimates of the real federal funds rates using alternative proxies: lagged core PCE inflation, which is used to construct the actual real federal funds rate shown in the table that displays the r^* measures; lagged four-quarter headline PCE inflation; and projected four-quarter headline PCE inflation beginning with the next quarter. The table also displays the Tealbook-consistent FRB/US-based measure of the short-run equilibrium real rate and the average actual real federal funds rate over the next twelve quarters using each of the different proxies for expected inflation.

Proxy used for expected inflation	Actual real federal funds rate (current value)	Tealbook-consistent FRB/US-based measure of the equilibrium real funds rate (current value)	Average actual real funds rate (twelve-quarter average)
Lagged core inflation	-0.7	-1.4	-0.4
Lagged headline inflation	-1.3	-1.7	-0.6
Projected headline inflation	-1.2	-1.5	-0.5

Explanatory Notes

B. Analysis of Policy Paths and Confidence Intervals

RULE SPECIFICATIONS

For the following rules, i_t denotes the federal funds rate for quarter t, while the right-hand-side variables include the staff's projection of trailing four-quarter core PCE inflation (π_t), inflation two and three quarters ahead ($\pi_{t+2|t}$ and $\pi_{t+3|t}$), the output gap in the current period and one quarter ahead ($y_t - y_t^*$ and $y_{t+1|t} - y_{t+1|t}^*$), and the three-quarter-ahead forecast of annual average GDP growth relative to potential ($\Delta^4 y_{t+3|t} - \Delta^4 y_{t+3|t}^*$), and π^* denotes an assumed value of policymakers' long-run inflation objective. The outcome-based and forecast-based rules were estimated using real-time data over the sample 1988:1-2006:4; each specification was chosen using the Bayesian information criterion. Each rule incorporates a 75 basis point shift in the intercept, specified as a sequence of 25 basis point increments during the first three quarters of 1998. The first two simple rules were proposed by Taylor (1993, 1999). The prescriptions of the first-difference rule do not depend on assumptions regarding r^* or the level of the output gap; see Orphanides (2003).

Outcome-based rule	$i_t = 1.20 i_{t-1} - 0.39 i_{t-2} + 0.19[1.17 + 1.73\pi_t$ $+3.66(y_t - y_t^*) - 2.72(y_{t-1} - y_{t-1}^*)]$
Forecast-based rule	$i_t = 1.18 i_{t-1} - 0.38 i_{t-2} + 0.20[0.98 + 1.72\pi_{t+2|t}$ $+2.29\left(y_{t+1|t} - y_{t+1|t}^*\right) - 1.37(y_{t-1} - y_{t-1}^*)]$
Taylor (1993) rule	$i_t = 2 + \pi_t + 0.5(\pi_t - \pi^*) + 0.5(y_t - y_t^*)$
Taylor (1999) rule	$i_t = 2 + \pi_t + 0.5(\pi_t - \pi^*) + (y_t - y_t^*)$
First-difference rule	$i_t = i_{t-1} + 0.5\left(\pi_{t+3|t} - \pi^*\right) + 0.5(\Delta^4 y_{t+3|t} - \Delta^4 y_{t+3|t}^*)$

FRB/US MODEL SIMULATIONS

Prescriptions from the two empirical rules are computed using dynamic simulations of the FRB/US model, implemented as though the rule were followed starting at this FOMC meeting. The dotted line labeled "Previous Tealbook" is based on the current specification of the policy rule, applied to the previous Tealbook projection. Confidence intervals are based on stochastic simulations of the FRB/US model with shocks drawn from the estimated residuals over 1969-2008.

INFORMATION FROM FINANCIAL MARKETS

The expected funds rate path is based on Eurodollar quotes and implied three-month forward rates from swaps, and the confidence intervals for this path are constructed using prices of interest rate caps.

NEAR-TERM PRESCRIPTIONS OF SIMPLE POLICY RULES

These prescriptions are calculated using Tealbook projections for inflation and the output gap. The first-difference rule, the estimated outcome-based rule, and the estimated forecast-based rule include the lagged policy rate as a right-hand-side variable. When the Tealbook is published early in the quarter, the lines denoted "Previous Tealbook" report rule prescriptions based on the previous Tealbook's staff outlook, jumping off from the actual value of the lagged funds rate in the previous quarter. When the Tealbook is published late in the quarter, the lines denoted "Previous Tealbook Outlook" report rule prescriptions based on the previous Tealbook's staff outlook, but jumping off from the average value for the policy rate thus far this quarter

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C. Long-Run Projections of the Balance Sheet and Monetary Base

This explanatory note presents the assumptions underlying the projections provided in the section entitled "Long-Run Projections of the Balance Sheet and Monetary Base," as well as projections for each major component of the balance sheet.

GENERAL ASSUMPTIONS

The balance sheet projections are constructed on a monthly frequency from March 2011 to December 2020. The few balance sheet items that are not discussed below are assumed to be constant over the projection period at the level observed on February 28, 2011. The projections for all major asset and liability categories under each scenario are summarized in the tables that follow the bullet points.

The Tealbook projection assumes that the federal funds rate begins to increase in September of 2012. The balance sheet projections assume that no use of short-term draining tools is necessary to achieve the projected path for the federal funds rate.

ASSETS

Treasury Securities, Agency MBS, and Agency Debt Securities

- The assumptions under Alternatives A and B are
  - Purchases of $600 billion of longer-term Treasury securities between November 2010 and June 2011.
  - Principal payments from Treasury securities continue to be reinvested until the target federal funds rate lifts off.
  - Principal payments from agency MBS and agency debt securities are reinvested in longer-term Treasury securities until the target federal funds rate lifts off.[1]
  - All purchases of Treasury securities are executed using a maturity distribution similar to that currently used by the Desk.[2]
  - Beginning immediately after the first increase in the target federal funds rate, all securities are allowed to roll off as they mature or prepay.
  - The Federal Reserve begins to sell agency MBS and agency debt securities six months after the assumed date of the first increase in the target federal funds rate.

[1] Projected prepayments of agency MBS reflect interest rates as of March 8, 2011.

[2] Because current and expected near-term interest rates are below the average coupon rate on outstanding Treasury securities, the market value at which these securities are purchased will exceed their face value. Reserve balances will increase by the market value, whereas securities holdings as reported in the H.4.1 release will increase by the face value; the implied premiums are recorded as "other assets." These premiums decline gradually from $58 billion at the end of 2012 (2.3 percent of SOMA) to $4 billion at the end 2020 (two-tenths of a percent of SOMA).

Holdings of agency securities are reduced over five years and reach zero by the end of the first quarter of 2018.

  - For agency MBS, the rate of prepayment is based on estimates of housing market factors from one of the program's investment managers and interest rate projections from the Tealbook. The projected rate of prepayment is sensitive to these underlying assumptions.

- Under Alternative C, a total of $450 billion in longer-term Treasury securities are purchased by the end of the second quarter of 2011. All other assumptions are the same as for Alternatives A and B.

- In the scenarios, a minimum level of $25 billion is set for reserve balances. To maintain reserve balances at this level, first the U.S. Treasury's Supplementary Financing Account (SFA) is reduced to zero. After the SFA is exhausted, Treasury bills are purchased. Purchases of bills continue until these securities comprise one-third of the Federal Reserve's total Treasury security holdings–about the average level in the period prior to the crisis. Once this level is reached, the Federal Reserve buys notes and bonds in addition to bills to maintain an approximate composition of the portfolio of one-third bills and two-thirds coupon securities.

Liquidity Programs and Credit Facilities

- Loans through the Term Asset-Backed Securities Loan Facility (TALF) peaked at $48 billion in December 2009. Credit extended through this facility declines to zero by the end of 2015, reflecting loan maturities and prepayments.

- The assets held by TALF LLC increase to $1.0 billion by the end of 2011 and remain at this level through 2014 before declining to zero the following year. Assets held by TALF LLC consist of investments of commitment fees collected by the LLC and the U.S. Treasury's initial funding. In this projection, the LLC does not purchase any asset-backed securities received by the Federal Reserve Bank of New York in connection with a decision of a borrower to not repay a TALF loan.

- The assets held by Maiden Lane LLC, Maiden Lane II LLC, and Maiden Lane III LLC decline gradually over time.

LIABILITIES AND CAPITAL

- Federal Reserve notes in circulation grow in line with the staff forecast for money stock currency through the last quarter of 2012. Afterwards, Federal Reserve notes in circulation grow at the same rate as nominal GDP, as projected in the extended Tealbook projection.

- The U.S. Treasury's general account (TGA) follows the staff forecast through June 2011.[3] Immediately after, the TGA slowly drops back to its historical target level of $5

[3] The staff forecast for end-of-month U.S. Treasury operating cash balances includes forecasts of both the TGA and balances associated with the U.S. Treasury's Tax and Loan program. Because balances

billion as it is assumed that the Treasury will implement a new cash management system that allows it to invest funds in excess of $5 billion. The TGA remains constant at $5 billion over the remainder of the forecast period.

- In the near term, movements in the SFA balance reflect constraints that Treasury faces with the debt limit. We assume the SFA is reduced to $5 billion by the end of March 2011, as the debt ceiling approaches. Subsequently, under the assumption that Congress raises the debt ceiling, the SFA returns gradually to $200 billion by September 2011. Later in the projection, the SFA is reduced to ensure that the level of reserve balances does not fall below $25 billion.
- Federal Reserve capital grows 15 percent per year, in line with the average rate of the past ten years.
- In general, increases in the level of assets of the Federal Reserve generate higher levels of reserve balances. Increases in the levels of other liability items, such as Federal Reserve notes in circulation or the Treasury's general account, like increases in the level of Reserve Bank capital, drain reserve balances. When increases in these liability or capital items would otherwise cause reserve balances to fall below $25 billion, purchases of Treasury securities are assumed in order to maintain that level of reserve balances.
- In the event that Federal Reserve earnings fall short of the amount necessary to cover operating costs, pay dividends, and equate surplus to capital paid-in, a deferred asset will be recorded. This deferred asset is recorded in lieu of reducing the Reserve Bank's capital and is found on the liability side of the balance sheet as "Interest on Federal Reserve notes due to U.S. Treasury." Note that this liability can take negative values when earnings fall short of the expenses listed above.

associated with the Tax and Loan program are only $2 billion, for the time being, this forecast is a good proxy for the level of TGA balances.

Federal Reserve Balance Sheet
End-of-Year Projections -- Alternatives A and B

Billions of dollars

	Feb 28, 2011	2012	2014	2016	2018	2020
Total assets	2,540	2,706	1,908	1,522	1,686	1,879
Selected assets						
Liquidity programs for financial firms	0	0	0	0	0	0
Primary, secondary, and seasonal credit	0	0	0	0	0	0
Central bank liquidity swaps	0	0	0	0	0	0
Lending through other credit facilities	20	9	1	0	0	0
Term Asset-Backed Securities Loan Facility (TALF)	20	9	1	0	0	0
Support for specific institutions	65	51	38	27	14	8
Credit extended to AIG	0	0	0	0	0	0
Net portfolio holdings of Maiden Lane LLC, Maiden Lane II LLC, and Maiden Lane III LLC	65	51	38	27	14	8
Securities held outright	2,320	2,512	1,759	1,402	1,589	1,792
U.S. Treasury securities	1,228	1,663	1,226	1,196	1,589	1,792
Agency debt securities	143	77	39	16	0	0
Agency mortgage-backed securities	949	773	494	190	0	0
Special drawing rights certificate account	5	7	7	7	7	7
Net portfolio holdings of TALF LLC	1	1	1	0	0	0
Total other assets	134	133	109	92	84	79
Total liabilities	2,487	2,636	1,815	1,399	1,524	1,664
Selected liabilities						
Federal Reserve notes in circulation	956	1,036	1,169	1,292	1,418	1,558
Reverse repurchase agreements	59	59	59	59	59	59
Deposits with Federal Reserve Banks	1,448	1,525	572	33	33	33
Reserve balances held by depository institutions	1,259	1,317	364	25	25	25
U.S. Treasury, general account	89	5	5	5	5	5
U.S. Treasury, supplementary financing account	100	200	200	0	0	0
Other balances	0	3	3	3	3	3
Interest on Federal Reserve Notes due to U.S. Treasury	0	0	0	0	0	0
Total capital	53	70	93	123	162	215

Source: Federal Reserve H.4.1 statistical releases and staff calculations.
Note: Components may not sum to totals due to rounding.

Explanatory Notes

Federal Reserve Balance Sheet
End-of-Year Projections -- Alternative C

Billions of dollars

	Feb 28, 2011	2012	2014	2016	2018	2020
Total assets	2,540	2,552	1,794	1,522	1,686	1,879
Selected assets						
Liquidity programs for financial firms	0	0	0	0	0	0
Primary, secondary, and seasonal credit	0	0	0	0	0	0
Central bank liquidity swaps	0	0	0	0	0	0
Lending through other credit facilities	20	9	1	0	0	0
Term Asset-Backed Securities Loan Facility (TALF)	20	9	1	0	0	0
Support for specific institutions	65	51	38	27	14	8
Credit extended to AIG	0	0	0	0	0	0
Net portfolio holdings of Maiden Lane LLC, Maiden Lane II LLC, and Maiden Lane III LLC	65	51	38	27	14	8
Securities held outright	2,320	2,362	1,648	1,402	1,588	1,791
U.S. Treasury securities	1,228	1,513	1,115	1,196	1,588	1,791
Agency debt securities	143	77	39	16	0	0
Agency mortgage-backed securities	949	773	494	190	0	0
Special drawing rights certificate account	5	7	7	7	7	7
Net portfolio holdings of TALF LLC	1	1	1	0	0	0
Total other assets	134	128	107	92	85	80
Total liabilities	2,487	2,482	1,702	1,399	1,524	1,664
Selected liabilities						
Federal Reserve notes in circulation	956	1,036	1,169	1,292	1,418	1,558
Reverse repurchase agreements	59	59	59	59	59	59
Deposits with Federal Reserve Banks	1,448	1,370	458	33	33	33
Reserve balances held by depository institutions	1,259	1,162	250	25	25	25
U.S. Treasury, general account	89	5	5	5	5	5
U.S. Treasury, supplementary financing account	100	200	200	0	0	0
Other balances	0	3	3	3	3	3
Interest on Federal Reserve Notes due to U.S. Treasury	0	0	0	0	0	0
Total capital	53	70	93	123	162	215

Source: Federal Reserve H.4.1 statistical releases and staff calculations.
Note: Components may not sum to totals due to rounding.

Explanatory Notes