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

December 9, 2010

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

The exhibit, "Equilibrium Real Federal Funds Rate," displays estimates of short-run *r**, defined as the real federal funds rate that, if maintained starting in the current quarter, would return output to its potential in twelve quarters. Changes in the estimates of short-run *r** since November have been mixed. The Tealbook-consistent measure of short-run *r** for the fourth quarter of 2010 generated from the FRB/US model has edged lower by 10 basis points, to minus 2.0 percent, as the staff's downward revision to the outlook for the housing sector and somewhat less favorable financial conditions have marginally outweighed the positive effects from revised fiscal assumptions as well as incoming data on consumption and investment spending. The Tealbook-consistent measure of short-run *r** generated by the EDO model has fallen by 50 basis points to minus 2.8 percent. Since the incoming data have led the staff to narrow its estimate of the current output gap, estimates of short-run *r** from the single-equation model and the small structural model—which are both conditioned on the staff's assessment of recent output gap behavior—have increased since November, but remain at very low levels. The incoming data on investment spending contributed to an increase of 60 points in the estimate of short-run *r** generated by the FRB/US model when using its own projections. The estimate generated by the EDO model using its own projections has decreased by less than its Tealbook-consistent counterpart.

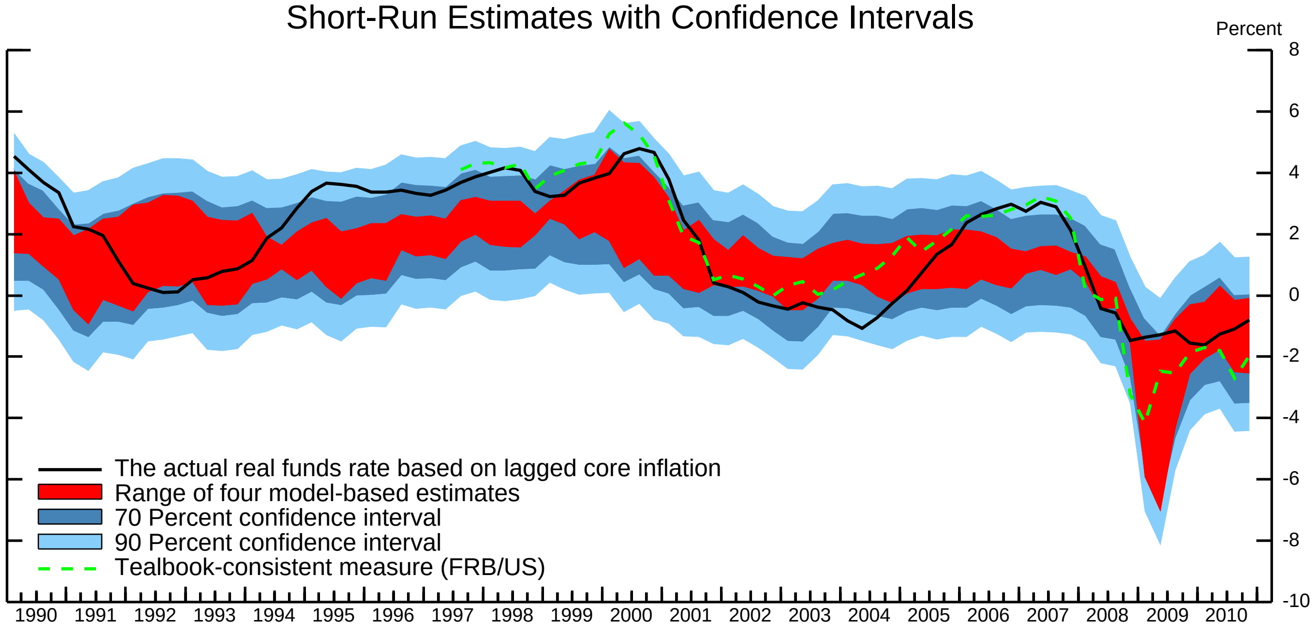
The exhibit "Constrained vs. Unconstrained Monetary Policy" displays the policy prescriptions produced by optimal control simulations of the FRB/US model based on the extended staff baseline projection. As discussed in Tealbook Book A, the staff baseline forecast incorporates the effects of the Federal Reserve's large-scale asset purchases, and these effects are held unchanged at their baseline levels in the optimal policy simulations. In these simulations, policymakers are assumed to place equal weight on keeping core PCE inflation close to a 2 percent inflation goal, on keeping unemployment close to the effective NAIRU, and on minimizing changes in the federal funds rate.[1] The simulations

[1] Since the November Tealbook, the staff has implemented two changes to the optimal control simulations that make it difficult to compare the current optimal policy results to those originally reported in the November Tealbook. First, the staff has re-specified and re-estimated the FRB/US wage and price equations, thereby changing the dynamics of inflation in the model. Second, the staff has modified the expectational assumptions used in the optimal policy simulations. Specifically, it is now assumed that the expectations influencing wage-and-price setting, and not just those affecting financial asset prices, are fully model consistent; previously, wage-and-price expectations reflected the average historical co-movement of

Strategies

Equilibrium Real Federal Funds Rate

Short-Run Estimates with Confidence Intervals

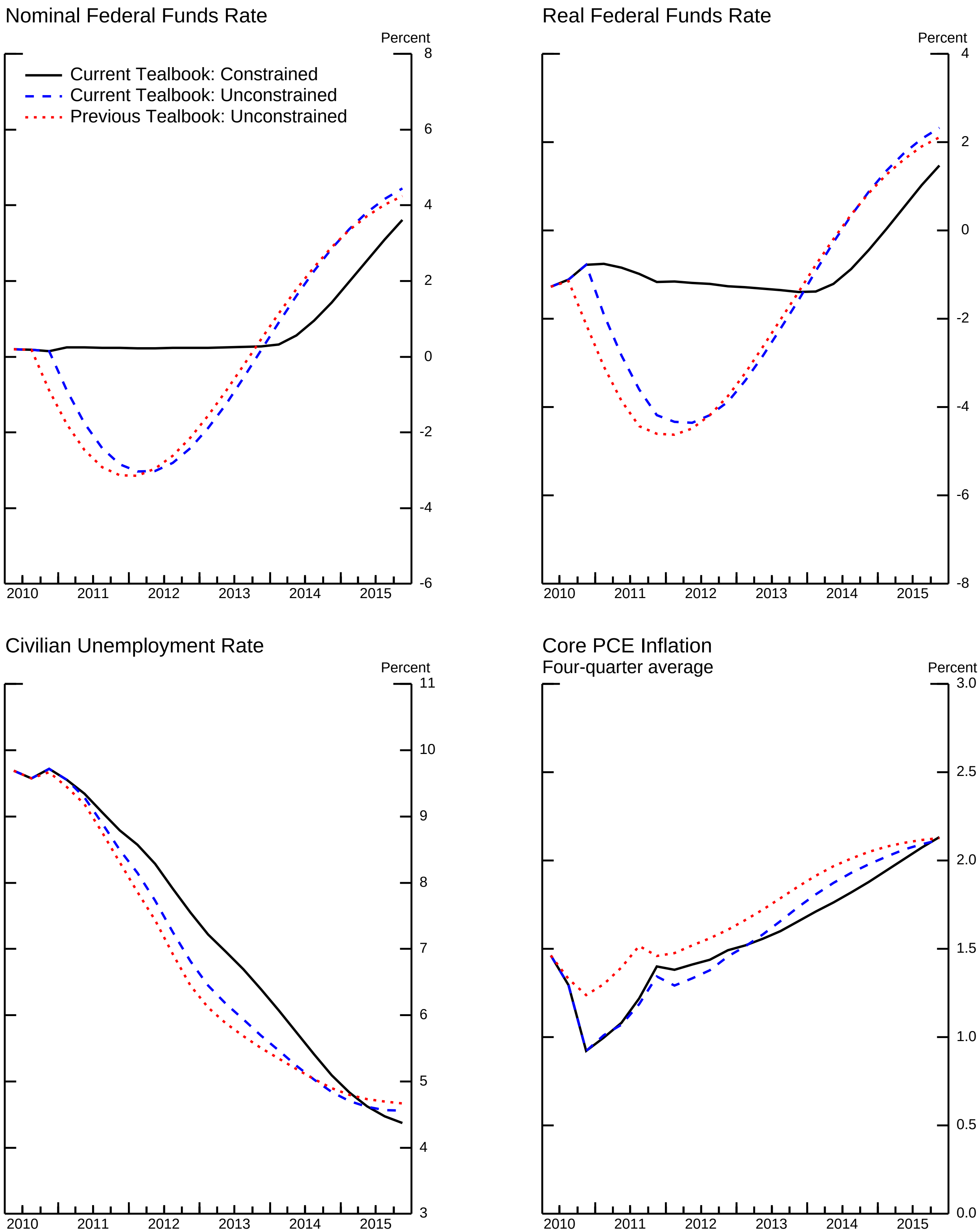


Short-Run and Medium-Run Measures

	Current Tealbook	*Previous Tealbook*
Short-Run Measures		
Single-equation model	-2.0	*-2.4*
Small structural model	-2.4	*-2.7*
EDO model	-0.1	*0.1*
FRB/US model	-2.5	*-3.1*
Confidence intervals for four model-based estimates		
70 percent confidence interval	-3.5 to 0.1	
90 percent confidence interval	-4.4 to 1.2	
Tealbook-consistent measures		
EDO model	-2.8	*-2.3*
FRB/US model	-2.0	*-1.9*
Medium-Run Measures		
Single-equation model	1.1	*1.2*
Small structural model	1.3	*1.2*
Confidence intervals for two model-based estimates		
70 percent confidence interval	0.3 to 2.1	
90 percent confidence interval	-0.5 to 2.7	
TIPS-based factor model	2.0	*2.0*
Memo		
Actual real federal funds rate	-0.8	*-1.2*

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. Estimates of r* may change at the beginning of a quarter even when there is no shift in the staff outlook because the twelve quarter horizon covered by the calculation has rolled forward one quarter. Therefore, whenever the Tealbook is published early in the quarter, this table includes a third column labeled "Current Quarter Estimate as of Previous Tealbook."

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



Note: As discussed in the text note, the lines "Previous Tealbook" depict optimal control paths based on the previous Tealbook's staff outlook, but using the re-specified model under the new expectational assumptions.

indicate that the optimal path of policy is importantly constrained by the zero lower bound on nominal interest rates. With the lower-bound constraint imposed, the federal funds rate does not begin to rise appreciably until the second quarter of 2014, the unemployment rate remains above the staff estimate of the effective NAIRU until the third quarter of 2014, and inflation stays below its target rate until the second quarter of 2015 (black solid lines).[2] But if the nominal funds rate could fall below zero, optimal policy would call for the nominal funds rate to decline to around minus 3 percent in the first quarter of 2012 before moving up to positive levels in the fourth quarter of 2013 (blue dashed line). Changes in the staff outlook since November have had little effect on the unconstrained optimal funds rate path; the modest revisions shown almost entirely reflect the shift of the start date of the optimization forward one quarter. The unconstrained policy, if it were feasible, would bring the unemployment rate down to the staff estimate of the effective NAIRU about three quarters earlier than under the constrained policy and inflation would reach the 2 percent target by the beginning of 2015. As discussed in the box "The Role of Commitment in Optimal Policy Simulations," optimal policy in both the constrained and unconstrained cases provides additional stimulus over the near term, effectively, by promising to temporarily overshoot the inflation target later in the decade.

As shown in the exhibit, "The Policy Outlook in an Uncertain Environment," the staff's estimated outcome-based policy rule prescribes keeping the federal funds rate at its effective lower bound through the fourth quarter of 2012, the same as in the November Tealbook.[3] Over the intermeeting period, the expected federal funds rate path implied by financial market data has shifted upward. Market quotes suggest that the federal funds rate is expected to rise above the current target range in the fourth quarter of 2011, about three quarters earlier than anticipated at the time of the previous Tealbook. Thereafter, the expected path for the federal funds rate rises gradually to 2 percent by the end of 2014, which is about ½ percentage point higher than in November. The lower panel of

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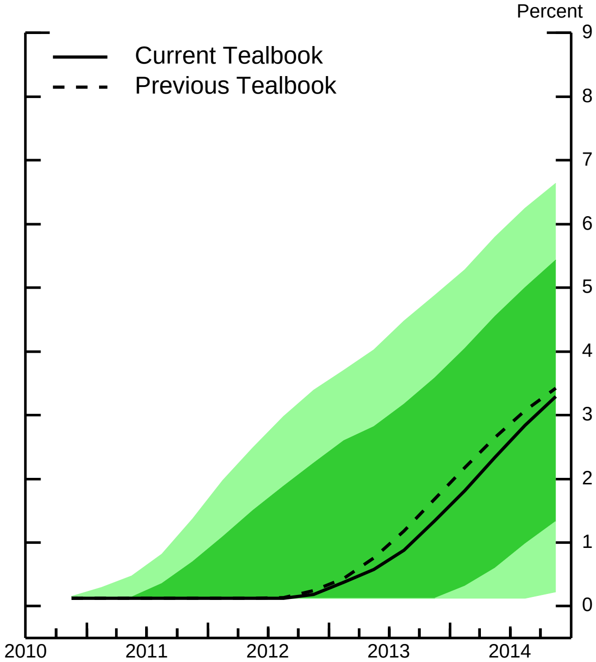
inflation, interest rates, and the output gap. In light of both modifications, the exhibit does not show the actual unconstrained optimal policy results reported in the November Tealbook, but instead the paths as they would have appeared had they been generated using the re-specified model and the new expectational assumptions.

[2] Reflecting the transitory effects of extended unemployment benefits, the staff's estimate of the effective NAIRU falls from 6½ percent in the fourth quarter of 2010 to 6 percent by the fourth quarter of 2012, and then to 5¼ percent by the end of 2015.

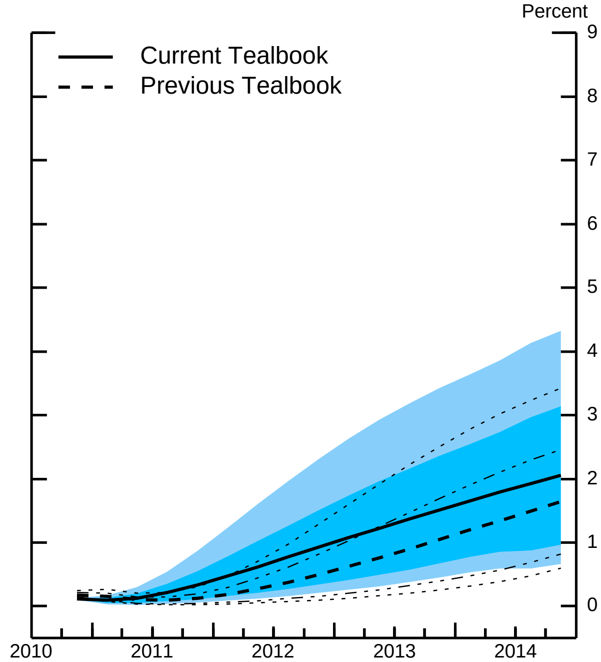
[3] As noted in Tealbook Book A, the staff baseline projection for the federal funds rate is now based on the outcome-based policy rule, and so the top-left panel no longer needs to report the staff assumption separately.

The Policy Outlook in an Uncertain Environment

FRB/US Model Simulations of Estimated Outcome-Based Rule



Information from Financial Markets



Note: In both panels, the dark and light shading represent the 70 and 90 percent confidence intervals respectively. Financial market quotes are as of December 8.

Near-Term Prescriptions of Simple Policy Rules

	Constrained Policy		Unconstrained Policy	
	2011Q1	2011Q2	2011Q1	2011Q2
Taylor (1993) rule	**0.13**	**0.13**	**-0.90**	**-0.81**
Previous Tealbook	*0.13*	*0.13*	*-0.82*	*-0.71*
Taylor (1999) rule	**0.13**	**0.13**	**-4.09**	**-3.89**
Previous Tealbook	*0.13*	*0.13*	*-4.21*	*-4.00*
Estimated outcome-based rule	**0.13**	**0.13**	**-0.42**	**-1.05**
Previous Tealbook Outlook	*0.13*	*0.13*	*-0.51*	*-1.17*
Estimated forecast-based rule	**0.13**	**0.13**	**-0.42**	**-0.98**
Previous Tealbook Outlook	*0.13*	*0.13*	*-0.47*	*-1.05*
First-difference rule	**0.16**	**0.26**	**0.16**	**0.26**
Previous Tealbook Outlook	*0.19*	*0.43*	*0.19*	*0.43*

Memo	2011Q1	2011Q2
Staff assumption	0.13	0.13
Fed funds futures	0.15	0.13
Median expectation of primary dealers	0.13	0.13
Blue Chip forecast (December 1, 2010)	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. 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. Since this 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.

the exhibit provides near-term prescriptions from simple policy rules. As shown in the left-hand columns, all prescriptions—except for the first difference rule—remain at the effective lower bound. The right-hand columns show the prescriptions that would be implied by these rules in the absence of the lower bound. Apart from the first-difference rule, all unconstrained rule prescriptions continue to be negative, ranging from minus 4.09 to minus 0.42 percent.[4]

[4] The unconstrained prescriptions from the estimated outcome-based rule and the estimated forecast-based rule have risen for mechanical reasons related to the inclusion of the lagged policy rate as a right-hand-side variable in both rules. In the November Tealbook, the lagged policy rate entering the 2011:Q1 rule prescription was the (negative) value for 2010:Q4 obtained by projecting from the rule, whereas in the current Tealbook the calculations use the actual funds rate value of 0.15 percent for 2010:Q4, and this change boosts the rule prescription. As in the previous Tealbook the unconstrained prescriptions from the first-difference rule are slightly above zero because the rule responds to the staff's assessment of near-term growth which, in contrast to the output gap, is positive.

The Role of Commitment in Optimal Policy Simulations

The optimal policy simulations regularly presented in the Tealbook assume that policymakers are able to credibly commit to a specific policy path extending many years into the future, conditional on underlying economic conditions unfolding as expected. The ability to make such an extended commitment provides greater scope for policymakers to guide expectations for the future path of the federal funds rate in a way that helps to bring inflation and unemployment more rapidly to their desired levels. Specifically, policymakers can promise to keep monetary policy unusually easy for a time in the future, thereby raising inflation above its objective at that time, which boosts inflation expectations and lowers real interest rates in the near term, helping to foster a stronger recovery.[1] This ability to provide credible forward guidance is especially important to the effectiveness of optimal policy when the zero lower bound binds because, with short-term interest rates at zero, the only operative lever for policymakers in these simulations is the management of expectations.[2]

In practice, however, policymakers may be unable or unwilling to credibly commit to the types of policy actions assumed in the standard optimal-policy simulations. For one, such strategies presume effective communication of the strategy. Perhaps more importantly, these strategies also involve promising to take future policy actions that may appear undesirable to both policymakers and the public when that future period arrives. In particular, the optimal policy paths reported in the text have the feature that, when it comes time to deliver on the pledge to keep the federal funds rate below what economic conditions at that point would otherwise call for, policymakers may find themselves wishing to renege on their earlier commitment. This possibility alone could prevent such extended commitments from ever being deemed credible by the public.

The incentive to renege on earlier commitments is illustrated by the outcomes under commitment that are discussed in the main text and replicated by the red lines in the charts on the facing page. When policy is constrained by the zero lower bound (left column of the chart), inflation noticeably overshoots the assumed target of 2 percent during the second half of the decade, after unemployment has returned to its target. The (credible) promise to produce this future overshooting helps to boost inflation expectations and lower real interest rates today. As a result, real activity and inflation return more quickly to their desired levels than in the baseline staff projection, which follows a simple estimated policy rule (the black lines).

[1] The success of this strategy relies both on the ability of policymakers to credibly commit to the policy and on inflation expectations being forward looking.

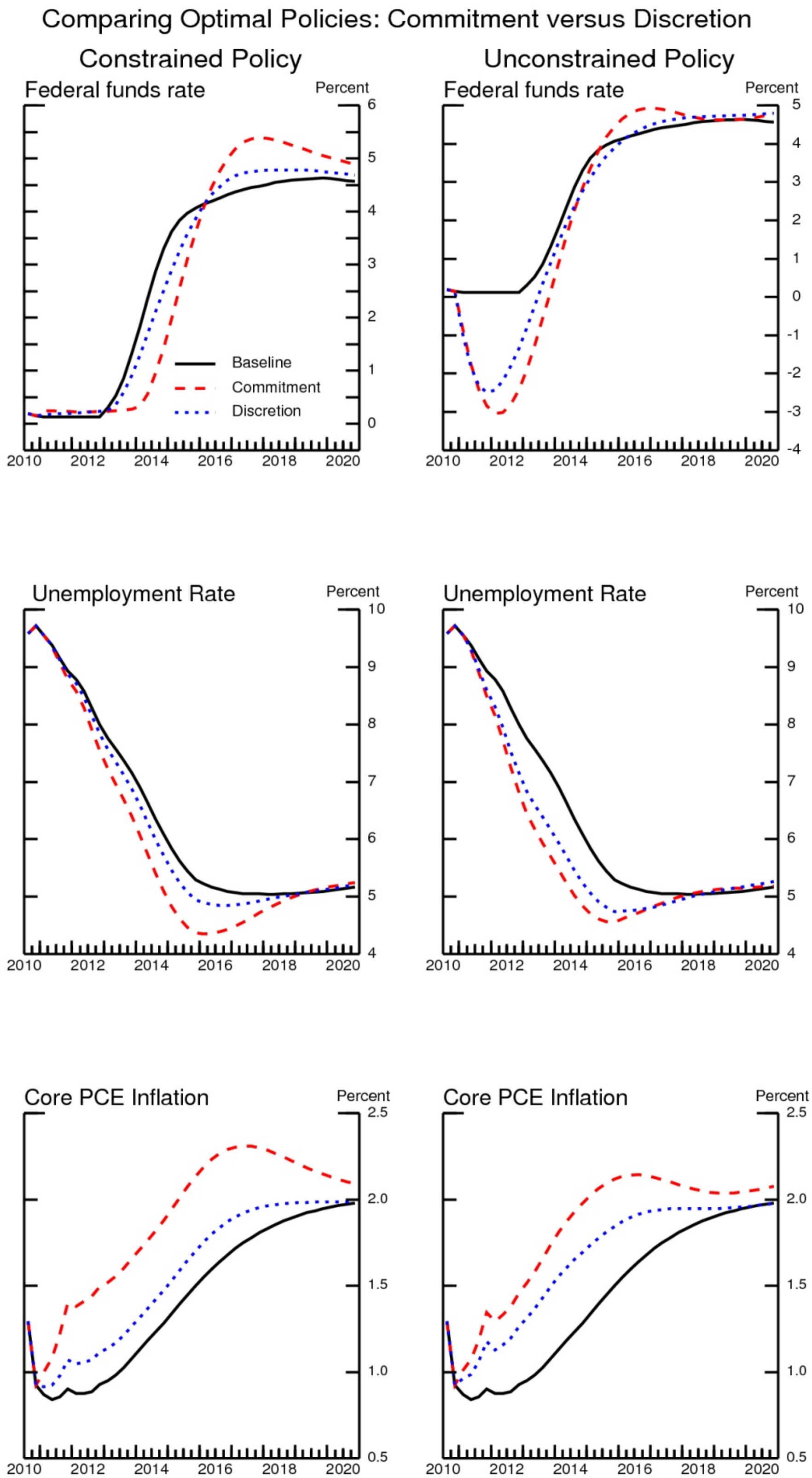
[2] Policymakers could also try to attain their objectives through asset purchases, but the standard optimal-policy simulations abstract from this possibility. Implicitly, the optimal control exercises assume that the trajectory of asset purchases is the same as in the baseline.

As noted, these outcomes rest on strong assumptions about the credibility of forward guidance. An alternative to optimal policy under commitment assumes that policymakers have a limited ability or willingness to constrain their future actions. Instead, they choose the best course of action today conditional on future policies being set optimally given conditions at those points in time. By design, this strategy rules out situations in which policymakers have an incentive in future periods to deviate from the funds path originally expected by private agents so long as economic conditions unfold as expected. Paths for the federal funds rate generated under this assumption are typically referred to as optimal policy under discretion.[3]

The blue lines in the charts illustrate the optimal funds rate paths when policy is made under discretion (that is, without commitment), together with the resulting paths of unemployment and inflation. The constrained optimal policy path for the funds rate under discretion is only a little more accommodative than the staff baseline assumption, and so yields only modestly lower unemployment and higher inflation. In the constrained case, the federal funds rate rises above its effective lower bound one year earlier under discretion than under commitment, as policymakers respond to the improvement in activity that has occurred by late 2012. Although policy under discretion does have the advantage of keeping inflation from overshooting, it yields higher unemployment than obtained under commitment. Accordingly, these results illustrate the potential gains of committing to a longer period of accommodative policy.

If interest rates are hypothetically allowed to fall below zero, the simulation results are broadly similar to those in the constrained case (right column of the chart). For example, under commitment inflation still overshoots its target. However, eliminating the zero lower bound constraint reduces the relative importance of the expectational channel of monetary policy, because policymakers are able to substitute actual funds rate reductions today for promises of lower funds rates in the future. As a result, outcomes with and without commitment differ by less than they do when interest rates are constrained by the zero bound.

[3] Under both discretion and commitment, policymakers wish to keep inflation and unemployment close to their targets (2 percent and the effective NAIRU, respectively) while minimizing quarter-to-quarter changes in the federal funds rate. Discretion differs from commitment in what policymakers assume about the manner in which future policy is set. Under commitment, policymakers determine a strategy for policy for the current and future periods, conditional on the economic outlook, and do not update that strategy in future periods barring new information about economic developments (in which case adjustments are made that are consistent with the initially determined strategy). In contrast, policymakers under discretion know that future policymakers will not be bound by today's decisions, and will update their strategy in each future period. As a result, under this approach policymakers have much less ability to manage the public's expectations regarding future policy actions. Academic presentations also refer to optimal policy under discretion as *time-consistent* and optimal policy under commitment as *time-inconsistent*, reflecting the incentive to renege.



Comparing Optimal Policies: Commitment versus Discretion
Constrained Policy
Unconstrained Policy
Federal funds rate
Percent
Baseline
Commitment
Discretion
Federal funds rate
Percent
Unemployment Rate
Percent
Unemployment Rate
Percent
Core PCE Inflation
Percent
Core PCE Inflation
Percent
2010 2012 2014 2016 2018 2020

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Monetary Policy Alternatives

This Tealbook presents four policy alternatives—labeled A, B, C, and D—for the Committee's consideration. Alternative B reaffirms the intended increase in securities holdings and the pace of purchases that the Committee announced in November. Under Alternative A, the Committee would provide further monetary policy stimulus by augmenting the program of additional purchases of longer-term securities. Under Alternative C, the asset-purchase program would be scaled back by reducing the monthly pace of purchases, while under Alternative D, the program would be discontinued. All of the alternatives maintain the existing target for the federal funds rate. Alternative A provides more explicit forward guidance concerning the period over which the funds rate is likely to remain at its effective lower bound. Alternatives B and C retain the familiar "extended period" language. Alternative D would signal that the period of exceptionally low funds rates is likely to come to an end in the near future and that the reinvestment of principal payments may also be brought to a close before long.

The statement under Alternative B would again characterize the information received over the intermeeting period as confirming that the economic recovery "continues to be slow," and express the Committee's judgment that "the unemployment rate is elevated." Alternative B would state that measures of underlying inflation are "somewhat low" and that they "have continued to trend downward." The statement would reiterate that progress toward the Committee's objectives "has been disappointingly slow." Under this alternative, the FOMC would reaffirm its November decision to purchase an additional $600 billion of longer-term Treasury securities by the end of the second quarter of 2011 at a pace of about $75 billion per month. The Committee would also maintain its existing policy of reinvesting in longer-term Treasuries the principal payments from agency debt and mortgage-backed securities (MBS). Finally, the Committee would continue to state that it "will regularly review" the asset-purchase program and will make adjustments as needed to achieve its objectives.

Under Alternative A, the Committee would give an assessment of economic conditions and the outlook similar to that in Alternative B. Alternative A does, however, retain the November characterization of household spending as increasing "gradually" (rather than "at a moderate pace," as in Alternative B) and describes measures of underlying inflation as "low." The statement would announce that "in light of incoming information," the Committee was increasing the ultimate size of its planned purchase program by $200 billion, raising the intended total increase in the Federal Reserve's securities holdings to $800 billion by the end of the third quarter of 2011, while maintaining a pace of monthly purchases of about $75 billion. The forward guidance for the federal funds rate would be more explicit, indicating an expectation that the target for the funds rate would stay at its current level "at least through mid-2012." As in November, the Committee would state that it would "regularly review" its asset-purchase program and "will employ its policy tools as necessary" to pursue its objectives.

Under Alternative C, the Committee would state that the recovery "is continuing" but that progress toward Committee objectives "has been slow." Alternative C would scale back the planned expansion of securities holdings to $400 billion and reduce the pace of purchases from $75 billion per month to around $50 billion per month. The Committee would state that it will maintain the current target for the funds rate for an extended period and continue its policy of reinvesting the proceeds of principal payments into Treasury securities. The Committee would repeat its November indication that it would "regularly review" its purchase program and would "adjust the program as needed," thus leaving open the possibility that further policy adjustments could be taken in coming months in response to economic developments.

Alternative D would state that the economic recovery "is proceeding." The statement would announce the immediate discontinuation of the asset-purchase program announced in November and would also signal that other steps toward a less accommodative stance of policy are likely soon. While maintaining the target for the federal funds rate at its current level, the Committee would indicate that it anticipated the rate staying at "low levels" for "some time" rather than at "exceptionally low levels" for "an extended period" as in the previous statement. In addition, the Committee would state that its policy of reinvesting the proceeds of principal repayments would be continued only for "the time being," suggesting that this policy was likely to end soon.

The next page summarizes key aspects of each alternative, and is followed by complete draft statements and the arguments for each alternative. As always, the Committee could mix components of the various alternatives to construct its desired statement.

Table 1: Overview of Alternatives for the December 14 FOMC Statement

Key Components	November Statement	December Alternatives A	B	C	D
Economic Activity					
Recent Developments	pace of recovery continues to be slow	pace of recovery continues to be slow		recovery is continuing	economic recovery is proceeding
Labor Market	pace of recovery continues to be slow; high unemployment; employers remain reluctant to add to payrolls; unemployment rate is elevated	pace of recovery continues to be slow		recovery is continuing	n.a.
		high unemployment		n.a.	
		employers remain reluctant to add to payrolls; unemployment rate is elevated			
Outlook	gradual return to higher resource utilization with price stability	gradual return to higher resource utilization with price stability			
	progress has been disappointingly slow	progress remains disappointingly slow	progress has been disappointingly slow	progress has been slow	n.a.
Inflation					
Recent Developments	expectations stable, but underlying inflation has trended lower; measures are somewhat low	expectations stable, but underlying inflation has continued to trend downward; measures are low	expectations stable, but underlying inflation has continued to trend downward; measures are somewhat low	expectations stable, but underlying inflation has trended lower; measures are somewhat low	although underlying inflation has trended lower, expectations have remained stable
Outlook	*same as "Economic Activity" outlook above*	*same as "Economic Activity" outlook above*			
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	$600 billion of Treasuries by end of 2011:Q2, $75 billion per month	$800 billion of Treasuries ($200b more than Nov.), $75 billion per month, through 2011:Q3	$600 billion of Treasuries by end of 2011:Q2, $75 billion per month	$400 billion of Treasuries ($200b less than Nov.), $50 billion per month, through 2011:Q2	discontinue program announced in November
	maintain reinvestment policy	maintain reinvestment policy			for the time being, maintain existing reinvestment policy
Future Policy Action					
Approach	will adjust program as needed; will employ policy tools as necessary to support the recovery and to help ensure that inflation, over time, is at levels consistent with its mandate	will adjust program as needed; will employ policy tools as necessary to support the recovery and to help ensure that inflation, over time, is at levels consistent with its mandate			will employ policy tools as necessary to promote maximum employment and price stability

NOVEMBER FOMC STATEMENT

1. Information received since the Federal Open Market Committee met in September confirms that the pace of recovery in output and employment continues to be slow. Household spending is increasing gradually, but remains constrained by high unemployment, modest income growth, lower housing wealth, and tight credit. Business spending on equipment and software is rising, though less rapidly than earlier in the year, while investment in nonresidential structures continues to be weak. Employers remain reluctant to add to payrolls. Housing starts continue to be depressed. Longer-term inflation expectations have remained stable, but measures of underlying inflation have trended lower in recent quarters.

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 expand its holdings of securities. The Committee will maintain its existing policy of reinvesting principal payments from its securities holdings. In addition, the Committee intends to purchase a further $600 billion of longer-term Treasury securities by the end of the second quarter of 2011, a pace of about $75 billion per 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.

DECEMBER FOMC STATEMENT—ALTERNATIVE A

1. Information received since the Federal Open Market Committee met in ~~September~~ **November** confirms that the pace of recovery in output and employment continues to be slow. Household spending is increasing gradually, but remains constrained by high unemployment, modest income growth, lower housing wealth, and tight credit. Business spending on equipment and software is rising, though less rapidly than earlier in the year, while investment in nonresidential structures continues to be weak. Employers remain reluctant to add to payrolls. Housing starts continue to be depressed. Longer-term inflation expectations have remained stable, but measures of underlying inflation have **continued to** trend~~ed lower in recent quarters~~ **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~~ **remains** 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** expand**ing** its holdings of securities. **Moreover, in light of incoming information, the Committee now intends to increase its holdings of securities by a total of $800 billion—$200 billion more than announced last month—by purchasing longer-term Treasury securities at a pace of about $75 billion per month through the third quarter of 2011. In addition,** the Committee will maintain its existing policy of reinvesting principal payments from its securities holdings. ~~In addition, the Committee intends to purchase a further $600 billion of longer-term Treasury securities by the end of the second quarter of 2011, a pace of about $75 billion per 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~~ **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 ~~for an extended period~~ **at least through mid-2012**.

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.

DECEMBER FOMC STATEMENT—ALTERNATIVE B

1. Information received since the Federal Open Market Committee met in ~~September~~ **November** confirms that the pace of recovery in output and employment continues to be slow. Household spending is increasing ~~gradually~~ **at a moderate pace**, but remains constrained by high unemployment, modest income growth, lower housing wealth, and tight credit. Business spending on equipment and software is rising, though less rapidly than earlier in the year, while investment in nonresidential structures continues to be weak. Employers remain reluctant to add to payrolls. Housing starts continue to be depressed. Longer-term inflation expectations have remained stable, but measures of underlying inflation have **continued to** trend~~ed~~ ~~lower in recent quarters~~ **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 the** expan~~d~~**sion of** its **securities** holdings ~~of securities~~ **announced in November**. The Committee will maintain its existing policy of reinvesting principal payments from its securities holdings. In addition, the Committee ~~intends~~ **reaffirmed its intention** to purchase ~~a further~~ $600 billion of longer-term Treasury securities by the end of the second quarter of 2011, a pace of about $75 billion per 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.

Alternatives

DECEMBER FOMC STATEMENT—ALTERNATIVE C

1. Information received since the Federal Open Market Committee met in ~~September~~ **November** ~~confirms~~ **indicates** that the ~~pace of~~ recovery in output and employment ~~continues to be slow~~ **is continuing**. ~~Household~~ Spending ~~is~~ **by households and businesses appears to be** increasing ~~gradually,~~ **at a moderate pace**. ~~but remains constrained by high unemployment, modest income growth, lower housing wealth, and tight credit. Business spending on equipment and software is rising has decelerated, though less rapidly than earlier in the year, while investment in nonresidential structures continues to be weak.~~ **However,** employers remain reluctant to add to payrolls~~.~~ **and** housing starts continue to be depressed. Longer-term inflation expectations have remained stable, but measures of underlying inflation have trended lower in recent quarters.

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** expand**ing** its holdings of securities. **However, in light of incoming information, the Committee now intends to increase its holdings of securities by a total of $400 billion—$200 billion less than announced last month—by purchasing longer-term Treasury securities at a pace of about $50 billion per month through the second quarter of 2011. In addition,** the Committee will maintain its existing policy of reinvesting principal payments from its securities holdings. ~~In addition, the Committee intends to purchase a further $600 billion of longer-term Treasury securities by the end of the second quarter of 2011, a pace of about $75 billion per 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.

DECEMBER FOMC STATEMENT—ALTERNATIVE D

1. Information received since the Federal Open Market Committee met in ~~September~~ **November** ~~confirms~~ **indicates** that the ~~pace of~~ **economic** recovery ~~in output and employment continues to be slow~~ **is proceeding**. ~~Household~~ Spending **by households and businesses** is increasing ~~gradually,~~ **at a moderate pace**. ~~but remains constrained by high unemployment, modest income growth, lower housing wealth, and tight credit. Business spending on equipment and software is rising, though less rapidly than earlier in the year, while investment in nonresidential structures continues to be weak. Employers remain reluctant to add to payrolls. Housing starts continues to be depressed. Longer-term inflation expectations have remained stable, but~~ **Although** measures of underlying inflation have trended lower in recent quarters**, longer-term inflation expectations have remained stable**. **The Committee anticipates a gradual return to higher levels of resource utilization in a context of price stability.**

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~~.

2. ~~To promote a stronger pace of economic recovery and to help ensure that inflation, over time, is at levels consistent with its mandate,~~ **Based on this assessment of current and prospective economic conditions,** the Committee decided today to **discontinue the asset-purchase program it announced in November** ~~expand its holdings of securities~~. **For the time being,** the Committee will maintain its existing policy of reinvesting principal payments from its securities holdings. ~~In addition, the Committee intends to purchase a further $600 billion of longer-term Treasury securities by the end of the second quarter of 2011, a pace of about $75 billion per 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.~~

3. The Committee will maintain the target range for the federal funds rate at 0 to ¼ percent and ~~continues to~~ 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 for ~~an extended period~~ **some time**.

4. 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~~ **promote maximum employment and price stability**.

THE CASE FOR ALTERNATIVE B

The Committee may see the outlook for the economic recovery and inflation as little changed, on balance, since the time of its last meeting. Accordingly, the Committee may see the additional monetary policy accommodation announced in the November statement as still appropriate to promote progress toward its objectives of maximum employment and price stability. In that case, the Committee might choose an announcement along the lines of that provided in Alternative B.

Members may judge that a statement along the lines of that issued in November, with a reaffirmation of the decision to purchase additional Treasury securities, would help both to anchor inflation expectations and to create conditions for a stronger pace of recovery of output and employment. Members may view recent upward pressure on longer-term Treasury yields as reflecting in part an increase, among investors, in the perceived probability that the Committee will stop short of expanding its securities holdings by $600 billion. These members may be concerned that investors have now priced in a less accommodative monetary policy over 2011 and 2012 than is consistent with the November statement and intermeeting economic and financial developments; in this case, the December statement may be seen as an opportunity to reinforce the original announcement and so help to secure the intended effect of the purchases on longer-term yields. As the best means of achieving this result, policymakers may favor the release of a statement like Alternative B, which would convey the Committee's judgment that the outlook has not changed enough to warrant a change in policy, and so could reduce market uncertainty about the Committee's intentions.

The Committee may view recent readings on underlying inflation as indicating that it has continued to trend downward. Policymakers may, however, share the staff view that recent core PCE inflation readings overstate the decline in trend inflation, and that measures of underlying inflation will shortly return to levels near those observed in the first half of this year. Alternatively, they may see the monetary policy implications of lower inflation as having been offset by a strengthening in the outlook for real activity, particularly in light of the fiscal agreement that was announced earlier this week. Some members may be more concerned about the possible implications of recent readings on inflation or employment for the economic outlook, but may prefer to await clearer evidence of a pattern before increasing the intended level of purchases above the $600 billion total announced in November.

Policymakers may likewise see little basis for reducing the intended total of additional asset purchases below $600 billion. While noting that some aspects of real activity, such as household spending, have exhibited somewhat more strength than foreseen at the November meeting, members may judge that, on balance, the outlook has changed little since November. In addition, policymakers may judge that the overall effect on the economic outlook of the recently announced fiscal agreement is likely to be modest and subject to considerable uncertainty. Policymakers may consequently choose to maintain the asset-purchase program on its previously announced course, at least for the time being.

A statement along the lines of Alternative B would probably not surprise market participants, but would likely serve to reduce uncertainty somewhat. Responses from the Desk's latest survey of primary dealers, conducted prior to the announcement of the fiscal agreement, indicate that they expect the Committee to proceed with the $600 billion purchase program, as in Alternative B.[1] In addition, respondents stated that they see the third quarter of 2012 as the most likely date at which the Committee will begin raising the federal funds rate, consistent with Alternative B's maintenance of the "extended period" language. On balance, asset prices would likely be little changed following the announcement.

THE CASE FOR ALTERNATIVE A

The November statement indicated that the Committee would regularly review the pace and overall size of its asset-purchase program in light of incoming information and would adjust the program as needed to best foster maximum employment and price stability. Policymakers may conclude that developments in the economy and financial markets since the November meeting justify a modest further increase in the degree of policy accommodation. If so, the Committee may wish to augment the asset-purchase program and, in addition, provide more explicit forward guidance concerning the likely duration of the period of exceptionally low federal funds rates, as in Alternative A.

Committee members may, like the staff, expect the economic recovery to remain quite gradual, even after taking into account the intended $600 billion asset-purchase program announced in November and the recent fiscal initiative. In the staff's baseline

[1] The survey also indicated that respondents expected that the program would eventually reach $850 billion. However, the Desk's discussions with primary dealers after the fiscal agreement suggest that most respondents now anticipate that the program will cumulate to only $600 billion.

projection, the unemployment rate remains above 8 percent until late in 2012, and inflation remains below levels that the Committee sees as consistent with its objectives even at the end of the projection period. Members may view such outcomes as unacceptable. Moreover, policymakers may be skeptical of the acceleration in economic activity that the staff has projected for next year, and may place more weight on the "Weaker Recovery" scenario in the Tealbook. The Committee also may be concerned about the implications for the recovery of the significant rise in longer-term interest rates over the intermeeting period, and may conclude that more substantial asset purchases are required to provide offsetting downward pressure on longer-term rates.

Even if policymakers see the economic recovery as likely to continue and inflation as likely to return to mandate-consistent levels over time, some may be particularly concerned about the risks of weaker outcomes and substantial further disinflation. Members may perceive a heightened risk that the recent downward trend in inflation will continue, and may be concerned about the risks to the economic recovery that could arise from a further decline in inflation. Alternatively, they may judge that developments in Europe have increased the downside risks to the economic outlook. Consequently, members may anticipate that a Committee announcement that goes beyond a reaffirmation of the November decision is needed to provide the economy with the degree of stimulus required to promote maximum employment and price stability. Policymakers may therefore see merit in the announcement of an increase in the purchase program to $800 billion, as in Alternative A.

The Committee may view the risks associated with a modest further expansion of the balance sheet to be acceptably low when compared to the anticipated benefits. Indeed, small-scale operations of two short-term reserve-management tools, the Term Deposit Facility and reverse repurchase agreements with an expanded set of counterparties, have been conducted successfully. These operations may give policymakers confidence that even with a further expansion of the Federal Reserve's balance sheet and the associated increase in reserve balances, the Federal Reserve will be able to exit smoothly from its extraordinarily accommodative policy stance when appropriate.

The Committee may also wish to communicate more explicitly its expectation for the path of the federal funds rate by stating that it anticipates that the current level of the target rate will remain in place "at least through mid-2012." Members may feel that such an explicit indication would clarify the FOMC's intentions regarding future adjustments to the federal funds rate and could help counter what the Committee may view as an undesirable shift in investors' expectations, in the direction of less monetary accommodation, since the November meeting.

Coming just one meeting after the Committee launched its new purchase program with an intended size of $600 billion, an announcement in December of an expansion of the program to $800 billion would come as a significant surprise to market participants, especially in view of the generally modest changes to the outlook since November. Longer-term yields would probably fall noticeably, stock prices would likely move up, and the foreign exchange value of the dollar would likely decline somewhat. If the announcement led investors to anticipate that further expansion of the program was likely, the movement in asset prices could be large. The decline in longer-term nominal rates might be dampened to the extent that the policy decision led investors to mark up their inflation expectations.

THE CASE FOR ALTERNATIVE C

Members may view the incoming information on real activity since the November meeting as having been somewhat better than expected. They also may judge that the economic outlook has improved—in part due to the recently announced fiscal package—to a degree that justifies scaling back the additional policy accommodation announced by the Committee in November. Policymakers may conclude that, consistent with the Committee's statement that it would "regularly review" the purchase program "in light of incoming information," the total volume of purchases should now be lowered. Members may consequently favor a statement in December that reduces the intended purchase total to $400 billion, as in Alternative C.

The Committee may judge that incoming information over the intermeeting period confirmed a moderate acceleration in consumer spending. Policymakers may regard the higher growth rate of consumer spending that has emerged over the second half of the year as creating a more favorable climate for firms' investment and hiring decisions. Consequently, the Committee may now expect a stronger recovery than it did in November, perhaps along the lines of the "Stronger Recovery" scenario in the Tealbook. In addition, members may interpret recent low readings on underlying inflation as reflecting transitory factors and may see inflation as most likely to run a bit higher than in the staff projection.

Policymakers may also view the recently announced fiscal measures as likely to exert a sizable positive effect on the overall outlook for real activity and inflation. Consequently, they may see the fiscal announcement as strengthening the case for reducing the amount of accommodation that is being provided by monetary policy.

As noted earlier, the Desk's survey of Primary Dealers suggested that market participants expect the Committee to maintain its new asset-purchase program at $600 billion at the December meeting. A statement along the lines of Alternative C would consequently come as a significant surprise to investors. As a result, longer-term interest rates would rise, stock prices would fall, and the foreign exchange value of the dollar would increase. These effects would be reinforced to the extent that the adoption of Alternative C was seen as opening the door to further reductions in the Committee's purchase total going forward. The rise in longer-term nominal rates might be dampened to the extent that the policy decision led investors to mark down their inflation expectations.

THE CASE FOR ALTERNATIVE D

Policymakers may view the incoming data as largely conforming to their expectations that the economic recovery is continuing and that it will strengthen gradually over time. In addition, policymakers may judge that concerns about the potential connection between sustained periods of accommodative policy and subsequent periods of financial instability call for a reassessment of the costs and benefits of the asset-purchase program. In light of this reassessment, the Committee might issue a statement such as that in Alternative D, under which it would immediately discontinue the $600 billion purchase program announced in November, and might also indicate that it was likely to undertake other moves toward a less accommodative stance of policy in the near future.

If policymakers believe that the economy is likely to accelerate next year, they may worry that the current size of the Federal Reserve's balance sheet could make it difficult to tighten policy as quickly as may be required to avoid an increase in inflation as the recovery strengthens, especially if the size of the balance sheet itself directly affects inflation expectations. Policymakers may feel that continuing to expand the balance sheet, in the manner indicated by the November announcement, would intensify these difficulties.

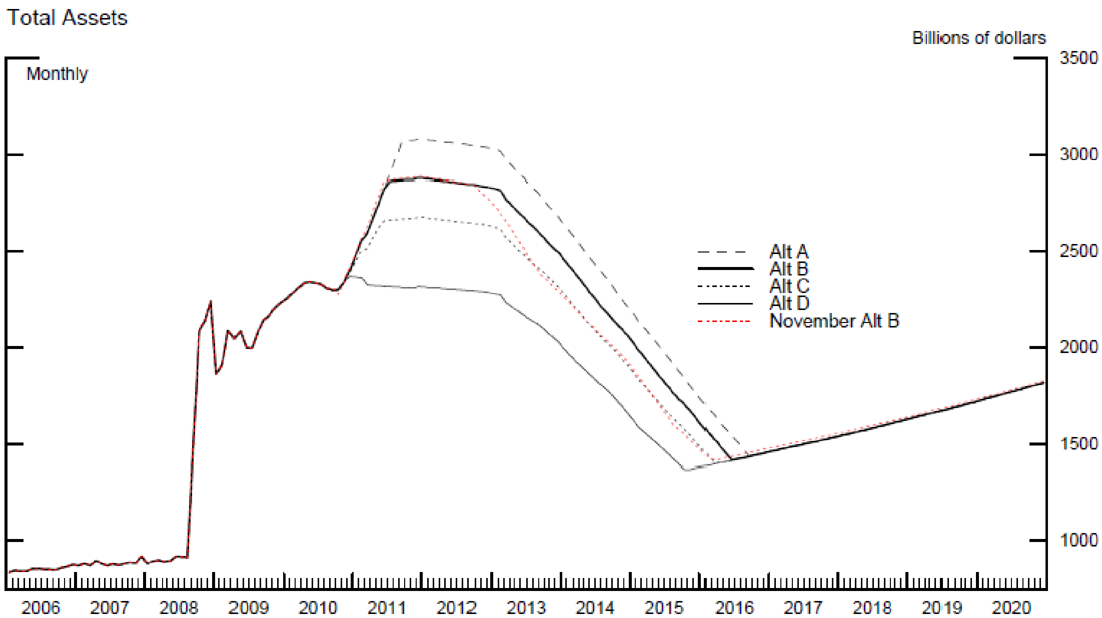
Even if policymakers are concerned about the high level of unemployment, they may judge that a good deal of current joblessness reflects structural misallocations in the economy and cannot be effectively addressed by monetary policy. Policymakers may also discount recent low inflation outcomes if they believe that accommodative policy measures taken prior to the November meeting have yet to make themselves felt in the behavior of aggregate spending and inflation but will soon start to have an impact.

Members may believe that the current statement language could lead to a buildup of macroeconomic or financial imbalances. For example, inflation expectations could become unmoored, leading to a persistent and costly increase in actual inflation, or investors, in an effort to obtain higher yields, could take on risks that they do not understand, putting financial stability at risk as the economy recovers and interest rates rise. Reflecting such concerns, the language in Alternative D would position the Committee to begin removing policy accommodation before long. The target for the federal funds rate would be maintained under this alternative, but the forward guidance would indicate that economic conditions warrant "low levels" of the federal funds rate for "some time," instead of the "exceptionally low levels" for an "extended period" indicated in the November statement. The Committee would also state that its policy of reinvesting the proceeds from principal repayments on its current holdings of securities would be maintained only for "the time being," implying that the Committee might well discontinue this policy before long.

The announcement of Alternative D would completely surprise market participants. As noted above, investors anticipate no change in the new asset-purchase program at this meeting. Consequently, an indication that the Federal Reserve was instead discontinuing this program and was poised to remove other aspects of policy accommodation would likely lead investors to re-examine their expectations both for the path of the funds rate and for the Federal Reserve's portfolio. The result would likely be a marked rise in interest rates at all horizons. The foreign exchange value of the dollar would likely increase, and equity markets would sell off sharply. The rise in longer-term rates could be dampened to the extent that the tighter financial conditions prompted a decline in inflation expectations.

LONG-RUN PROJECTIONS OF THE BALANCE SHEET AND MONETARY BASE

The staff has prepared four scenarios for the Federal Reserve's balance sheet that correspond to the policy alternatives A, B, C, and D. Projections under each scenario are based on assumptions about each component of the balance sheet. Details of these assumptions as well as projections for each major component of the balance sheet can be found in Explanatory Note C.



Source: Federal Reserve H.4.1 statistical release and staff calculations.

Under Alternative B, the FOMC continues the expansion of its holdings of longer-term securities by $600 billion (at an average pace of about $75 billion per month) by the end of the second quarter of 2011, as announced at the November FOMC meeting. The proceeds from principal repayments from Treasury securities and agency securities continue to be reinvested into Treasury securities. Under these assumptions, the balance sheet peaks at about $2.9 trillion in 2011. Over 2012 and the first quarter of 2013, the balance sheet declines gradually as the credit extended through TALF and the Maiden Lanes is repaid. The target federal funds rate increases in the first quarter of 2013, and immediately thereafter all maturing securities and prepayments of securities are allowed to roll off the portfolio. Finally, six months after the assumed rise in the target federal funds rate, remaining holdings of agency MBS and agency debt securities begin to be sold at a rate that would reduce the amount of these securities in the portfolio to zero in five years, by the end of the third quarter of 2018.[2, 3]

After reserve balances reach the assumed $25 billion floor and the U.S. Treasury's supplementary financing account has been wound down, the balance sheet begins to expand as increases in holdings of Treasury securities match the growth of Federal Reserve capital and notes in circulation. The balance sheet reaches a size of about $1.8 trillion by the end of 2020.[4]

The other alternatives have different assumptions about the size of longer-term securities holdings, and the contours of projected total assets reflect these assumptions.[5] Under Alternative A, the Federal Reserve purchases $200 billion more of longer-term Treasury securities than under Alternative B, with these purchases ending by the end of the third quarter of 2011. With these additional purchases, the balance sheet peaks at $3.1 trillion. Under Alternative C, the purchases are reduced to $400 billion, ending by the second quarter of 2011, and the balance sheet peaks at $2.7 trillion. Under Alternative D, asset purchases are discontinued in December and the balance sheet peaks this year; the reinvestment of principal repayments from Treasury securities and agency securities, however, continues.

Relative to the November Tealbook, total assets in Alternative B are projected to be slightly higher than in the last Tealbook from the fourth quarter of 2012 through early 2016 primarily reflecting the later liftoff date for the federal funds rate. Correspondingly, on the liability side of the balance sheet, reserve balances are slightly higher than in the previous Tealbook. With this path for reserve balances, the U.S. Treasury's supplementary financing account is not run down to zero until June 2016. After

[2] 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.

[3] Under all of the scenarios presented, the tools to drain reserve balances (reverse repurchase agreements and the Term Deposit Facility) are not used. If these tools were needed, it would represent a shift in the composition of Federal Reserve liabilities, but not an overall change in the size of the balance sheet.

[4] 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 the Alternative B, Treasury securities are projected to account for only around 47 percent of the domestic securities portfolio at the end of 2010. By the end of 2020, Treasury securities account for 100 percent of the domestic securities portfolio under all scenarios.

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

expanding in 2011, the monetary base is projected to contract through 2015 reflecting the decline in reserve balances.

Growth Rates for the Monetary Base

Date	Alternative B	Alternative A	Alternative C	Alternative D	*Memo:* November Alternative B
			Percent, annual rate		
			Monthly		
Apr-10	-37.6	-37.6	-37.6	-37.6	-37.6
May-10	-2.0	-2.0	-2.0	-2.0	-2.0
Jun-10	-5.8	-5.8	-5.8	-5.8	-5.8
Jul-10	-2.2	-2.2	-2.2	-2.2	-2.2
Aug-10	-2.4	-2.4	-2.4	-2.4	-2.4
Sep-10	-10.1	-10.1	-10.1	-10.1	-10.1
Oct-10	-9.8	-9.8	-9.8	-9.8	-9.8
Nov-10	4.6	4.6	4.6	4.6	4.6
Dec-10	15.4	15.4	13.5	5.6	27.6
Jan-11	24.1	24.1	15.2	-9.5	18.4
Feb-11	66.7	66.7	53.1	20.6	41.6
Mar-11	57.9	57.9	45.5	14.7	57.0
			Quarterly		
2010 Q2	-10.4	-10.4	-10.4	-10.4	-10.4
2010 Q3	-3.9	-3.9	-3.9	-3.9	-3.9
2010 Q4	-3.1	-3.1	-3.3	-4.2	9.5
2011 Q1	34.3	34.3	26.1	4.8	31.7
			Annual - Q4 to Q4		
2009	41.5	41.5	41.5	41.5	41.5
2010	-1.0	-1.0	-1.0	-1.2	2.2
2011	30.9	41.0	20.8	2.9	28.7
2012	-1.2	-1.1	-1.3	-1.0	-2.6
2013	-12.2	-11.6	-12.4	-11.6	-19.0
2014	-19.6	-19.3	-20.0	-20.8	-18.1
2015	-24.7	-24.1	-24.1	-11.5	-23.7

Note: Not seasonally adjusted.

Alternatives

DEBT, BANK CREDIT, AND MONEY FORECASTS

Domestic nonfinancial debt is projected to expand at a moderate annual rate of about 4¼ percent in the fourth quarter of this year, driven almost entirely by a rapid expansion in federal government debt with private nonfinancial debt about unchanged. We expect domestic nonfinancial debt to grow at an annual rate of about 5 percent in 2011 and 2012, as federal debt continues to expand and private nonfinancial debt increases at a very modest pace. Despite low mortgage rates, home mortgage debt is anticipated to continue contracting in 2011 and to be flat in 2012, reflecting ongoing weakness in housing demand, tight lending standards that ease only gradually, and continued charge-offs of existing loans. Consumer credit is forecasted to expand over the next two years, lifted by increases in spending on consumer durables. We expect growth in nonfinancial business debt to rise gradually to 3¾ percent in 2012, reflecting a pickup in capital expenditures over the forecast period.

Commercial bank credit is expected to remain about flat in the current quarter, as a continued decline in loans is offset by robust growth in banks' securities holdings. Bank credit is projected to rise 1¾ percent in 2011 and 3 percent in 2012, as modest loan growth resumes and securities expand at a moderate rate. The runoff in commercial and industrial loans appears to have ebbed significantly, but growth in this loan category is projected to increase only gradually over the forecast period. We expect commercial real estate loans to keep contracting over 2011 and 2012, as weak fundamentals continue to depress activity in that market. Banks' holdings of closed-end mortgages—loans secured by 1-4 family residential properties—have grown steadily in recent months, offsetting declines in revolving home equity lines of credit, and we anticipate that residential real estate loans on banks' books in total will continue to edge up over the forecast horizon as activity in housing markets improves. Consumer loans are forecasted to contract this quarter and then increase modestly in 2011 and 2012 as household spending on consumer durables gradually picks up. Banks' securities holdings are projected to expand at a moderate pace over the forecast period as loan demand improves.

M2 is projected to slow in 2011 and then pick up a bit in 2012, but remain at a pace below that of nominal GDP over the forecast period. The forecast assumes that, as the economic recovery gains strength, households reallocate their portfolios away from safe and liquid M2 assets toward higher-yielding investments through early 2012. Liquid deposits are forecasted to decelerate from their robust growth in 2009, but continue to expand at a solid pace over the forecast period. We expect small time deposits and retail money market mutual funds to continue to contract through most of the projection period, though the rate of contraction diminishes over time. Currency is anticipated to expand moderately as recent robust demand for currency from abroad wanes.

Growth Rates for M2

(Percent, seasonally adjusted annual rate)

Monthly Growth Rates	Tealbook Forecast*
Apr-10	-4.1
May-10	11.6
Jun-10	4.4
Jul-10	-0.2
Aug-10	6.4
Sep-10	8.3
Oct-10	8.0
Nov-10	5.1
Dec-10	1.6
Jan-11	1.3
Feb-11	1.2
Mar-11	1.1
Quarterly Growth Rates	
2010 Q2	1.8
2010 Q3	4.6
2010 Q4	6.6
2011 Q1	1.8
Annual Growth Rates	
2009	5.1
2010	3.2
2011	1.4
2012	5.1

* This forecast is consistent with nominal GDP and interest rates in the Tealbook forecast. Actual data through November 2010; projections thereafter.

Alternatives

DIRECTIVE

The November directive appears below. Drafts for a December directive that correspond to each of the four policy alternatives appear on subsequent pages. The directive for Alternative 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 A would increase the SOMA's securities holdings by $800 billion by the end of September 2011 through the purchase of longer-term Treasury securities, while the corresponding increase under the Alternative C directive is a total of $400 billion by the end of June 2011. The directives for both Alternatives A and C continue the current portfolio policy of reinvesting principal payments. The directive for Alternative D would instruct the Desk to maintain the SOMA's total holdings of securities at approximately the current level by continuing to reinvest payments of principal from agency debt and MBS in longer-term Treasury securities.

November 2010 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 by the end of June 2011 in order to increase the total face value of domestic securities held in the System Open Market Account to approximately $2.6 trillion. 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.

December 2010 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 ~~by the end of June 2011~~ in order to increase the total face value of domestic securities held in the System Open Market Account to approximately ~~$2.6~~ **$2.8** trillion **by the end of September 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.

Alternatives

December 2010 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 ~~by the end of June 2011~~ 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.

December 2010 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 ~~by the end of June 2011~~ in order to increase the total face value of domestic securities held in the System Open Market Account to approximately ~~$2.6~~ **$2.4** 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.

Alternatives

December 2010 FOMC Directive — Alternative D

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 by the end of June 2011 in order to increase~~ **maintain** the total face value of domestic securities held in the System Open Market Account ~~to~~ **at** approximately ~~$2.6~~ **$2.1** trillion~~. The Committee also directs the Desk to~~ **by** reinvest**ing** 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.

Explanatory Notes

A. Measures of the Equilibrium Real Rate

The equilibrium real rate is the real federal funds rate that, if maintained, would be projected to return output to its potential level over time. 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 keep output at potential 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. The TIPS-based factor model measure provides an estimate of market expectations for the real federal funds rate seven years ahead.

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 estimated real federal funds rates based on lagged core PCE inflation, the definition used in the Equilibrium Real Federal Funds Rate chart; lagged four-quarter headline PCE inflation; and projected four-quarter headline PCE inflation beginning with the next quarter. For each estimate of the real rate, the table also provides 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.

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	-0.8	-2.0	-0.6
Lagged headline inflation	-1.1	-2.1	-0.7
Projected headline inflation	-1.0	-2.1	-0.7

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 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	$i_t = 1.18 i_{t-1} - 0.38 i_{t-2} + 0.20[0.98 + 1.72\pi_{t+2\|t}$ $+2.29(y_{t+1\|t} - y_{t+1\|t}^*) - 1.37(y_{t-1} - y_{t-1}^*)]$
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	$i_t = i_{t-1} + 0.5(\pi_{t+3\|t} - \pi^*) + 0.5(\Delta^4 y_{t+3\|t} - \Delta^4 y_{t+3\|t}^*)$

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. Because the first-difference rule involves the lagged funds rate, the value labeled "Previous Tealbook" for the current quarter is computed using the actual value of the lagged funds rate, and the one-quarter-ahead prescriptions are based on this rule's prescription for the current quarter.

References

Taylor, John B. (1993). "Discretion versus Policy Rules in Practice," *Carnegie-Rochester Conference Series on Public Policy*, vol. 39 (December), pp. 195–214.

—————— (1999). "A Historical Analysis of Monetary Policy Rules," in John B. Taylor, ed., *Monetary Policy Rules*. University of Chicago Press, pp. 319–341.

Orphanides, Athanasios (2003). "Historical Monetary Policy Analysis and the Taylor Rule," *Journal of Monetary Economics*, vol. 50 (July), pp. 983−1022.

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 December 2010 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 November 30, 2010. 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 the first quarter of 2013. 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 Alternative B are
  - Purchases of $600 billion of longer-term Treasury securities between November 2010 and July 2011, at an average pace of $75 billion per month.[1]
  - 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 increases.[2]
  - All purchases of Treasury securities are executed assuming a maturity distribution similar to that currently used by the Desk.[3]
  - With the increase in the target federal funds rate, all securities are allowed to roll off the portfolio as they mature or prepay.

[1] Based on the actual operations to date and a pace of $75 billion per month, a few purchases may settle in July 2011.

[2] Projected prepayments of agency MBS reflect interest rates as of December 3, 2010.

[3] 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 the 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 premiums are recorded in "other assets."

Explanatory Notes

  - The Federal Reserve will begin to sell agency MBS and agency debt securities six months after the assumed increase in the target federal funds rate. The holdings of agency securities are reduced over five years and reach zero by the end of the third 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 A, a total of $800 billion in longer-term Treasury securities is purchased by essentially the end of the third quarter of 2011. All other assumptions follow Alternative B.

- Under Alternative C, a total of $400 billion in longer-term Treasury securities is purchased by the end of the second quarter of 2011. All other assumptions follow Alternative B.

- Under Alternative D, longer-term Treasury securities purchases are discontinued after the December 2010 FOMC meeting, although the proceeds from maturing Treasury securities and the principal payments of agency MBS and agency debt securities are reinvested in Treasury securities until the target federal funds rate lifts off. All other assumptions follow Alternative B.

- In all four 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. After the SFA declines to zero, Treasury bills are purchased. Purchases of bills continue until these securities comprise one-third of the Federal Reserve's total Treasury securities 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 2014, 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.

- Credit extended to AIG, the sum of the Federal Reserve Bank of New York's extension of revolving credit and its preferred interests in AIA Aurora LLC and ALICO Holdings LLC, declines to zero by November 2013.
- The assets held by Maiden Lane LLC, Maiden Lane II LLC, and Maiden Lane III LLC are sold over time and reach a minimal level by the end of 2014.

LIABILITIES AND CAPITAL

- Federal Reserve notes in circulation grow in line with the staff forecast for money stock currency through the end of 2012. From 2013 to the end of the projection period, Federal Reserve notes in circulation grow at the same rate as nominal GDP, as projected in the extended Tealbook forecast.
- The U.S. Treasury's general account (TGA) follows the staff forecast for end-of-month U.S. Treasury operating cash balances through June 2011.[4] At that point, the TGA slowly drops back to its historical target level of $5 billion by the end of 2011 as it is assumed that the Treasury will have implemented 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.
- Balances in the SFA remain at their current level until the SFA is reduced to ensure that the level of reserve balances does not fall below $25 billion.[5]
- 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.

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

[5] With debt subject to limit moving closer to the debt ceiling, Treasury may drain the SFA in coming months. For this Tealbook, however, we maintain the SFA at $200 billion in the near term.

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

	Nov 30, 2010	2010	2012	2014	2016	2018	2020
		End-of-Year					
		$ Billions					
Total assets	2,342	2,403	2,835	2,077	1,455	1,623	1,816
Selected assets:							
Liquidity programs for financial firms	0	0	0	0	0	0	0
Primary, secondary, and seasonal credit	0	0	0	0	0	0	0
Central bank liquidity swaps	0	0	0	0	0	0	0
Lending though other credit facilities	26	27	9	0	0	0	0
Term Asset-Backed Securities Loan Facility (TALF)	26	27	9	0	0	0	0
Support for specific institutions	115	96	32	3	2	0	0
Credit extended to AIG	48	43	3	0	0	0	0
Net portfolio holdings of Maiden Lane LLC, Maiden Lane II LLC, and Maiden Lane III	67	53	29	3	2	0	0
Securities held outright	2,081	2,156	2,640	1,954	1,360	1,542	1,742
U.S. Treasury securities	911	1,016	1,923	1,473	1,137	1,542	1,742
Agency debt securities	148	147	77	39	16	0	0
Agency mortgage-backed securities	1,023	992	640	443	207	0	0
Special drawing rights certificate account	5	5	7	7	7	7	7
Net portfolio holdings of TALF LLC	1	1	1	1	0	0	0
Total other assets	115	118	148	111	86	74	67
Total liabilities	2,285	2,344	2,757	1,974	1,319	1,442	1,577
Selected liabilities:							
Federal Reserve notes in circulation	937	941	1,000	1,088	1,209	1,333	1,468
Reverse repurchase agreements	57	54	59	59	59	59	59
Deposits with Federal Reserve Banks	1,247	1,302	1,681	810	35	35	35
Reserve balances held by depository institutions	963	995	1,471	600	25	25	25
U.S. Treasury, general account	79	100	5	5	5	5	5
U.S. Treasury, supplementary financing account	200	200	200	200	0	0	0
Other balances	3	2	5	5	5	5	5
Total capital	57	59	78	103	136	180	239

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

Explanatory Notes

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

	Nov 30, 2010	2010	2012	2014	2016	2018	2020
		End-of-Year					
		$ Billions					
Total assets	2,342	2,403	3,036	2,232	1,455	1,623	1,816
Selected assets:							
Liquidity programs for financial firms	0	0	0	0	0	0	0
Primary, secondary, and seasonal credit	0	0	0	0	0	0	0
Central bank liquidity swaps	0	0	0	0	0	0	0
Lending though other credit facilities	26	27	9	0	0	0	0
Term Asset-Backed Securities Loan Facility (TALF)	26	27	9	0	0	0	0
Support for specific institutions	115	96	32	3	2	0	0
Credit extended to AIG	48	43	3	0	0	0	0
Net portfolio holdings of Maiden Lane LLC, Maiden Lane II LLC, and Maiden Lane III	67	53	29	3	2	0	0
Securities held outright	2,081	2,156	2,840	2,110	1,360	1,542	1,742
U.S. Treasury securities	911	1,016	2,123	1,628	1,137	1,542	1,742
Agency debt securities	148	147	77	39	16	0	0
Agency mortgage-backed securities	1,023	992	640	443	207	0	0
Special drawing rights certificate account	5	5	7	7	7	7	7
Net portfolio holdings of TALF LLC	1	1	1	1	0	0	0
Total other assets	115	118	148	111	86	74	67
Total liabilities	2,285	2,344	2,958	2,129	1,319	1,442	1,577
Selected liabilities:							
Federal Reserve notes in circulation	937	941	1,000	1,088	1,209	1,333	1,468
Reverse repurchase agreements	57	54	59	59	59	59	59
Deposits with Federal Reserve Banks	1,247	1,302	1,882	965	35	35	35
Reserve balances held by depository institutions	963	995	1,672	755	25	25	25
U.S. Treasury, general account	79	100	5	5	5	5	5
U.S. Treasury, supplementary financing account	200	200	200	200	0	0	0
Other balances	3	2	5	5	5	5	5
Total capital	57	59	78	103	136	180	239

Source: Federal Reserve H.4.1 statistical release 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

		End-of-Year					
	Nov 30, 2010	2010	2012	2014	2016	2018	2020
		$ Billions					
Total assets	2,342	2,397	2,636	1,925	1,455	1,623	1,816
Selected assets:							
Liquidity programs for financial firms	0	0	0	0	0	0	0
Primary, secondary, and seasonal credit	0	0	0	0	0	0	0
Central bank liquidity swaps	0	0	0	0	0	0	0
Lending though other credit facilities	26	27	9	0	0	0	0
Term Asset-Backed Securities Loan Facility (TALF)	26	27	9	0	0	0	0
Support for specific institutions	115	96	32	3	2	0	0
Credit extended to AIG	48	43	3	0	0	0	0
Net portfolio holdings of Maiden Lane LLC, Maiden Lane II LLC, and Maiden Lane III	67	53	29	3	2	0	0
Securities held outright	2,081	2,150	2,440	1,802	1,360	1,542	1,742
U.S. Treasury securities	911	1,010	1,723	1,321	1,137	1,542	1,742
Agency debt securities	148	147	77	39	16	0	0
Agency mortgage-backed securities	1,023	992	640	443	207	0	0
Special drawing rights certificate account	5	5	7	7	7	7	7
Net portfolio holdings of TALF LLC	1	1	1	1	0	0	0
Total other assets	115	118	148	111	86	74	67
Total liabilities	2,285	2,338	2,558	1,822	1,319	1,442	1,577
Selected liabilities:							
Federal Reserve notes in circulation	937	941	1,000	1,088	1,209	1,333	1,468
Reverse repurchase agreements	57	54	59	59	59	59	59
Deposits with Federal Reserve Banks	1,247	1,296	1,482	658	35	35	35
Reserve balances held by depository institutions	963	989	1,272	448	25	25	25
U.S. Treasury, general account	79	100	5	5	5	5	5
U.S. Treasury, supplementary financing account	200	200	200	200	0	0	0
Other balances	3	2	5	5	5	5	5
Total capital	57	59	78	103	136	180	239

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

Explanatory Notes

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

	Nov 30, 2010	2010	2012	2014	2016	2018	2020
		End-of-Year					
		$ Billions					
Total assets	2,342	2,371	2,289	1,677	1,455	1,622	1,815
Selected assets:							
Liquidity programs for financial firms	0	0	0	0	0	0	0
Primary, secondary, and seasonal credit	0	0	0	0	0	0	0
Central bank liquidity swaps	0	0	0	0	0	0	0
Lending though other credit facilities	26	27	9	0	0	0	0
Term Asset-Backed Securities Loan Facility (TALF)	26	27	9	0	0	0	0
Support for specific institutions	115	96	32	3	2	0	0
Credit extended to AIG	48	43	3	0	0	0	0
Net portfolio holdings of Maiden Lane LLC, Maiden Lane II LLC, and Maiden Lane III	67	53	29	3	2	0	0
Securities held outright	2,081	2,125	2,125	1,560	1,372	1,554	1,754
U.S. Treasury securities	911	985	1,408	1,079	1,149	1,554	1,754
Agency debt securities	148	147	77	39	16	0	0
Agency mortgage-backed securities	1,023	992	640	443	207	0	0
Special drawing rights certificate account	5	5	7	7	7	7	7
Net portfolio holdings of TALF LLC	1	1	1	1	0	0	0
Total other assets	115	118	116	106	74	61	55
Total liabilities	2,285	2,312	2,211	1,574	1,318	1,442	1,577
Selected liabilities:							
Federal Reserve notes in circulation	937	941	1,000	1,088	1,209	1,333	1,468
Reverse repurchase agreements	57	54	59	59	59	59	59
Deposits with Federal Reserve Banks	1,247	1,270	1,135	411	35	35	35
Reserve balances held by depository institutions	963	963	925	201	25	25	25
U.S. Treasury, general account	79	100	5	5	5	5	5
U.S. Treasury, supplementary financing account	200	200	200	200	0	0	0
Other balances	3	2	5	5	5	5	5
Total capital	57	59	78	103	136	180	239

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

Explanatory Notes

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Explanatory Notes