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.

Content last modified 01/29/2016.

Class I FOMC – Restricted Controlled (FR)

Report to the FOMC on Economic Conditions and Monetary Policy

Book B

Monetary Policy: Strategies and Alternatives

September 16, 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 over time, would return output to its potential in twelve quarters. The Tealbook-consistent estimate of short-run *r** generated by the FRB/US model has declined 10 basis points, to minus 2.4 percent, as the effect of the reduction in GDP growth in the staff projection exceeded that of the downward revision to potential GDP, implying somewhat lower resource utilization over the medium run.[1] The EDO model's Tealbook-consistent *r** estimate is now minus 3.7 percent, up substantially from the August Tealbook. However, the rise in this estimate reflects the re-estimation of the EDO model and a methodological change in how expectations of future monetary policy are treated in the EDO-based calculation.[2] By itself, the modest revision to the staff forecast for resource utilization would have reduced the EDO model's Tealbook-consistent *r** by 30 basis points. The estimate of short-run *r** generated by the EDO model using its own projections has declined about 60 basis points, while the corresponding estimate from the FRB/US model has declined about 75 basis points. In the case of FRB/US, the decline reflects the model's interpretation of weaker incoming data on real activity as signaling a persistently slower pace of economic growth over the medium term. The short-run *r** estimates from the small structural model and the single-equation model have both increased about 30 basis points from the last round but remain at very low levels; the upward revisions primarily reflect the change to the staff's estimate of potential GDP, which implies that the *r** estimates are conditioned on a reduced estimate of the current degree of resource slack.

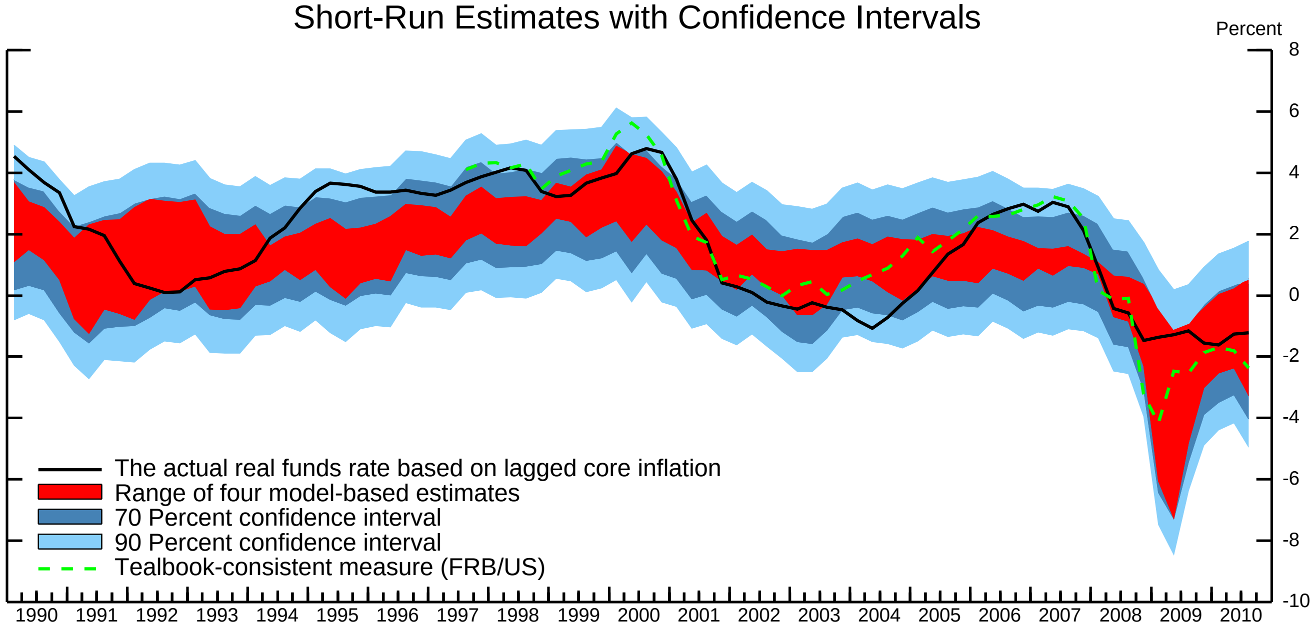
The exhibit "Constrained vs. Unconstrained Monetary Policy" displays the policy prescriptions produced by optimal control simulations of the FRB/US model based on the

[1] The revisions to the staff's estimates of the NAIRU are discussed in the box in the nonfinancial outlook section of Tealbook Part A, "Structural Unemployment."

[2] The changes in monetary policy underlying the calculation of the Tealbook-consistent EDO estimate of *r** were previously modeled as unanticipated shocks to the short-term interest rate rule. As these shocks were perceived by agents in the model to be temporary, their effect on longer-term interest rate expectations was muted, implying a low sensitivity of activity to the changes in interest rates incorporated into the *r** calculation. The new procedure for generating *r** assumes that private agents understand the policy strategy embedded in the *r** calculation—that is, to close the output gap at a horizon of twelve quarters—and so anticipate the future policy actions that will be taken to achieve this outcome. As a result, the policy adjustments required to close the output gap are smaller.

Equilibrium Real Federal Funds Rate

Short-Run Estimates with Confidence Intervals



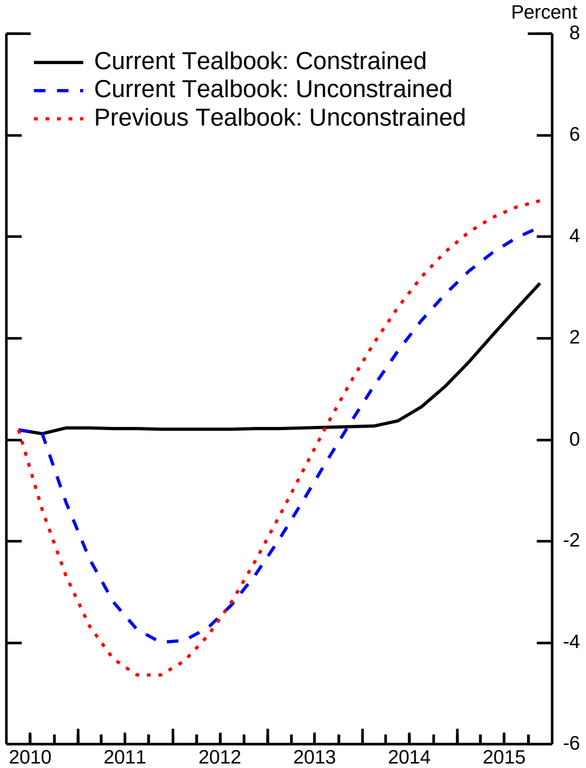
Short-Run and Medium-Run Measures

	Current Tealbook	*Previous Tealbook*
Short-Run Measures		
Single-equation model	-2.4	*-2.7*
Small structural model	-2.8	*-3.1*
EDO model	0.6	*1.1*
FRB/US model	-3.3	*-2.5*
Confidence intervals for four model-based estimates		
70 percent confidence interval	-4.0 to 0.4	
90 percent confidence interval	-5.0 to 1.8	
Tealbook-consistent measures		
EDO model	-3.7	*-5.4*
FRB/US model	-2.4	*-2.3*
Medium-Run Measures		
Single-equation model	1.1	*1.0*
Small structural model	1.2	*1.3*
Confidence intervals for two model-based estimates		
70 percent confidence interval	0.2 to 2.0	
90 percent confidence interval	-0.4 to 2.6	
TIPS-based factor model	2.0	*2.0*
Memo		
Actual real federal funds rate	-1.2	*-1.4*

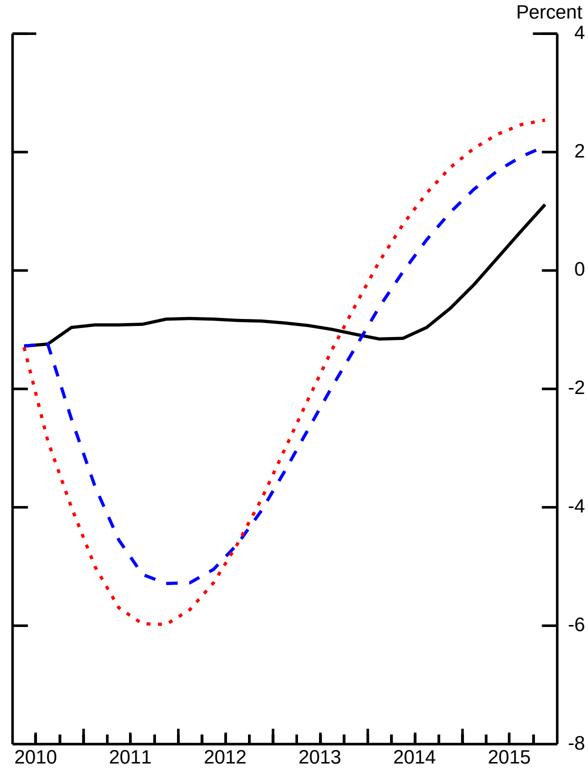
Note: Explanatory Note A provides background information regarding the construction of these measures and confidence intervals. The actual real federal funds rate shown is based on lagged core inflation as a proxy for inflation expectations. For information regarding alternative measures, see Explanatory 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)

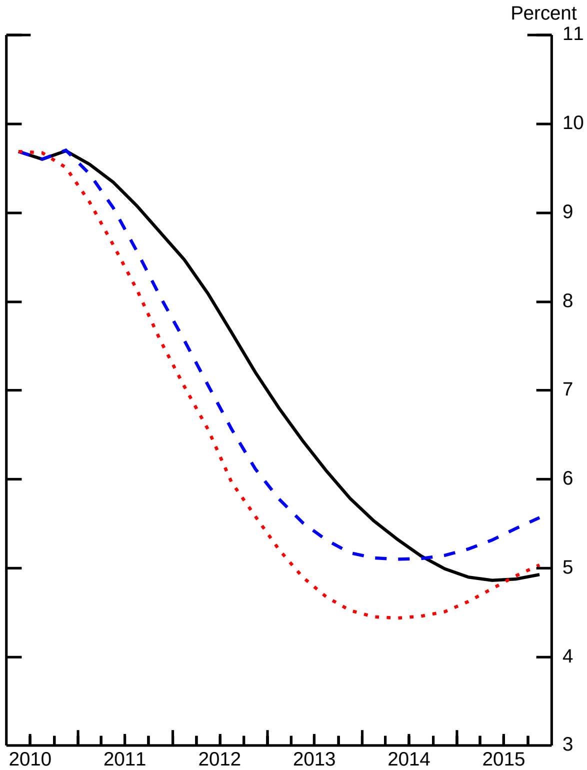
Nominal Federal Funds Rate



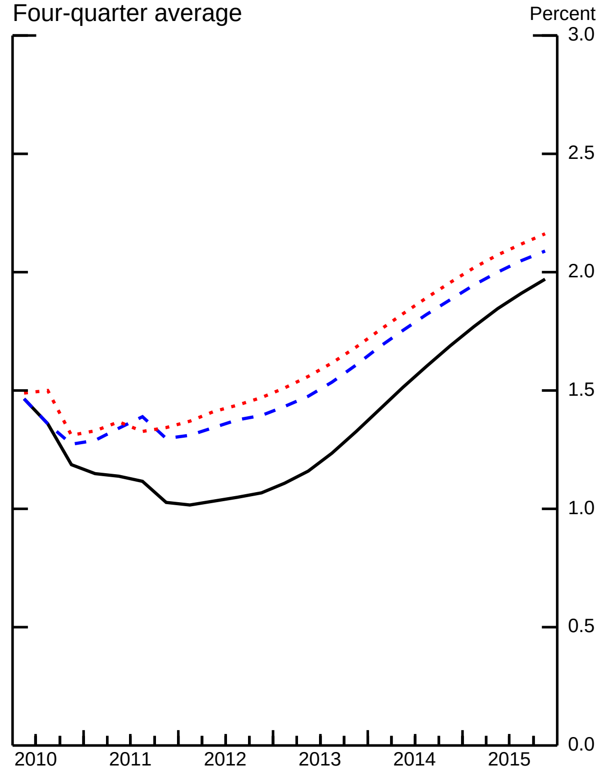
Real Federal Funds Rate



Civilian Unemployment Rate



Core PCE Inflation
Four-quarter average



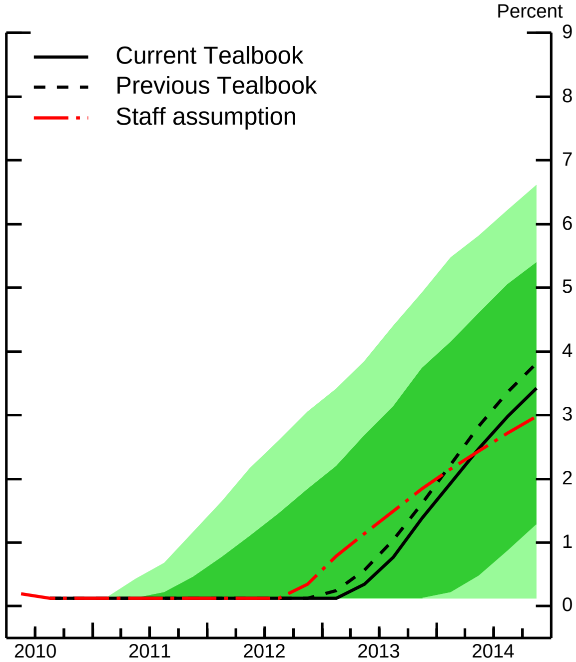
extended staff baseline projection. As discussed in Tealbook Part A, the staff baseline incorporates the effects of the Federal Reserve's large-scale asset purchases. In these simulations, policymakers are assumed to place equal weight on keeping core PCE inflation close to a 2 percent inflation goal, on keeping unemployment close to the effective NAIRU, and on minimizing changes in the federal funds rate. As has been true for some time, these simulations indicate that optimal policy is severely constrained by the effective lower bound on nominal interest rates. With the lower-bound constraint imposed, the federal funds rate does not begin to rise appreciably until mid-2014, the unemployment rate remains above the staff's assumed NAIRU of 5¾ percent until early 2014, and inflation stays persistently below target until the end of 2015 (black solid line). But if the nominal funds rate could fall below zero, optimal policy would call for the nominal funds rate to decline to around minus 4 percent in the fourth quarter of 2011 (blue dashed line). This unconstrained funds rate path is similar in shape to that in the August Tealbook (red dashed line); although the funds rate is on average somewhat higher during 2011 and 2012, most of this shift is an artifact of starting the optimization procedure one quarter later than in the August Tealbook. The unconstrained policy, if it were feasible, would bring the unemployment rate down to the staff estimate of the NAIRU more rapidly and would allow inflation to reach the 2 percent target in early 2015.

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 first quarter of 2013, one quarter later than in the August Tealbook. Over the intermeeting period, the expected federal funds rate path implied by financial market data also has shifted down on net, consistent with the weaker-than-expected incoming data. The upper bounds of the confidence intervals derived from options prices have moved down, suggesting that financial market participants have reduced the odds they place on outcomes with relatively high funds rates. The table in the lower panel of the exhibit provides near-term prescriptions from simple policy rules for the nominal federal funds rate. As shown in the left-hand columns, all of the prescriptions 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. The rule prescriptions all continue to be negative, but are uniformly higher

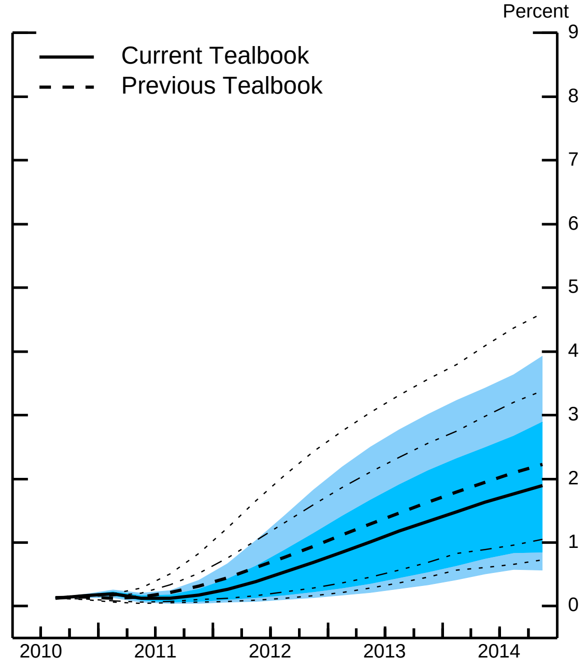
Strategies

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 September 15.

Near-Term Prescriptions of Simple Policy Rules

	Constrained Policy		Unconstrained Policy	
	2010Q4	2011Q1	2010Q4	2011Q1
Taylor (1993) rule	**0.13**	**0.13**	**-0.92**	**-1.00**
Previous Tealbook	*0.13*	*0.13*	*-1.23*	*-1.28*
Taylor (1999) rule	**0.13**	**0.13**	**-4.51**	**-4.59**
Previous Tealbook	*0.13*	*0.13*	*-5.04*	*-5.03*
Estimated outcome-based rule	**0.13**	**0.13**	**-0.70**	**-1.64**
Previous Tealbook	*0.13*	*0.13*	*-1.62*	*-2.49*
Estimated forecast-based rule	**0.13**	**0.13**	**-0.71**	**-1.60**
Previous Tealbook	*0.13*	*0.13*	*-1.72*	*-2.50*
First-difference rule	**0.13**	**0.13**	**-0.19**	**-0.34**
Previous Tealbook	*0.13*	*0.13*	*-0.38*	*-0.40*

Memo

	2010Q4	2011Q1
Staff assumption	0.13	0.13
Fed funds futures	0.16	0.14
Median expectation of primary dealers	0.13	0.13
Blue Chip forecast (September 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.

than in the August Tealbook, reflecting the effect of the upward adjustment, in the staff forecast, in near-term inflation and the staff's reduced estimate of near-term slack.[3]

[3] The unconstrained prescriptions from the estimated outcome-based rule and the estimated forecast-based rule have risen by a greater amount than the other rule prescriptions. A mechanical source of increase in the prescriptions from these rules arises from the presence of the lagged policy rate as a right-hand-side variable in the rules. In the August Tealbook, the lagged policy rate entering the 2010 Q4 rule prescription was the (negative) value for 2010 Q3 obtained by projecting from the rule. As the quarter nears its end, the observation for the 2010 Q3 funds rate is replaced by the value used in the staff projection (0.125 percent), and this change boosts the rule prescription. In addition to this mechanical source of increase, the increase in the prescriptions also partly reflects the high weight assigned to inflation in these rules.

Monetary Policy Alternatives

This Tealbook presents four policy alternatives—labeled A1, A2, B, and C—for the Committee's consideration that span a range of policy choices. In light of the staff outlook for a prolonged period of significant resource slack and undesirably low inflation, Alternatives A1, A2, and B are more explicit than past statements about the Committee's assessment of inflation relative to its dual mandate. All of the alternatives maintain the existing target range for the federal funds rate. However, the alternatives vary in their policies regarding the Federal Reserve's securities portfolio and in their descriptions of the Committee's inclination and approach to taking policy action going forward. As always, the Committee could mix components of the various alternatives to construct its desired statement.

The statement issued under Alternative B would note that information received since the last FOMC meeting "confirms" that the pace of recovery has slowed in recent months. It would also note that measures of underlying inflation have trended down to levels "somewhat below" those the Committee judges most consistent, over the longer run, with its dual mandate. In addition, although inflation is characterized as likely to remain subdued for some time, the language would indicate that inflation subsequently is expected to rise to mandate-consistent levels. Alternative B would not introduce additional policy accommodation at this time, and it would maintain the Committee's existing reinvestment policy. But the statement for this alternative would make clear that the Committee "is prepared to provide additional accommodation" to foster the Committee's objectives.

Under both of the A alternatives, the Committee would be more direct about its characterization of inflation and would couple that language with additional large-scale asset purchases. The statement for Alternative A2 would say that measures of underlying inflation have trended lower in recent quarters, to levels "below" those the Committee judges most consistent with its dual mandate. It would also note that in the current environment, disinflation is an impediment to economic recovery. In the statement for Alternative A1, the Committee would be even more explicit, indicating that it judges inflation of "2 percent or a bit less, as measured by the price index for personal consumption expenditures," to be most consistent, over the longer run, with its mandate and noting that underlying inflation is now running below that level. Under either of the

A alternatives, the Committee would announce that it will increase its total holdings of securities to approximately $2.5 trillion by purchasing an additional $500 billion of longer-term Treasury securities over the next six months while maintaining its existing reinvestment policy, in order "to help foster a stronger pace of economic recovery and to move underlying inflation closer, over time, to rates consistent with its mandate." The Committee could then indicate that it will "act as needed" going forward to support a stronger economic recovery and foster price stability. Or, in Alternative A2, the Committee could choose language that indicates a more flexible and incremental approach to managing the size of its securities portfolio under which it would "determine, each time it meets, whether an adjustment—either upward or downward—to its holdings of securities is needed to foster maximum employment and price stability."

The statement under Alternative C would say that the economic recovery "is proceeding," and that the Committee continues to anticipate a gradual return to higher levels of resource utilization in a context of price stability. In addition, this alternative would change the forward guidance regarding the federal funds rate to state that economic conditions are likely to warrant "low" (rather than "exceptionally low") levels of the federal funds rate for "some time" (rather than for an "extended period"). The statement would also indicate that the Committee expects to maintain its existing securities reinvestment policy "for the time being."

A table summarizing the key components of each alternative appears on the next page, followed by complete draft statements and the arguments for each alternative.

Table 1: Overview of Alternatives for the September 21 FOMC Statement

Key Components	August Statement	September Alternatives			
		A1	**A2**	**B**	**C**
Economic Activity					
Recent Developments	pace of recovery has slowed in recent months	pace of recovery has slowed in recent months			economic recovery is proceeding
Labor Market	pace of recovery in employment has slowed; high unemployment; employers remain reluctant to add to payrolls	pace of recovery in employment has slowed; high unemployment; employers remain reluctant to add to payrolls			economic recovery is proceeding
Outlook	gradual return to higher resource utilization w/ price stability; pace of recovery likely more modest in near term than had been anticipated	gradual return to higher resource utilization, although…	gradual return to higher resource utilization w/ price stability, although…		although pace of recovery likely modest in near term, gradual return to higher resource utilization w/ price stability
		pace of recovery likely modest in near term			
Financial Conditions					
Recent Developments	bank lending has continued to contract	bank lending has continued to contract		bank lending has continued to contract, but at a reduced rate in recent months	
Inflation					
Recent Developments	trended lower; and…	trended lower; underlying inflation running below 2 percent PCE inflation	trended below mandate-consistent levels	trended somewhat below mandate-consistent levels; and…	stayed subdued; and…
	substantial slack; stable inflation expectations	n.a.		substantial slack; stable inflation expectations	stable inflation expectations
Outlook	subdued for some time	n.a.		subdued for some time before rising toward mandate-consistent levels	gradual return to higher resource utilization in a context of price stability
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 for an extended period			low levels for some time
SOMA Portfolio Policy					
Approach	*keep constant:* reinvest principal payments in Treasuries	*increase:* purchase $500 billion of Treasuries over next six months; maintain existing reinvestment policy		*keep constant:* maintain existing reinvestment policy	*keep constant:* for the time being, maintain existing reinvestment policy
Future Policy Action					
Approach	employ tools as necessary	act as needed	act as needed | each time it meets, determine needed adjustment, up or down	prepared to provide additional accommodation as needed	employ tools as necessary

Alternatives

AUGUST FOMC STATEMENT

1. Information received since the Federal Open Market Committee met in June indicates that the pace of recovery in output and employment has slowed in recent months. 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; however, investment in nonresidential structures continues to be weak and employers remain reluctant to add to payrolls. Housing starts remain at a depressed level. Bank lending has continued to contract. Nonetheless, the Committee anticipates a gradual return to higher levels of resource utilization in a context of price stability, although the pace of economic recovery is likely to be more modest in the near term than had been anticipated.
2. Measures of underlying inflation have trended lower in recent quarters and, with substantial resource slack continuing to restrain cost pressures and longer-term inflation expectations stable, inflation is likely to be subdued for some time.
3. 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 of the federal funds rate for an extended period.
4. To help support the economic recovery in a context of price stability, the Committee will keep constant the Federal Reserve's holdings of securities at their current level by reinvesting principal payments from agency debt and agency mortgage-backed securities in longer-term Treasury securities.[1] The Committee will continue to roll over the Federal Reserve's holdings of Treasury securities as they mature.
5. The Committee will continue to monitor the economic outlook and financial developments and will employ its policy tools as necessary to promote economic recovery and price stability.

[1] The Open Market Desk will issue a technical note shortly after the statement providing operational details on how it will carry out these transactions.

September FOMC Statement—Alternative A1

1. Information received since the Federal Open Market Committee met in ~~June~~**August** ~~indicates~~**confirms** that the pace of recovery in output and employment has slowed in recent months. Household spending is increasing **only** gradually~~, but remains~~ constrained by high unemployment, modest income growth, lower housing wealth, and tight credit. Business spending on equipment and software ~~is rising; however,~~**has slowed and** investment in nonresidential structures continues to be weak**.** ~~and~~ Employers remain reluctant to add to payrolls. Housing starts remain at a depressed level. Bank lending has continued to contract. ~~Nonetheless,~~ The Committee anticipates a gradual return to higher levels of resource utilization ~~in a context of price stability~~, although the pace of economic recovery is likely to be ~~more~~ modest in the near term ~~than had been anticipated~~.

2. Measures of underlying inflation have trended lower in recent quarters**. Underlying inflation is now running below the level of 2 percent or a bit less, as measured by the price index for personal consumption expenditures, that the Committee judges most consistent, over the longer run, with its mandate to promote maximum employment and price stability. In the current environment, disinflation is an impediment to economic recovery.** ~~and, with substantial resource slack continuing to restrain cost pressures and longer-term inflation expectations stable, inflation is likely to be subdued for some time.~~

3. **To help foster a stronger pace of economic recovery and to move underlying inflation closer, over time, to rates consistent with its mandate, the Committee will increase its total holdings of securities to approximately $2.5 trillion by purchasing an additional $500 billion of longer-term Treasury securities over the next six months. The Committee will maintain its existing policy of reinvesting principal payments from its securities holdings.** The Committee **also** 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 of the federal funds rate for an extended period. ~~To help support the economic recovery in a context of price stability, the Committee will keep constant the Federal Reserve's holdings of securities at their current level by reinvesting principal payments from agency debt and agency mortgage-backed securities in longer-term Treasury securities. The Committee will continue to roll over the Federal Reserve's holdings of Treasury securities as they mature.~~

4. The Committee will continue to monitor the economic outlook and financial developments and will ~~employ its policy tools as necessary to promote economic recovery and price stability~~**act as needed to support a stronger economic recovery and foster price stability**.

SEPTEMBER FOMC STATEMENT—ALTERNATIVE A2

1. Information received since the Federal Open Market Committee met in ~~June~~**August** ~~indicates~~**confirms** that the pace of recovery in output and employment has slowed in recent months. Household spending is increasing **only** gradually~~, but remains~~ constrained by high unemployment, modest income growth, lower housing wealth, and tight credit. Business spending on equipment and software ~~is rising; however,~~**has slowed and** investment in nonresidential structures continues to be weak**.**~~ and~~ Employers remain reluctant to add to payrolls. Housing starts remain at a depressed level. Bank lending has continued to contract. ~~Nonetheless, ~~The Committee anticipates a gradual return to higher levels of resource utilization in a context of price stability, although the pace of economic recovery is likely to be ~~more ~~modest in the near term~~ than had been anticipated~~.

2. Measures of underlying inflation have trended lower in recent quarters**, to levels below those the Committee judges most consistent, over the longer run, with its mandate to promote maximum employment and price stability. In the current environment, disinflation is an impediment to economic recovery.** ~~and, with substantial resource slack continuing to restrain cost pressures and longer-term inflation expectations stable, inflation is likely to be subdued for some time.~~

3. 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.

4. **To help foster a stronger pace of economic recovery and to move underlying inflation closer, over time, to rates consistent with its mandate, the Committee will increase its total holdings of securities to approximately $2.5 trillion by purchasing an additional $500 billion of longer-term Treasury securities over the next six months. The Committee will maintain its existing policy of reinvesting principal payments from its securities holdings.** ~~To help support the economic recovery in a context of price stability, the Committee will keep constant the Federal Reserve's holdings of securities at their current level by reinvesting principal payments from agency debt and agency mortgage-backed securities in longer-term Treasury securities. The Committee will continue to roll over the Federal Reserve's holdings of Treasury securities as they mature.~~

5. The Committee will continue to monitor the economic outlook and financial developments and will ~~employ its policy tools as necessary to promote economic recovery and price stability~~**act as needed to support a stronger economic recovery and foster price stability**.

— OR —

5. The Committee will continue to monitor the economic outlook and financial developments~~ and will employ its policy tools as necessary to promote economic recovery and price stability~~. **The Committee will determine, each time it meets, whether an adjustment—either upward or downward—to its holdings of securities is needed to foster maximum employment and price stability.**

SEPTEMBER FOMC STATEMENT—ALTERNATIVE B

1. Information received since the Federal Open Market Committee met in ~~June~~**August** ~~indicates~~**confirms** that the pace of recovery in output and employment has slowed in recent months. 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**~~; however~~, **while** investment in nonresidential structures continues to be weak**.** ~~and~~ Employers remain reluctant to add to payrolls. Housing starts ~~remain~~**are** at a depressed level. Bank lending has continued to contract**, but at a reduced rate in recent months**. ~~Nonetheless,~~ The Committee anticipates a gradual return to higher levels of resource utilization in a context of price stability, although the pace of economic recovery is likely to be ~~more~~ modest in the near term ~~than had been anticipated~~.

2. Measures of underlying inflation have trended lower in recent quarters**, to levels somewhat below those the Committee judges most consistent, over the longer run, with its mandate to promote maximum employment and price stability.** ~~and~~ With substantial resource slack continuing to restrain cost pressures and longer-term inflation expectations stable, inflation is likely to ~~be~~**remain** subdued for some time **before rising to levels the Committee considers consistent with its mandate**.

3. 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. **The Committee also will maintain its existing policy of reinvesting principal payments from its securities holdings.**

4. ~~To help support the economic recovery in a context of price stability, the Committee will keep constant the Federal Reserve's holdings of securities at their current level by reinvesting principal payments from agency debt and agency mortgage-backed securities in longer-term Treasury securities. The Committee will continue to roll over the Federal Reserve's holdings of Treasury securities as they mature.~~

4. The Committee will continue to monitor the economic outlook and financial developments and ~~will employ its policy tools as necessary to promote economic recovery and price stability.~~ **is prepared to provide additional accommodation as needed to foster a stronger economic recovery and to help return inflation, over time, to levels consistent with its mandate.**

Alternatives

SEPTEMBER FOMC STATEMENT—ALTERNATIVE C

1. Information received since the Federal Open Market Committee met in ~~June~~**August** indicates that the ~~pace of~~ **economic** recovery ~~in output and employment has slowed in recent months~~**is proceeding**. Household **income and** spending ~~is~~**are** increasing gradually**.** ~~, but remains constrained by high unemployment, modest income growth, lower housing wealth, and tight credit.~~ **Manufacturing activity and** business spending on equipment and software **have risen.**~~is rising; however, investment in nonresidential structures continues to be weak and employers remain reluctant to add to payrolls. Housing starts remain at a depressed level.~~ Bank lending has continued to contract**, but at a reduced rate in recent months**. Measures of underlying inflation have ~~trended lower~~**stayed subdued** in recent quarters, and longer-term inflation expectations **have remained** stable. ~~Nonetheless, the Committee anticipates a gradual return to higher levels of resource utilization in a context of price stability,~~ Although the pace of economic recovery is likely to be ~~more~~ modest in the near term**,** ~~than had been anticipated.~~**the Committee continues to anticipate a gradual return to higher levels of resource utilization in a context of price stability.**

2. ~~Measures of underlying inflation have trended lower in recent quarters and, with substantial resource slack continuing to restrain cost pressures and longer-term inflation expectations stable, inflation is likely to be subdued for some time.~~

2. 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 of the federal funds rate for ~~an extended period~~**some time**. ~~To help support the economic recovery in a context of price stability,~~ **For the time being,** the Committee **also** will **maintain its existing policy of reinvesting principal payments to** keep constant the Federal Reserve's holdings of securities at their current level**.** ~~by reinvesting principal payments from agency debt and agency mortgage-backed securities in longer-term Treasury securities. The Committee will continue to roll over the Federal Reserve's holdings of Treasury securities as they mature~~.

3. The Committee will continue to monitor the economic outlook and financial developments and will employ its policy tools as necessary to promote economic recovery and price stability.

Alternatives

THE CASE FOR ALTERNATIVE B

The Committee may not see economic conditions as having deteriorated sufficiently over recent months to warrant additional policy accommodation at this meeting, but it may feel that current conditions—little if any progress in reducing elevated levels of resource slack and underlying inflation that is running below levels consistent with the dual mandate—if they were to persist much longer, would call for policy action. If so, the Committee might choose an announcement along the lines of that provided in Alternative B.

Committee members may interpret the recent data on economic activity and employment as having confirmed that the pace of economic recovery has slowed in recent months. Nevertheless, members may still view the recent weakness in economic activity as most likely to be a temporary "soft patch," and continue to anticipate that growth will strengthen going forward without additional policy action. The improvement in the tone of the incoming economic data released late in the intermeeting period might be seen as supporting this view. Indeed, the Committee's assessment of the prospects for economic growth and inflation beyond the near term may not have materially changed over the intermeeting period, and thus members may not see the threshold for further policy action at this meeting as having been met. Under Alternative B, the Committee would state that it "anticipates a gradual return to higher levels of resource utilization in a context of price stability, although the pace of economic recovery is likely to be modest in the near term." Even if the Committee is more concerned about the downside risks to the outlook than it was in August, it could view the uncertainty about the economy as being unusually high and therefore want to wait for additional information about the trajectory of output and inflation before undertaking a new policy action. If so, the Committee would likely want to maintain the current target range for the federal funds rate as well as its existing policy of reinvesting principal payments from its securities holdings, as under Alternative B.[2]

Market participants appear to have appropriately interpreted the "extended period" language in past statements as conditioning the Committee's anticipation for the

[2] At the August 2010 FOMC meeting, the Committee directed the Desk to reinvest principal payments from Treasury securities, agency debt, and agency MBS into Treasury issues. All else equal, in the absence of this policy, the size of the SOMA portfolio would have gradually declined; with this policy in place, the size of the SOMA portfolio is kept approximately constant over time while the share of Treasury securities held in the portfolio gradually increases.

federal funds rate on the economic outlook. Indeed, market measures of the expected federal funds rate dropped and then moved back up over the intermeeting period in line with the way market participants reportedly interpreted the incoming economic data. Therefore, the Committee may wish to retain the current language at this meeting, as in the policy paragraph in Alternative B.

Nonetheless, the Committee may be concerned that the deceleration in economic activity could prove more protracted than currently expected. Indeed, members may have found the slow pace of the economic recovery since spring disappointing, and believe that the persistent slow growth with high levels of resource slack would be unacceptable. Moreover, underlying inflation has trended lower in recent quarters, to levels somewhat below those seen by the Committee as consistent with its dual mandate (as indicated by participants' longer-run inflation projections reported in recent Summaries of Economic Projections). While the staff has narrowed slightly its assessment of resource slack and edged up its forecast of inflation over the next couple of quarters, it anticipates that inflation will tick down again next year, and does not see inflation beginning to creep up until 2013. In this environment, the Committee may see some increase in the risk of further disinflation, with potentially adverse consequences for the real economy. Given these concerns, the Committee might think it appropriate to signal that if economic conditions do not begin to improve soon, it stands ready to provide additional monetary accommodation.

Consistent with this assessment, Alternative B continues to indicate that the pace of economic recovery is likely to be modest in the near term, but notes that measures of underlying inflation have trended lower in recent quarters, "to levels somewhat below those the Committee judges most consistent, over the longer run, with its mandate to promote maximum employment and price stability." Alternative B ends by stating that the Committee "is prepared to provide additional accommodation as needed to foster a stronger economic recovery and to help return inflation, over time, to levels consistent with its mandate." Market participants have indicated a strong desire for greater clarity about the Committee's threshold for undertaking additional policy action, and a statement along the lines of Alternative B would help in this regard.

According to the Desk's latest survey, primary dealers do not see major changes in the statement language as the most likely outcome at this meeting. In addition, the results suggest that dealers generally do not anticipate that additional asset purchases will be announced at this time, although they reportedly put material odds on such an outcome by the end of the year. Even though the statement language points to "additional accommodation" without specifically mentioning LSAPs, the announcement of Alternative B nonetheless would likely lead investors to price in higher odds that additional LSAPs will be implemented by the Committee, perhaps as soon as at the November meeting. As a consequence, longer-term interest rates would likely fall somewhat, stock prices would rise, and the foreign exchange value of the dollar would decline. However, the statement could possibly leave investors more uncertain about the Committee's economic outlook, or cause them to conclude the Committee had a significantly more downbeat assessment of economic activity than in August. If so, risk premiums could widen to some extent and the rise in stock prices could be muted.

THE CASE FOR ALTERNATIVE A2

Policymakers may conclude that, with the weakness to date in the economic recovery and the downtrend in underlying inflation, the Committee is increasingly falling short of both of its statutory objectives. If so, they may see the need for additional policy accommodation at this meeting, as in Alternative A2. Committee members may view the incoming data as confirming that the economic recovery has slowed significantly since spring, with inflation well below levels most consistent with the Committee's dual mandate. Indeed, in the staff forecast, the output gap does not begin to diminish until the middle of next year, two quarters later than in the previous forecast.[3] And this revision follows others of a similar nature—at the time of the April FOMC meeting, staff estimated that resource slack had already stepped down in late 2009. With both economic growth and inflation running below desired levels, members may be concerned that a prolonged period of very low inflation could weigh heavily on the economic recovery and, as a result, they may be quite reluctant to tolerate the status quo. And members may also worry about the extent to which the downward trend in underlying inflation is itself impeding the economic recovery.

Additional accommodation would seem particularly appropriate if the Committee was also concerned about other factors that could undermine the recovery. For example, members might believe that ongoing weakness in house prices was impairing

[3] In its latest forecast, the staff revised down its assessment of the recent and projected path of potential output, and therefore the amount of resource slack in the economy. However, going forward on the new trajectory, the point at which the amount of resource slack in the economy begins to diminish has been pushed out.

households' balance sheets and so weighing on their spending. In addition, the federal fiscal stimulus is projected to soon become a source of drag on economic growth, and members may be worried that private demand could prove insufficient to sustain a robust recovery. Accordingly, the Committee may generally view the downside risks to the outlook for economic growth and inflation as quite pronounced, as in the "Weaker Economic Recovery" and "Greater Disinflation" scenarios presented in the Tealbook.

Although the current target range for the federal funds rate would remain unchanged, Alternative A2 would nonetheless deliver an explicit message that the Committee is dissatisfied with both the pace of economic recovery and with the trajectory of inflation by making three major changes relative to the Committee's August statement. First, the Committee would make clear its discomfort with the recent behavior of inflation by noting that measures of underlying inflation have trended lower in recent quarters, "to levels below those the Committee judges most consistent, over the longer run, with its mandate to promote maximum employment and price stability." Second, the Committee would go on to state that, "in the current environment, disinflation is an impediment to economic recovery," making clear that such low inflation is unwelcome. Moreover, the indication employed in the statement for Alternative B that inflation was expected to rise eventually to levels the Committee considers consistent with its mandate would not be used in this case. Third, the Committee would announce that it will increase its total holdings of securities to approximately $2.5 trillion by purchasing an additional $500 billion of longer-term Treasury securities over the next six months while maintaining its existing policy of reinvesting principal payments.

Relative to several months ago, Committee members may judge the costs of expanding its securities portfolio as having diminished to some degree. In particular, members may be more comfortable expanding LSAPs in light of the substantial progress that has been made in developing the mechanisms for managing the aggregate level of reserve balances. The Term Deposit Facility, in which interest-bearing term deposits are auctioned to depository institutions, has been successfully tested, and a program of regular small-value auctions has been announced. In addition, the Desk is prepared to transact large-dollar reverse repurchase agreements with its recently expanded list of counterparties. Members may therefore be at least somewhat less concerned that the large size of the Federal Reserve's portfolio will end up posing substantial constraints on the ability of the Committee to tighten financial conditions when needed.

If, in addition to taking this policy step, the Committee wanted to adopt a strategy of using the size of its securities portfolio more actively as a tool to adjust financial conditions going forward, it could decide to announce that it will "determine, each time it meets, whether an adjustment to its holdings of securities is needed to foster maximum employment and price stability." Spelling out the Committee's intention to take a more incremental approach from meeting to meeting could help investors understand the Committee's reaction function and so take into account possible future policy decisions. Such an outcome could prove stabilizing, helping the Committee to achieve its desired outcomes. On the other hand, more frequent, incremental purchases would likely reduce the size of the announcement effects associated with the purchases, possibly limiting their effectiveness. Moreover, unless more information was provided to complement the statement, perhaps through subsequent speeches and testimony, the Committee's reaction function likely would remain unclear at least for a time. Indeed, without further explanation, the words "upward or downward" in the statement could increase uncertainty if they were viewed as signaling a readiness to withdraw accommodation in the near term. (For more discussion of the various issues that such a strategy could raise, see the box entitled, "Issues Related to Using a More Flexible Approach to Adjusting the SOMA Securities Portfolio.")

Based on the results of the latest survey of primary dealers, market participants would be surprised by the Committee's resumption of LSAPs at this meeting. While the effects of additional purchases of longer-term Treasury securities are difficult to predict, staff estimates suggest that additional purchases of longer-term Treasury securities in the amount of $500 billion would initially reduce long-term yields by around 15 to 20 basis points, although a part of this effect appears to already be priced into markets.[4] Such a

[4] This estimate was calibrated assuming that the effects of additional asset purchases on long-term interest rates would be in the middle of the wide range of estimates provided in the Federal Reserve Bank of New York Staff Report of March 2010, "Large-Scale Asset Purchases by the Federal Reserve: Did They Work?" by Joseph Gagnon, Matthew Raskin, Julie Remache, and Brian Sack. In contrast, analyses of different SOMA portfolio strategies that the staff produced for the June and August 2010 FOMC meetings were based on estimates of LSAP effects that were at the upper end of the range reported by Gagnon et al. These higher estimates were similar to those originally used by staff to calibrate the effects of asset purchases, such as in the two memos sent to the FOMC in March 2009: "Economic Effects of Large-Scale Purchases of Long-Term Treasury Securities and Agency Debt and MBS," by Eileen Mauskopf and David Reifschneider; and "Expanding Large-Scale Asset Purchases: Effectiveness, Benefits, Risks, and, Strategies," by Joseph Gagnon, David Lucca, Jonathan McCarthy, Julie Remache, and Jennifer Roush. Because the latest study by Gagnon et al exploits additional data and analytical methods, it seems appropriate to adjust the calibration to reflect the more comprehensive results.

That said, the effects of asset purchases are subject to considerable uncertainty and depend on a number of factors, including whether market participants expect the Committee to repeat its action, how

Issues Related to Using a More Flexible Approach to Adjusting the SOMA Securities Portfolio

During the past two years, the FOMC undertook large-scale purchases of longer-term assets to provide policy stimulus by reducing term premiums and thus longer-term interest rates. Although the Committee stated that it would purchase "up to" specified amounts of securities over a given time frame, market participants generally did not expect the FOMC to buy significantly less than the maximum absent a substantial improvement in the economic outlook. The Committee's August 2010 decision to reinvest principal payments from agency debt and agency MBS appears more open-ended; the Committee explained that its decision was a response to the somewhat softer economic outlook but did not specify how long it would maintain the new policy. In addition, market participants now believe that further deterioration in the outlook could trigger additional expansion in the balance sheet. Under one variant of Alternative A2, the Committee would explicitly adopt an approach of more frequently adjusting the size of the SOMA portfolio as economic conditions or the outlook change.

The FOMC might choose such an approach to managing the SOMA portfolio because it sees this approach as similar to its method for adjusting the target federal funds rate before the financial crisis. If the Committee chooses to consider more frequent adjustments in the SOMA portfolio, it could use a framework akin to the Taylor rule to help guide its decisions. For example, a Taylor (1993) rule would call for a 25 basis point reduction in the federal funds rate in response to a ½ percentage point increase in the output gap or 0.2 percentage point decrease in inflation. The staff estimates that expanding the SOMA portfolio of longer-term assets by \$150 to \$200 billion would provide roughly the same stimulus as a 25 basis point reduction in the federal funds rate.[1]

Of course, the Committee need not follow a Taylor rule. Many estimated reaction functions recognize that the FOMC typically moved the federal funds rate gradually toward the level prescribed by Taylor-like rules by making a series of small adjustments. The Committee could choose a similarly gradual approach to adjusting the size of the SOMA portfolio. Moreover, if the Committee judges that the costs associated with altering the portfolio exceed those associated with changing the target federal funds rate, it could decide that somewhat larger shifts in economic conditions would be required to trigger changes in the SOMA's securities holdings than in the funds rate.[2]

An incremental approach to adjusting the SOMA portfolio might be fairly easy to explain to markets and the public if it were similar to the Committee's

[1] This rough equivalence is consistent with the middle of the wide range of estimates of the effects of the Committee's large-scale asset purchases on longer-term Treasury yields in 2008 and 2009, and with estimates of the historical relationship between changes in the federal funds rate and longer-term interest rates. Given this equivalence, the FRB/US model would suggest that a \$150 to \$200 billion increase in the SOMA's holdings of longer-term assets would raise real GDP by 0.1 percentage point after 4 quarters and by 0.2 percentage point after 8 quarters.

[2] If the costs associated with expanding or contracting the SOMA portfolio are primarily fixed costs, an incremental approach might be seen as inferior to a policy of changing the size of the portfolio only by a sizable increment, and only in response to a substantial change in economic conditions or the outlook.

historical reaction function for the target federal funds rate. Under the relevant variant of Alternative A2, the Committee would announce that it will reconsider the size of the SOMA portfolio at each future FOMC meeting, implying that changes in the outlook for economic activity and inflation may lead to adjustments in the portfolio.

Though a strategy of making incremental changes in the SOMA portfolio would be similar in some respects to the Committee's pre-crisis approach to adjusting its target for the federal funds rate, it could pose significant challenges nonetheless. The degree of stimulus associated with a given change in the size or composition of the portfolio is quite uncertain, as are the potential effects of such changes on the public's perceptions of the Committee's ability to exit smoothly from the period of exceptionally accommodative policy. Accordingly, the Committee—and the markets—would have to be prepared for a period of "learning by doing." In addition, the Committee would need to make decisions not only about the size of the SOMA portfolio but also about its composition (the mix of Treasury securities and agency MBS, for example) and the time period over which the Desk would undertake the purchases or sales that would be required to implement a desired change in the portfolio. Such decisions presumably would be guided by an assessment of conditions in these markets, the anticipated economic effects of purchases of different instruments, and the Desk's ability to change the SOMA's holdings in an orderly fashion.

The Committee also would need to reconsider the link between balance sheet policy and federal funds rate policy. One possibility is a "Last In, First Out" (LIFO) approach under which, as the recovery proceeds, the Committee sells assets before it begins to increase the federal funds rate; the FOMC could vary the pace of asset sales in response to economic developments. A second possibility is that the Committee could stick with its stated intention of raising the federal funds rate first and selling securities later, potentially on a fixed schedule; under this approach, the Committee presumably would change the federal funds rate rather than the size and composition of the SOMA portfolio to adjust the stance of monetary policy. A third possibility is for the Committee to adjust the federal funds rate and the size of its securities portfolio simultaneously. The LIFO approach likely implies a longer period of near-zero interest rates than the others. The second approach—raising the federal funds rate before beginning to adjust the balance sheet—likely would rely more heavily on new reserve draining tools, and result in a more gradual reduction in the size of the balance sheet, once it becomes appropriate to begin removing policy accommodation. Both approaches are consistent with an eventual return to a regime in which the Committee adjusts the stance of monetary policy by moving the federal funds rate. Under the third approach, adjustments to the size of the portfolio would remain an important instrument of monetary policy even after the federal funds rate rises above its effective lower bound.[3]

[3] If the costs associated with expanding or contracting the SOMA portfolio are primarily fixed costs, an incremental approach might be seen as inferior to a policy of changing the size of the portfolio only by a sizable increment, and only in response to a substantial change in economic conditions or the outlook.

response would likely be accompanied by a rise in stock prices and a decline in the foreign-exchange value of the dollar. However, if the unexpected decision to provide additional policy accommodation caused investors to conclude the Committee was more concerned than had been thought about the economic outlook, the effect on stock prices could be quite small.

THE CASE FOR ALTERNATIVE A1

If the Committee were particularly concerned about the possibility that underlying inflation and inflation expectations might remain too low or even trend lower still over time, it might be inclined to couple the policy actions taken under Alternative A2 with the additional step of being even more explicit in describing the level of inflation that the Committee sees as consistent with its mandate to promote maximum employment and price stability. Alternatives A1 and A2 both note that measures of underlying inflation have trended lower in recent quarters. But Alternative A1 would go on to point specifically to the Committee's primary benchmark for monitoring inflation—the price index for personal consumption expenditures—and state that underlying inflation is now running below the level of "2 percent or a bit less" that the Committee judges most consistent, over the longer run, with its mandate, where that judgment is read from the most recent Summary of Economic Projections.[5] By including such words in the statement, the Committee would indicate that it will give greater emphasis to the level of inflation relative to its benchmark when setting monetary policy to achieve its dual mandate going forward.

This increased clarity regarding the Committee's intentions for inflation could serve to better anchor inflation expectations, and therefore actual inflation. If so, then in the current environment, this change could help arrest the downtrend in underlying inflation. On the other hand, without additional communication from policymakers, the announcement might increase uncertainty about how the Committee will decide on its

quickly the purchases are expected to be made, and how long investors expect the Federal Reserve to hold the securities it acquires. The effects also may depend importantly on the pace at which the Desk buys or sells. In addition, the effects clearly depend on how market expectations for the path of the federal funds rate would respond to an asset purchase or sale.

[5] In the Summary of Economic Projections published in June, the central tendency of the Committee's longer-run projections of PCE inflation was 1.7 percent to 2.0 percent.

policy stance.[6] In particular, market participants could come to question the Committee's commitment to the "maximum employment" component of its dual mandate. (For a discussion of the operational issues raised by introducing more explicit language regarding the Committee's longer-run inflation objectives, see the box entitled, "Communication of the FOMC's Objectives and the Link to Its Policy Strategy.")

THE CASE FOR ALTERNATIVE C

Unlike the staff, Committee members may view the incoming data on economic activity and employment as having generally continued to evolve as they had expected over the intermeeting period. They may see the recent period of uneven economic performance as likely to be only a temporary "soft patch," with growth likely to pickup in a sustained way going forward, especially in light of the recent improvement in the incoming data. Members may also be concerned that as the economy recovers, the highly accommodative stance of monetary policy and very large Federal Reserve balance sheet currently in place could make it difficult to tighten policy as quickly as may be required, potentially allowing inflation pressures to build. In this case, the Committee might choose the statement and policy options outlined in Alternative C. Under this alternative, the Committee would characterize the economic recovery as "proceeding" and note that it "continues to anticipate a gradual return to higher levels of resource utilization in a context of price stability."

In addition, Alternative C would change the statement language to begin positioning the Committee for removal of policy accommodation. Although the target range for the federal funds rate would be maintained in this alternative, the forward guidance would indicate that economic conditions warranted "low levels" of the federal funds rate for "some time," instead of the "exceptionally low levels" for an "extended period" indicated in the Committee's August statement and retained in the other alternatives. Moreover, the Committee would maintain its existing policy of reinvesting principal payments from securities held in the SOMA only "for the time being," which would likely be read as suggesting that this policy could possibly be reversed quite soon.

Aside from their assessment of the incoming data, it could also be the case that some policymakers worry that an extended period of near-zero short-term interest rates

[6] To ensure that the Committee's change in strategy was well understood, additional communication about the strategy—outside of the statement and FOMC meeting minutes—would likely be useful for the Congress, the Administration, and the public.

Alternatives

Communication of the FOMC's Objectives and the Link to Its Policy Strategy

The expectations of financial market participants, firms, and households regarding monetary policy, inflation, and real activity depend in part on their perceptions of the Federal Reserve's inflation goal. The Committee could provide greater clarity about its desired inflation outcomes and hence about its policy strategy by specifying clearly the rate of inflation that it judges to be consistent, over the longer run, with its mandate to promote maximum employment and price stability. In providing this information, policymakers might wish to proceed by building on the framework embedded in the Summary of Economic Projections (SEP), which currently reports on participants' individual assessments of the longer-run mandate-consistent inflation rate as measured by the price index for personal consumption expenditures (PCE). For example, the Committee could indicate – as in Alternative A1 – its judgment that the dual mandate is consistent with PCE inflation over the longer run of "2 percent or a bit less" (in line with the central tendency of 1.7 to 2 percent for those projections in the SEP).

A more explicit focus on the Committee's longer-run inflation goal in its communications could, if the goal were deemed credible, be helpful in anchoring inflation expectations more firmly, which in turn could provide the Committee with greater latitude to provide policy stimulus in response to an adverse demand shock. A firmer anchoring of long-run expectations may also grant the Committee further leeway to "look through" transitory fluctuations in inflation—perhaps due to swings in food or energy prices—and to focus its actions on offsetting persistent shifts in inflation.

While a more explicit focus on the inflation outlook has some potential advantages, it could raise communications challenges. For example, the Committee would likely have to explain deviations of inflation from the announced range. The Committee might also need to provide more information to the public regarding its assessment of the persistent and transitory factors affecting inflation and the policy steps that would be consistent with achieving its long-run inflation objective over time. Such information could be provided to the public in FOMC statements, the minutes of FOMC meetings, and the Monetary Policy Report to the Congress, as well as in speeches and testimonies of Federal Reserve officials. An increased focus on inflation and the inflation outlook in communications with the public might also call for a greater focus on these issues in the Committee's deliberations.

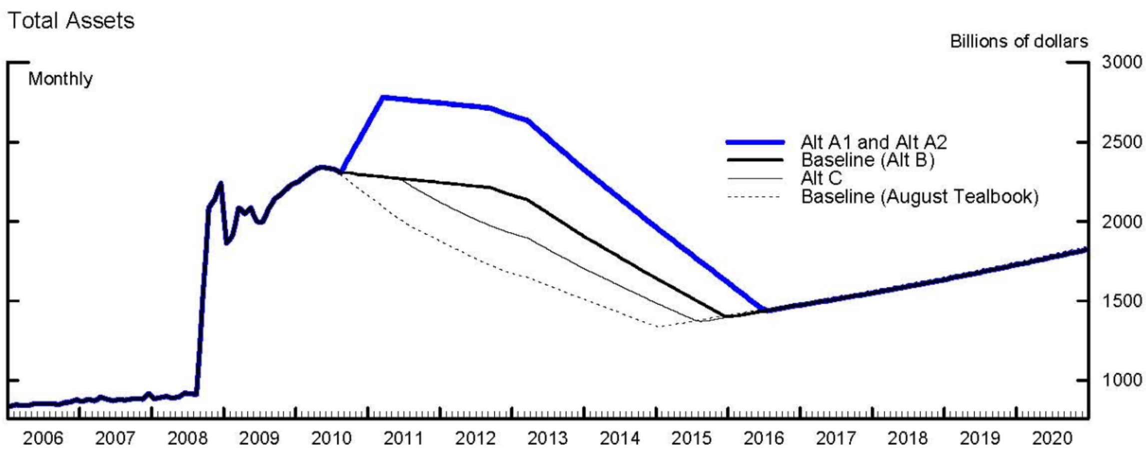
An increased focus on inflation in Committee communications could lead some to question the Committee's commitment to the "maximum employment" component of its dual mandate. Indeed, the Committee might choose to confer with members of the Congress and the Administration before announcing a specific numerical range for inflation consistent with its mandate in order to avoid any misunderstanding on this point. In addition, the Committee might choose to emphasize its continuing commitment to the dual mandate, but note that adopting a fixed target for the unemployment rate is not feasible because the natural rate of unemployment is outside of the central bank's control and varies over time due to demographic and structural factors. Policymakers could emphasize the extent to which the Committee's two objectives are complementary and mutually reinforcing over longer periods of time, and FOMC communications could also draw further attention to participants' longer-term projections of the unemployment rate in the SEP. At the present time, for example, the Committee could note that the actual unemployment rate is far above the range of 4.5 to 6 percent for the longer-term unemployment rate projections in the June SEP, and that the outlooks for inflation and unemployment currently have similar implications for the policy stance. Of course, the implications for the policy stance of the two legs of the dual mandate will likely conflict at times in the future. In such situations, providing the public with greater clarity about the Committee's intentions with regard to both parts of its mandate would be helpful in communicating the factors determining the Committee's policy stance.

could foster unintended consequences, potentially including a buildup of macroeconomic or financial imbalances. If left unchecked, such forces could conceivably culminate in a scenario such as the one presented in the "Higher Inflation" alternative simulation, in which inflation expectations jump. Members may view the associated economic costs of such outcomes as being high enough, and may view the effectiveness of the Committee's available policy tools in combating such scenarios as being uncertain enough, that they choose to guard against such outcomes by adopting Alternative C.

The announcement of the statement under Alternative C would come as a complete surprise to market participants. As noted above, the primary dealers largely do not expect major changes to the statement language at this meeting, and even see material odds of additional asset purchases by year-end. Therefore, the announcement of Alternative C would lead investors to greatly reassess their trajectory for the path of monetary policy, especially in the near term. Short- and intermediate-term interest rates would rise and stock prices would fall, possibly by substantial amounts. The foreign-exchange value of the dollar would likely appreciate. With no advanced warning of this change in the Federal Reserve's strategy, the functioning of some financial markets could possibly be disturbed, at least initially.

LONG-RUN PROJECTIONS OF THE BALANCE SHEET AND MONETARY BASE

The staff has prepared three scenarios for the Federal Reserve's balance sheet that correspond to the policy alternatives presented above: a baseline scenario corresponding to Alternative B, a second scenario corresponding to Alternatives A1 and A2, and a third scenario corresponding to Alternative C. 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.



Under the baseline and the scenario corresponding to Alternative C, the balance sheet peaked in size at $2.34 trillion in May 2010 and edges down in the near term as credit extensions are repaid, before declining more rapidly in the medium term as securities mature, prepay, or are sold. The rate of contraction differs under the two scenarios reflecting the different assumptions made regarding the duration of the reinvestment policy; under the baseline, the reinvestment policy is maintained through the third quarter of 2012 and under Alternative C, the reinvestment policy is maintained through the second quarter of 2011. Under Alternatives A1 and A2, the balance sheet expands in the near term and peaks at $2.78 trillion in March 2011, due to the additional $500 billion of longer-term Treasury securities purchased in these Alternatives, before contracting and eventually returning to the total asset path projected under the baseline in July 2016, at which time assets will be about $1.44 trillion. In all three scenarios, after reserve balances hit the assumed $25 billion floor and the U.S. Treasury's supplementary financing account has been drained, the balance sheet begins to expand as purchases of Treasury securities match the growth of Federal Reserve capital and notes in circulation.

Alternatives

In all three scenarios, the balance sheet reaches a size of about $1.8 trillion by the end of 2020.[7]

In the baseline scenario, which corresponds to Alternative B, the proceeds from maturing Treasury securities continue to be reinvested. Additionally, principal payments of agency MBS and agency debt securities are reinvested in longer-term Treasury securities until the target federal funds rate is assumed to liftoff from its current setting.[8] Immediately after the target federal funds rate increases, the baseline projection assumes that agency MBS and agency debt securities holdings are allowed to mature or prepay without reinvestment, while principal payments from Treasury securities continue to be reinvested. Six months after the assumed rise in the target federal funds rate, the FOMC begins asset sales.[9] Specifically, beginning at that time, remaining holdings of agency MBS and agency debt securities as well as longer-term Treasury securities that were purchased under the reinvestment policy are sold or run off over five years and reach zero by the end of the first quarter of 2018.[10]

In the scenario corresponding to Alternatives A1 and A2, an additional $500 billion of longer-term Treasury securities are purchased by the end of the first quarter of 2011, at which time, total SOMA holdings reach $2.55 trillion. Asset sales under this scenario, which begin at the same time as in the baseline scenario, include the sale of this additional $500 billion of longer-term Treasury securities. For this reason, total assets decline somewhat more rapidly relative to the baseline scenario once the sale of securities begins, as more securities are being sold over the same five-year period.

In the scenario corresponding to Alternative C, the reinvestment of agency MBS and agency debt securities is halted at the end of the second quarter of 2011, five quarters earlier than in the baseline. As a result, total assets decrease more rapidly than in the baseline from this point until the sale of assets starts.

Under the baseline scenario, total assets are projected to be higher over the next few years than in the baseline projection that was presented in August. This revision

[7] The composition of Federal Reserve assets in these projections differs notably at times from historical patterns. Prior to August 2007, U.S. Treasury securities made up 100 percent of the domestic securities portfolio. By contrast, under the baseline scenario, Treasury securities are projected to account for only around 44 percent of the domestic securities portfolio at the end of 2010. However, by the end of 2020, Treasury securities again account for 100 percent of the domestic securities portfolio.

[8] The Tealbook projection assumes that the federal funds rate lifts off in the fourth quarter of 2012. All scenarios assume a path for the federal funds rate consistent with this projection, independent of the projected size of the balance sheet under the different scenarios.

[9] The baseline balance sheet projection assumes that the tools to drain reserve balances (reverse repurchase agreements and the term deposit facility) are not used.

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

reflects the increase in holdings of longer-term Treasury securities stemming from the reinvestment policy. The path for holdings of agency MBS is lower than in the August Tealbook balance sheet projection resulting from a somewhat faster rate of forecasted prepayments of agency MBS.

On the liability side of the balance sheet, under the baseline, reserve balances are higher than in the previous Tealbook balance sheet projection over the next couple of years as a result of the reinvestment policy. With this higher path for reserve balances, the U.S. Treasury's supplementary financing account is not run down to zero until January 2016, one year later than in the last projection. Under the baseline scenario, the monetary base is projected to contract, on net, through mid-2015, reflecting the decline in reserve balances.

Growth Rates for the Monetary Base

Date	Baseline	Alternatives A1 and A2	Alternative C
		Percent, annual rate	
		Monthly	
Jan-10	-17.8	-17.8	-17.8
Feb-10	72.2	72.2	72.2
Mar-10	-19.7	-19.7	-19.7
Apr-10	-37.6	-37.6	-37.6
May-10	-2.0	-2.0	-2.0
Jun-10	-5.8	-5.8	-5.8
Jul-10	-2.2	-2.2	-2.2
Aug-10	-2.3	-2.3	-2.3
Sep-10	1.5	23.0	1.5
Oct-10	13.3	55.3	13.3
Nov-10	0.8	41.1	0.8
Dec-10	-16.5	23.9	-16.5
		Quarterly	
2010 Q1	14.0	14.0	14.0
2010 Q2	-10.4	-10.4	-10.4
2010 Q3	-2.6	-0.2	-2.6
2010 Q4	2.8	36.0	2.8
		Annual - Q4 to Q4	
2009	41.5	41.5	41.5
2010	0.9	9.8	0.9
2011	-0.4	14.3	-4.8
2012	-3.5	-2.8	-11.6
2013	-12.9	-12.8	-12.9
2014	-16.7	-18.0	-15.6
2015	-8.2	-21.1	3.5

Note: Not seasonally adjusted.

Alternatives

DEBT, BANK CREDIT, AND MONEY FORECASTS

Domestic nonfinancial sector debt is projected to expand at an average annual rate of about 4 percent during the second half of this year, with private domestic nonfinancial debt remaining about unchanged and government debt growing rapidly; domestic nonfinancial debt is expected to grow at a 5 percent pace in 2011 and 2012. In spite of historically low mortgage rates, sluggish housing demand and declining house prices are projected to weigh heavily on the growth of residential mortgage debt through the first half of 2011; this category of debt is projected to expand a bit in late 2011 and 2012 as conditions in the housing sector improve. After declining a bit further in the current quarter, consumer credit is expected to pick up late this year and then expand at a robust pace in 2011 and 2012, supported by a gradual increase in spending on consumer durables. Although standards and terms for bank loans to businesses are easing somewhat, lending conditions nonetheless remain tight, and the relatively low projected level of capital spending and firms' very high holdings of liquid assets suggest continued weak demand for external funding. Consequently, borrowing by nonfinancial businesses is expected to be tepid, with debt in this sector increasing at about a 1½ percent rate over the second half of 2010 and at a somewhat faster pace in 2011 and 2012. Federal government debt is projected to grow at a double-digit rate over the forecast period.

Commercial bank credit is expected to increase slightly in the current quarter, as a continued decline in loans is offset by robust growth in banks' securities holdings. After running off for the first three quarters of 2010, however, bank credit is projected to increase about 1½ percent in the fourth quarter, 2¾ percent in 2011, and 3½ percent in 2012, as modest loan growth resumes and securities expand at a moderate rate. The runoff in commercial and industrial loans is expected to end next quarter, but growth in this loan category is projected to remain subdued throughout the forecast period. We expect commercial real estate loans to contract over 2011 and remain flat in 2012, as fundamentals continue to depress activity in that market. Consumer loans at banks are forecasted to contract slightly in the second half of 2010, and then increase modestly in 2011 and 2012 as economic activity picks up, and we anticipate residential real estate loans will accelerate gradually over the same period. Banks' securities holdings are projected to expand at a moderate pace over the forecast period, as banks continue to favor safe and liquid investments amid weak loan demand and solid deposit growth.

M2 is projected to expand at a slower pace than nominal GDP over the forecast period. The relatively slow growth of M2 reflects a projected shift in investors' portfolio allocations away from safe assets in M2 and toward riskier assets as overall financial conditions and the economic outlook continue to improve. Growth of liquid deposits is anticipated to slow somewhat from its robust 2009 pace but remain solid over the forecast period. Small time deposits and retail money market funds are projected to contract through 2012, though with a moderating pace of decline. Currency growth is projected to be subdued as precautionary demand for currency from abroad wanes.

Growth Rates for M2

(Percent, seasonally adjusted annual rate)

Monthly Growth Rates	Tealbook Forecast*
Jan-10	-7.9
Feb-10	8.7
Mar-10	-3.4
Apr-10	-3.9
May-10	11.6
Jun-10	4.4
Jul-10	0.0
Aug-10	6.6
Sep-10	4.8
Oct-10	1.1
Nov-10	1.1
Dec-10	1.2
Quarterly Growth Rates	
2010 Q1	0.0
2010 Q2	2.0
2010 Q3	4.2
2010 Q4	2.5
Annual Growth Rates	
2009	5.1
2010	2.2
2011	1.3
2012	4.5

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

Alternatives

DIRECTIVE

The August directive appears below. Drafts for a September directive that correspond to each of the four policy alternatives appear on subsequent pages. The directive for Alternatives B and C would instruct the Desk to maintain the SOMA's total holdings of longer-term securities at approximately its current level by continuing to reinvest repayments of principal from agency debt and MBS in longer-term Treasury securities. The directives corresponding to Alternatives A1 and A2 would instruct the Desk to purchase $500 billion of longer-term Treasury securities by the end of March 2011 while continuing the current portfolio policy of reinvesting principal payments.

August 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 maintain the total face value of domestic securities held in the System Open Market Account at approximately $2 trillion by reinvesting principal payments from agency debt and agency mortgage-backed securities in longer-term Treasury securities. The Committee directs the Desk to engage in dollar roll and coupon swap transactions as necessary to facilitate settlement of the Federal Reserve's agency MBS transactions. 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.

September 2010 FOMC Directive — Alternative A1

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 about $500 billion of longer-term Treasury securities by the end of March 2011 in order to increase the total face value of domestic securities held in the System Open Market Account to approximately $2.5 trillion.** The Committee **also** directs the Desk to ~~maintain the total face value of domestic securities held in the System Open Market Account at approximately $2 trillion by~~ reinvest~~ing~~ principal payments from agency debt and agency mortgage-backed securities in longer-term Treasury securities. ~~The Committee directs the Desk to engage in dollar roll and coupon swap transactions as necessary to facilitate settlement of the Federal Reserve's agency MBS transactions.~~ 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.

September 2010 FOMC Directive — Alternative A2

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 about $500 billion of longer-term Treasury securities by the end of March 2011 in order to increase the total face value of domestic securities held in the System Open Market Account to approximately $2.5 trillion.** The Committee **also** directs the Desk to ~~maintain the total face value of domestic securities held in the System Open Market Account at approximately $2 trillion by~~ reinvest~~ing~~ principal payments from agency debt and agency mortgage-backed securities in longer-term Treasury securities. ~~The Committee directs the Desk to engage in dollar roll and coupon swap transactions as necessary to facilitate settlement of the Federal Reserve's agency MBS transactions.~~ 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.

September 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 maintain the total face value of domestic securities held in the System Open Market Account at approximately $2 trillion by reinvesting principal payments from agency debt and agency mortgage-backed securities in longer-term Treasury securities. ~~The Committee directs the Desk to engage in dollar roll and coupon swap transactions as necessary to facilitate settlement of the Federal Reserve's agency MBS transactions.~~ 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

September 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 maintain the total face value of domestic securities held in the System Open Market Account at approximately $2 trillion by reinvesting principal payments from agency debt and agency mortgage-backed securities in longer-term Treasury securities. ~~The Committee directs the Desk to engage in dollar roll and coupon swap transactions as necessary to facilitate settlement of the Federal Reserve's agency MBS transactions.~~ 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	-1.2	-2.4	-0.6
Lagged headline inflation	-1.3	-2.5	-0.7
Projected headline inflation	-1.1	-2.5	-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	$i_t = 1.18 i_{t-1} - 0.38 i_{t-2} + 0.20[0.98 + 1.72\pi_{t+2\|t}$ $+2.29\left(y_{t+1\|t} - y_{t+1\|t}^*\right) - 1.37(y_{t-1} - y_{t-1}^*)]$
Taylor (1993) rule	$i_t = 2 + \pi_t + 0.5(\pi_t - \pi^*) + 0.5(y_t - y_t^*)$
Taylor (1999) rule	$i_t = 2 + \pi_t + 0.5(\pi_t - \pi^*) + (y_t - y_t^*)$
First-difference rule	$i_t = i_{t-1} + 0.5\left(\pi_{t+3\|t} - \pi^*\right) + 0.5(\Delta^4 y_{t+3\|t} - \Delta^4 y_{t+3\|t}^*)$

FRB/US MODEL SIMULATIONS

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

INFORMATION FROM FINANCIAL MARKETS

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

NEAR-TERM PRESCRIPTIONS OF SIMPLE POLICY RULES

These prescriptions are calculated using Tealbook projections for inflation and the output gap. 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 September 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 August 31, 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 fourth quarter of 2012. The balance sheet projections assume that no use of short-term draining tools is necessary to achieve the projected path for the federal funds rate.

ASSETS

Treasury securities, agency MBS, and agency debt securities

- The baseline scenario, which corresponds to Alternative B.
    - Treasury securities held in the SOMA portfolio are reinvested as they mature. The current weighted average maturity of Treasury securities is about seven years.
    - Principal payments of agency MBS and agency debt securities are reinvested in Treasury coupon securities ("longer-term Treasury securities") until the federal funds rate increases in the fourth quarter of 2012.
    - The Federal Reserve will begin to sell agency MBS and agency debt securities, as well as longer-term Treasury securities that were purchased under the reinvestment policy, six months after the FOMC increases the federal funds rate. At this point, the holdings of agency MBS and agency debt securities and longer-term Treasury securities purchased under the reinvestment policy are reduced over five years and reach zero by the end of the first quarter of 2018.
    - For agency MBS, the rate of prepayment is based on estimates of housing market factors from one of the program's investment managers and interest rate projections from the Tealbook. The projected rate of prepayment is sensitive to these underlying assumptions.
- Under Alternatives A1 and A2, an additional $500 billion of longer-term Treasury securities are purchased by the end of the first quarter of 2011. Asset sales under the

Explanatory Notes

scenario associated with these alternatives, which begin at the same time as in the baseline scenario, include the sale of the additional $500 billion of longer-term Treasury securities.

- Under Alternative C, the reinvestment of the proceeds of agency MBS and agency debt securities is halted at the end of the second quarter of 2011, five quarters earlier than in the baseline. The Tealbook projects that GDP accelerates in 2011, and this alternative assumes that the FOMC halts its policy of reinvestment in response.

- In all three scenarios, a minimum level of $25 billion is set for reserve balances. To ensure that reserve balances do not fall below this minimum 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 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 $49 billion in March 2010. Credit extended through this facility declines to zero by the end of 2015, reflecting loan maturities and prepayments.

- The assets held by TALF LLC increase to $1.3 billion by the end of 2014, before declining to zero thereafter. 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 not to 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, increases slightly to $51 billion in October 2010 and then declines to zero by the end of 2013.

- The assets held by Maiden Lane LLC, Maiden Lane II LLC, and Maiden Lane III LLC are sold over time and reach either zero or a minimal level by the end of 2016.

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 the first quarter of 2011.[1] At that point, the TGA drops back to its historical target level of $5 billion 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.

- 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.

[1] 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.

Federal Reserve Balance Sheet
End-of-Year Projections -- Baseline Scenario (Alternative B)

		End-of-Year					
	Aug 01, 2010	2010	2012	2014	2016	2018	2020
				$ Billions			
Total assets	2,308	2,292	2,172	1,653	1,471	1,631	1,820
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	37	37	11	2	0	0	0
Term Asset-Backed Securities Loan Facility (TALF)	37	37	11	2	0	0	0
Support for specific institutions	114	100	49	9	2	0	0
Credit extended to AIG	46	47	20	0	0	0	0
Net portfolio holdings of Maiden Lane LLC, Maiden Lane II LLC, and Maiden Lane III	68	53	29	9	2	0	0
Securities held outright	2,046	2,054	2,024	1,565	1,399	1,564	1,757
U.S. Treasury securities	786	906	1,311	1,124	1,228	1,564	1,757
Agency debt securities	157	147	77	39	16	0	0
Agency mortgage-backed securities	1,103	1,000	636	402	154	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	111	100	87	76	70	67	64
Total liabilities	2,250	2,233	2,094	1,550	1,334	1,450	1,582
Selected liabilities:							
Federal Reserve notes in circulation	908	917	978	1,109	1,226	1,342	1,474
Reverse repurchase agreements with foreign official and international accounts	60	60	59	59	59	59	59
Deposits with Federal Reserve Banks	1,264	1,237	1,041	367	35	35	35
Reserve balances held by depository institutions	984	964	831	157	25	25	25
U.S. Treasury, general account	76	70	5	5	5	5	5
U.S. Treasury, supplementary financing account	200	200	200	200	0	0	0
Other balances[1]	2	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 -- Alternatives A1 and A2

	Aug 01, 2010	End-of-Year 2010	2012	2014	2016	2018	2020
		$ Billions					
Total assets	2,308	2,578	2,672	1,978	1,471	1,631	1,820
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	37	37	11	2	0	0	0
Term Asset-Backed Securities Loan Facility (TALF)	37	37	11	2	0	0	0
Support for specific institutions	114	100	49	9	2	0	0
Credit extended to AIG	46	47	20	0	0	0	0
Net portfolio holdings of Maiden Lane LLC, Maiden Lane II LLC, and Maiden Lane III	68	53	29	9	2	0	0
Securities held outright	2,046	2,340	2,524	1,890	1,399	1,564	1,757
U.S. Treasury securities	786	1,192	1,811	1,449	1,228	1,564	1,757
Agency debt securities	157	147	77	39	16	0	0
Agency mortgage-backed securities	1,103	1,000	636	402	154	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	111	100	87	76	70	67	64
Total liabilities	2,250	2,519	2,594	1,875	1,334	1,450	1,582
Selected liabilities:							
Federal Reserve notes in circulation	908	917	978	1,109	1,226	1,342	1,474
Reverse repurchase agreements with foreign official and international accounts	60	60	59	59	59	59	59
Deposits with Federal Reserve Banks	1,264	1,522	1,541	692	35	35	35
Reserve balances held by depository institutions	984	1,250	1,331	482	25	25	25
U.S. Treasury, general account	76	70	5	5	5	5	5
U.S. Treasury, supplementary financing account	200	200	200	200	0	0	0
Other balances[1]	2	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

	Aug 01, 2010	2010	2012	2014	2016	2018	2020
		End-of-Year					
		$ Billions					
Total assets	2,308	2,292	1,931	1,496	1,471	1,631	1,820
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	37	37	11	2	0	0	0
Term Asset-Backed Securities Loan Facility (TALF)	37	37	11	2	0	0	0
Support for specific institutions	114	100	49	9	2	0	0
Credit extended to AIG	46	47	20	0	0	0	0
Net portfolio holdings of Maiden Lane LLC, Maiden Lane II LLC, and Maiden Lane III	68	53	29	9	2	0	0
Securities held outright	2,046	2,054	1,783	1,408	1,399	1,564	1,757
U.S. Treasury securities	786	906	1,070	968	1,228	1,564	1,757
Agency debt securities	157	147	77	39	16	0	0
Agency mortgage-backed securities	1,103	1,000	636	402	154	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	111	100	87	76	70	67	64
Total liabilities	2,250	2,233	1,853	1,393	1,334	1,450	1,582
Selected liabilities:							
Federal Reserve notes in circulation	908	917	978	1,109	1,226	1,342	1,474
Reverse repurchase agreements with foreign official and international accounts	60	60	59	59	59	59	59
Deposits with Federal Reserve Banks	1,264	1,237	800	211	35	35	35
Reserve balances held by depository institutions	984	964	590	25	25	25	25
U.S. Treasury, general account	76	70	5	5	5	5	5
U.S. Treasury, supplementary financing account	200	200	200	176	0	0	0
Other balances[1]	2	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