

Accessible Version

Meeting of the Federal Open Market Committee April 27-28, 2010 Presentation Materials

[Presentation Materials \(PDF\)](#)

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Appendix 1: Materials used by Mr. Sack

Material for

FOMC Presentation: *Financial Market Developments and Desk Operations*

Brian Sack
April 27, 2010

Class II FOMC - Restricted FR

Exhibit 1

Top-left panel
(1)

Title: Equity Prices

Series: Standard & Poor's 500 Index, MSCI World Index

Horizon: August 1, 2008 - April 23, 2010

Description: Major equity indexes advanced over the intermeeting period.

A vertical line marks the FOMC meeting of March 16, 2010.

Source: Bloomberg

Top-right panel
(2)

Title: Equity Risk Premium

Series: Equity Premium

Horizon: January 1, 1990 - April 21, 2010

Description: The equity risk premium remains elevated.

Source: Federal Reserve Board of Governors.

Middle-left panel
(3)

Title: Corporate Bond Spreads

Series: High yield and investment grade corporate bond spreads

Horizon: August 1, 2008 - April 22, 2010

Description: Corporate bond spreads narrowed further over the intermeeting period.

Source: Bank of America

Middle-right panel

(4)

Title: CMBS Spreads

Series: CMBS spreads for junior, mezzanine and super senior tranches

Horizon: August 1, 2008 - April 16, 2010

Description: CMBS spreads narrowed over the intermeeting period.

Source: JP Morgan

Bottom-left panel

(5)

Title: Bank Equities

Series: Percent change in selected financial institution equity prices from 3/15/10 to 4/15/10, and from 4/15/10 to 4/26/10

Horizon: March 15, 2010 - April 26, 2010

Description: Equity prices gained sharply through mid-April, but declined following the SEC's announcement of legal action against Goldman Sachs on April 16.

GS, DB, UBS, JPM, BAC, WFC, MS, C, Regional Bank Index

Source: Bloomberg

Bottom-right panel

(6)

Title: Peripheral Euro-Area Yield Spreads to German Debt*

Series: Level of the debt spread on March 15, 2010, and change in the spread between March 15 and April 26

Horizon: March 15, 2010 - April 26, 2010

Description: Bond spreads on Greek and other peripheral Euro-area countries (Portugal, Ireland, and Spain) have widened over the intermeeting period.

* 2-yr yields. [Return to text](#)

Source: Bloomberg

Exhibit 2

Top-left panel

(7)

Title: Implied Federal Funds Rate

Series: Future federal funds rates implied by Eurodollar and federal funds futures contracts

Horizon: 3/15/10, 4/23/10

Description: The implied path of the federal funds rate has not changed over the intermeeting period.

Source: Federal Reserve Bank of New York

Top-right panel

(8)

Title: Average Probability Distribution of First Policy Rate Increase

Series: Primary dealer and buy-side firm expectations for the timing of the first policy rate increase

Horizon: N/A

Description: Survey respondents placed the highest probabilities on the first tightening occurring either in the second half of this year or the first half of next year.

Source: Federal Reserve Bank of New York Policy Survey, including responses from primary dealers and buy-side firms

Middle-left panel

(9)

Title: Treasury Yields

Series: Yields for the 2-year, 5-year, and 10-year Treasury note

Horizon: August 1, 2008 - April 23, 2010

Description: Treasury yields edged higher over the intermeeting period.

Source: Bloomberg

Middle-right panel

(10)

Title: Swap Spreads

Series: 2-year and 10-year swap spreads

Horizon: August 1, 2008 - April 23, 2010

Description: Swap spreads have reached unusually tight levels by historical standards.

Source: Bloomberg

Bottom-left panel

(11)

Title: 10-Year Treasury Term Premium

Series: Treasury term premium

Horizon: August 1, 2005 - April 23, 2010

Description: The Treasury term premium remains higher than its levels in recent years.

Source: Federal Reserve Bank of New York

Bottom-right panel

(12) *Average Probability of Federal Reserve Treasury Redemption Policies*

Treasuries Redeemed	2010 Q2	2011 Q2	2012 Q2
All	23%	24%	23%
Some	11%	26%	34%
None	66%	50%	43%

Source: Federal Reserve Bank of New York Dealer Policy Survey

Exhibit 3

Top-left panel

(13)

Title: Weekly Pace of Purchases

Series: Weekly purchases of MBS and agency debt

Horizon: December 10, 2008 - April 21, 2010

Description: The desk completed the purchases of agency debt and MBS at the end of March.

Source: Federal Reserve Bank of New York

Top-right panel

(14)

Title: MBS Weekly Trading Volumes

Series: Four-week moving average of MBS trading volumes

Horizon: January 1, 2008 - April 21, 2010

Description: Liquidity in the MBS market has not been materially affected by the end of the purchase programs.

Source: FR2004 (1/2 interdealer + customer)

Middle-left panel

(15)

Title: MBS Spreads

Series: Fannie Mae fixed-rate current coupon option-adjusted spreads to Treasury and to swaps

Horizon: January 1, 2009 - April 22, 2010

Description: MBS spreads have moved higher from the very low levels reached in 2009.

Source: Barclays Capital

Middle-right panel

(16)

Title: Impact on Yields from Purchase Programs

Series: Primary dealer and buy-side firm beliefs concerning the impact of the purchase programs on yields

Horizon: N/A

Description: Survey respondents believe the effect of the purchases was as much as 100 bps but that about 30 bps of that effect has unwound.

Source: Federal Reserve Bank of New York Policy Survey, including responses from primary dealers and buy-side firms

Bottom-left panel

(17) *Probability of Asset Sales*

	Time Horizon	
	2 Yrs	5 Yrs
Treasuries	15%	25%
Agencies	20%	50%
MBS	25%	70%

Source: Federal Reserve Bank of New York Policy Survey, including responses from primary dealers and buy-side firms

Bottom-right panel

(18)

Title: Impact on Yields from MBS Sales

Series: Primary dealer and buy-side firm beliefs about the impact of MBS sales on yields

Horizon: N/A

Description: Survey respondents believe that a decision to begin selling MBS would put upward pressure on Treasury yields and the MBS rate.

Source: Federal Reserve Bank of New York Policy Survey, including responses from primary dealers and buy-side firms

Exhibit 4

Top-left panel

(19)

Title: Treasury Repo and Fed Funds Rates

Series: The general collateral Treasury repo rate and the effective federal funds rate

Horizon: October 1, 2009 - April 23, 2010

Description: Overnight interest rates have firmed since the beginning of March.

Source: Federal Reserve Bank of New York

Top-right panel

(20)

Title: Excess Reserves and the Fed Funds Rate

Series: The effective federal funds rate and the level of excess reserves

Horizon: January 2, 2009 - April 23, 2010

Description: Recent observations for the effective federal funds rate have been higher than they had been in the past at similarly high levels of excess reserves.

Source: Federal Reserve Bank of New York

Bottom-left panel

(21)

Title: Fed Funds Futures Rates

Series: Rates implied by federal funds futures contracts

Horizon: February 1, 2010 - April 23, 2010

Description: The rates on federal funds futures contracts through May have all shifted higher.

Source: Bloomberg

Bottom-right panel

(22)

Title: Factors Leading to Increase in Fed Funds Rate*

Series: Survey respondents' rankings of various factors leading to the recent increase in the fed funds rate

Horizon: N/A

Description: Survey respondents have pointed to the increase in the SFP issuance and the supply of Treasury collateral as the most important factors in recent firmness in the federal funds rate.

Announcement of SFP: 3.17. Increases in Treasury Supply: 2.94. Decreases in Reserves: 2.47. GSE Delinquent Buyouts: 2.24. Increase in Primary Credit Rate: 1.47.

* Ratings were constructed by assigning the following values: Not important=1, Somewhat Important=2, Important=3, Very Important=4. The weighted average was then taken to construct the average rating. [Return to text](#)

Source: Federal Reserve Bank of New York Dealer Policy Survey

Appendix 2: Materials used by Mr. Madigan

Material for **Briefing on Strategies for Asset Sales and Redemptions**

Brian Madigan
April 27, 2010

Class I FOMC - Restricted Controlled (FR)

**Table 1: Possible Longer-Run Approaches to Redemptions and Asset Sales
Characteristics Assumed in the Staff Analysis**

	Treasury Redemptions Begin	Sales of agency-related securities			Conditionality of Sales
		Average pace \$billion/month	Start	Finish	
Option 1: No asset sales	None	\$0	N/A	N/A	N/A
Option 2: Asset sales after increase in target	May 3	\$15	One quarter after target increase	Five years after sales commence	Moderate
Option 3: Conditional pace of sales	May 3	\$15	Before increase in the target, but increase in target under Option 3 would be later than under baseline.	Five years after sales commence, depending on developments	Strong
Option 4: Reverse taper	May 3	\$5 in 2011 \$10 in 2012 \$20 in 2013-15	January 2011	December 2015	Virtually none
Option 5: Rapid sales	May 3	\$30	July 2010	June 2013	Limited

Exhibit 2 Balance Sheets

Greenbook-consistent Projections

*Top-left panel
SOMA holdings*

Monthly
\$ Billions

Period	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6*
January 2010	1910.38	1910.38	1910.38	1910.38	1910.38	1910.38
February 2010	1970.88	1970.88	1970.88	1970.88	1970.88	1970.88
March 2010	2014.39	2014.39	2014.39	2014.39	2014.39	2014.39
April 2010	2041.29	2042.59	2042.89	2042.89	2042.89	2042.57
May 2010	2049.15	2021.85	2022.25	2022.25	2022.25	2021.83
June 2010	2065.72	2034.81	2035.40	2035.40	2035.40	2035.40
July 2010	2055.80	2021.92	2022.56	2022.56	1961.55	2022.54

August 2010	2048.81	2007.90	2008.57	2008.58	1916.94	2008.54
September 2010	2042.30	1996.78	1997.48	1997.49	1874.74	1997.43
October 2010	2030.55	1982.38	1983.18	1983.18	1834.44	1983.08
November 2010	2021.73	1968.28	1969.18	1969.17	1791.50	1969.03
December 2010	2014.11	1954.96	1955.96	1955.93	1748.57	1955.75
January 2011	2002.38	1937.40	1939.93	1934.27	1705.79	1939.04
February 2011	1992.10	1917.41	1921.47	1910.16	1660.58	1921.34
March 2011	1972.44	1899.39	1904.99	1888.04	1617.34	1896.25
April 2011	1957.87	1880.62	1886.12	1863.52	1571.72	1873.73
May 2011	1944.66	1865.33	1870.72	1842.49	1529.57	1856.05
June 2011	1935.07	1849.28	1854.58	1820.70	1486.67	1841.24
July 2011	1924.24	1834.71	1839.36	1799.83	1444.70	1825.98
August 2011	1915.02	1817.65	1821.65	1776.49	1400.24	1809.84
September 2011	1906.95	1804.04	1807.40	1756.59	1359.23	1798.30
October 2011	1900.00	1788.81	1791.33	1734.88	1316.41	1786.04
November 2011	1891.90	1768.12	1769.79	1707.70	1268.12	1767.15
December 2011	1883.63	1752.92	1753.76	1686.02	1225.33	1753.60
January 2012	1876.11	1733.42	1719.97	1656.55	1180.56	1734.01
February 2012	1868.59	1711.13	1683.40	1624.30	1133.00	1711.63
March 2012	1861.06	1691.05	1649.04	1594.26	1087.65	1691.46
April 2012	1854.16	1648.81	1605.27	1554.82	1032.91	1662.52
May 2012	1847.27	1613.12	1569.43	1523.30	999.71	1641.51
June 2012	1840.37	1583.58	1539.75	1497.94	1009.39	1626.65
July 2012	1833.04	1551.53	1507.55	1470.07	1019.09	1608.83
August 2012	1825.72	1512.17	1468.04	1434.87	1028.82	1583.70
September 2012	1818.40	1481.95	1437.67	1408.82	1038.56	1567.71
October 2012	1810.87	1451.87	1407.44	1382.92	1048.00	1551.67
November 2012	1803.35	1416.44	1371.87	1351.66	1057.79	1530.29
December 2012	1795.83	1386.30	1341.58	1325.70	1067.60	1514.19
January 2013	1789.77	1359.27	1314.48	1293.57	1075.50	1500.54
February 2013	1783.72	1330.14	1285.28	1259.35	1084.24	1484.80
March 2013	1777.66	1306.39	1261.47	1230.50	1093.00	1474.44
April 2013	1771.99	1281.87	1236.88	1200.89	1102.94	1463.72
May 2013	1766.32	1258.92	1213.86	1172.84	1111.76	1454.58
June 2013	1760.66	1235.59	1190.47	1144.42	1120.60	1445.07
July 2013	1754.57	1211.81	1166.62	1130.46	1129.47	1434.68
August 2013	1748.49	1184.34	1139.09	1139.56	1138.37	1420.60
September 2013	1742.40	1160.94	1146.81	1148.68	1147.30	1410.60
October 2013	1735.99	1159.05	1155.98	1157.84	1156.25	1401.43
November 2013	1729.58	1168.16	1165.17	1167.02	1165.23	1389.56
December 2013	1723.17	1177.30	1174.38	1176.23	1174.23	1379.41
January 2014	1717.46	1184.27	1181.59	1183.40	1181.36	1367.92
February 2014	1711.74	1191.25	1188.82	1190.60	1188.52	1355.18

March 2014	1706.03	1198.26	1196.07	1197.82	1195.69	1344.01
April 2014	1700.57	1205.29	1203.34	1205.06	1202.89	1333.22
May 2014	1695.11	1212.34	1210.64	1212.32	1210.10	1319.72
June 2014	1689.65	1219.41	1217.95	1219.60	1217.34	1309.35
July 2014	1683.56	1226.51	1225.29	1226.91	1224.61	1298.44
August 2014	1677.47	1233.62	1232.65	1234.24	1231.90	1285.60
September 2014	1671.38	1241.01	1240.03	1241.59	1239.20	1274.96
October 2014	1664.81	1248.09	1247.44	1248.96	1246.54	1263.54
November 2014	1658.25	1255.19	1254.87	1256.36	1253.89	1251.77
December 2014	1651.68	1262.31	1262.32	1263.78	1261.27	1259.23
January 2015	1646.81	1269.23	1269.19	1270.58	1268.03	1266.08
February 2015	1641.93	1276.16	1276.08	1277.41	1274.81	1272.95
March 2015	1637.06	1283.12	1283.00	1284.26	1281.61	1279.84
April 2015	1632.57	1290.10	1289.93	1291.13	1288.43	1286.75
May 2015	1628.08	1297.09	1296.89	1298.01	1295.27	1293.67
June 2015	1623.58	1303.91	1303.86	1304.92	1302.13	1300.62
July 2015	1618.28	1310.75	1310.86	1311.85	1309.01	1307.59
August 2015	1612.98	1317.60	1317.87	1318.80	1315.92	1314.59
September 2015	1607.67	1324.48	1324.91	1325.77	1322.84	1321.60
October 2015	1601.88	1331.38	1331.97	1332.76	1329.79	1328.63
November 2015	1596.09	1338.30	1339.05	1339.78	1336.75	1335.68
December 2015	1590.30	1345.24	1346.15	1346.81	1343.74	1342.76
January 2016	1584.28	1352.17	1352.98	1353.63	1350.65	1349.77
February 2016	1578.26	1359.12	1359.84	1360.47	1357.58	1356.80
March 2016	1572.25	1366.09	1366.71	1367.33	1364.53	1363.85
April 2016	1566.67	1373.07	1373.60	1374.21	1371.49	1370.92
May 2016	1561.10	1380.07	1380.51	1381.11	1378.48	1378.01
June 2016	1555.53	1387.10	1387.44	1388.02	1385.48	1385.11
July 2016	1549.15	1394.14	1394.39	1394.96	1392.51	1392.24
August 2016	1542.77	1401.20	1401.36	1401.91	1399.55	1399.39
September 2016	1536.39	1408.28	1408.34	1408.89	1406.61	1406.55
October 2016	1529.55	1415.39	1415.35	1415.88	1413.69	1413.73
November 2016	1522.71	1422.51	1422.38	1422.89	1420.80	1420.94
December 2016	1515.87	1429.65	1429.42	1429.92	1427.92	1428.16
January 2017	1510.27	1436.57	1436.35	1436.84	1434.82	1435.17
February 2017	1504.67	1443.51	1443.29	1443.78	1441.74	1442.19
March 2017	1499.06	1450.47	1450.25	1450.74	1448.68	1449.24
April 2017	1493.95	1457.46	1457.23	1457.72	1455.64	1456.30
May 2017	1488.83	1464.46	1464.23	1464.72	1462.62	1463.39
June 2017	1483.71	1471.48	1471.25	1471.74	1469.62	1470.49
July 2017	1483.37	1478.52	1478.29	1478.78	1476.64	1477.61
August 2017	1490.49	1485.58	1485.35	1485.83	1483.68	1484.76
September 2017	1497.63	1492.66	1492.43	1492.91	1490.74	1491.92
October 2017	1504.79	1499.76	1499.53	1500.01	1497.82	1499.10

November 2017	1511.97	1506.88	1506.65	1507.13	1504.92	1506.31
December 2017	1519.17	1514.03	1513.78	1514.26	1512.04	1513.53
January 2018	1526.70	1521.49	1521.24	1521.72	1519.46	1521.07
February 2018	1534.25	1528.97	1528.72	1529.20	1526.91	1528.64
March 2018	1541.82	1536.47	1536.22	1536.70	1534.38	1536.22
April 2018	1549.41	1543.99	1543.74	1544.22	1541.87	1543.82
May 2018	1557.02	1551.54	1551.28	1551.77	1549.38	1551.45
June 2018	1564.65	1559.10	1558.85	1559.33	1556.91	1559.10
July 2018	1572.31	1566.69	1566.43	1566.91	1564.46	1566.77
August 2018	1579.98	1574.30	1574.04	1574.52	1572.03	1574.45
September 2018	1587.68	1581.92	1581.66	1582.14	1579.62	1582.17
October 2018	1595.39	1589.57	1589.31	1589.79	1587.23	1589.90
November 2018	1603.13	1597.25	1596.98	1597.46	1594.87	1597.65
December 2018	1610.89	1604.94	1604.67	1605.15	1602.53	1605.43
January 2019	1618.83	1612.79	1612.52	1613.00	1610.34	1613.36
February 2019	1626.78	1620.67	1620.39	1620.87	1618.17	1621.31
March 2019	1634.76	1628.56	1628.28	1628.77	1626.02	1629.29
April 2019	1642.76	1636.48	1636.20	1636.68	1633.90	1637.29
May 2019	1650.78	1644.42	1644.14	1644.62	1641.80	1645.31
June 2019	1658.83	1652.38	1652.09	1652.58	1649.72	1653.35
July 2019	1666.89	1660.37	1660.08	1660.56	1657.66	1661.41
August 2019	1674.98	1668.37	1668.08	1668.56	1665.62	1669.50
September 2019	1683.09	1676.40	1676.10	1676.59	1673.60	1677.61
October 2019	1691.23	1684.45	1684.15	1684.63	1681.61	1685.74
November 2019	1699.38	1692.53	1692.22	1692.70	1689.64	1693.89
December 2019	1707.56	1700.62	1700.31	1700.79	1697.69	1702.07
January 2020	1716.06	1709.03	1708.72	1709.20	1706.05	1710.55
February 2020	1724.59	1717.46	1717.14	1717.62	1714.44	1719.05
March 2020	1733.14	1725.91	1725.59	1726.07	1722.84	1727.58
April 2020	1741.72	1734.39	1734.06	1734.54	1731.27	1736.13
May 2020	1750.31	1742.89	1742.56	1743.03	1739.72	1744.70
June 2020	1758.93	1751.41	1751.07	1751.55	1748.20	1753.30
July 2020	1767.57	1759.95	1759.61	1760.09	1756.69	1761.91
August 2020	1776.24	1768.51	1768.18	1768.65	1765.21	1770.55
September 2020	1784.92	1777.10	1776.76	1777.23	1773.75	1779.22
October 2020	1793.64	1785.71	1785.37	1785.84	1782.32	1787.90
November 2020	1802.37	1794.35	1794.00	1794.47	1790.91	1796.61
December 2020	1811.13	1803.00	1802.65	1803.12	1799.52	1805.35

* Redemptions for Treasury and agency securities, redemptions and prepayments for agency mortgage-backed securities; no asset sales. [Return to table](#)

Top-right panel
MBS holdings

Monthly

\$ Billions

Period	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
January 2010	970.12	970.12	970.12	970.12	970.12	970.12
February 2010	1026.78	1026.78	1026.78	1026.78	1026.78	1026.78
March 2010	1068.70	1068.70	1068.70	1068.70	1068.70	1068.70
April 2010	1096.47	1096.49	1096.79	1096.79	1096.79	1096.47
May 2010	1105.73	1105.75	1106.15	1106.15	1106.15	1105.73
June 2010	1124.25	1124.28	1124.88	1124.88	1124.88	1124.88
July 2010	1120.14	1120.20	1120.84	1120.84	1059.89	1120.82
August 2010	1116.02	1116.12	1116.79	1116.80	1027.78	1116.76
September 2010	1111.91	1112.04	1112.74	1112.75	995.68	1112.70
October 2010	1104.59	1104.82	1105.63	1105.62	963.57	1105.53
November 2010	1097.27	1097.61	1098.51	1098.49	931.46	1098.35
December 2010	1089.95	1090.39	1091.39	1091.37	899.35	1091.18
January 2011	1081.05	1081.58	1084.11	1079.30	867.24	1082.43
February 2011	1072.15	1072.77	1076.83	1067.23	835.13	1073.67
March 2011	1063.25	1063.96	1069.55	1055.16	803.03	1064.91
April 2011	1056.05	1056.78	1062.27	1043.09	770.92	1057.74
May 2011	1048.86	1049.60	1055.00	1031.02	738.81	1050.57
June 2011	1041.67	1042.42	1047.72	1018.95	706.70	1043.40
July 2011	1035.11	1035.79	1040.44	1006.88	674.60	1036.72
August 2011	1028.54	1029.16	1033.16	994.82	642.49	1030.04
September 2011	1021.98	1022.53	1025.88	982.75	610.38	1023.37
October 2011	1015.63	1016.09	1018.60	970.68	578.27	1016.87
November 2011	1009.29	1009.65	1011.32	958.61	546.16	1010.38
December 2011	1002.94	1003.21	1004.05	946.54	514.06	1003.88
January 2012	997.68	997.89	985.08	931.95	485.02	998.51
February 2012	992.43	992.56	966.11	917.35	455.98	993.14
March 2012	987.17	987.24	947.13	902.75	426.94	987.77
April 2012	982.54	969.75	928.16	888.16	397.90	983.03
May 2012	977.91	950.89	909.19	873.56	368.86	978.30
June 2012	973.28	932.03	890.22	858.97	339.82	973.56
July 2012	968.22	913.17	871.25	844.37	310.79	968.38
August 2012	963.16	894.31	852.28	829.78	281.75	963.19
September 2012	958.11	875.45	833.31	815.18	252.71	958.01
October 2012	952.85	856.59	814.34	800.59	223.67	952.64
November 2012	947.60	837.73	795.37	785.99	194.63	947.27
December 2012	942.35	818.88	776.40	771.40	165.59	941.90
January 2013	937.92	801.41	758.89	748.91	138.03	937.40
February 2013	933.49	783.95	741.39	726.42	110.48	932.90
March 2013	929.06	766.49	723.88	703.94	82.92	928.40
April 2013	925.03	749.03	706.38	681.45	55.36	924.33
May 2013	920.99	731.56	688.87	658.96	27.80	920.26
June 2013	916.95	714.10	671.36	636.48	0	916.10

June 2013	910.50	714.10	671.50	630.70	0	910.10
July 2013	912.50	696.64	653.86	613.99	0	911.70
August 2013	908.04	679.18	636.35	591.50	0	907.21
September 2013	903.59	661.71	618.85	569.02	0	902.73
October 2013	898.81	644.25	601.34	546.53	0	897.92
November 2013	894.03	626.79	583.84	524.04	0	893.12
December 2013	889.25	609.33	566.33	501.56	0	888.32
January 2014	885.08	592.72	549.71	480.27	0	884.14
February 2014	880.91	576.12	533.10	458.98	0	879.95
March 2014	876.74	559.52	516.48	437.69	0	875.77
April 2014	872.83	542.92	499.86	416.39	0	871.85
May 2014	868.91	526.31	483.25	395.10	0	867.93
June 2014	865.00	509.71	466.63	373.81	0	864.01
July 2014	860.45	493.11	450.02	352.52	0	859.45
August 2014	855.91	476.50	433.40	331.23	0	854.90
September 2014	851.37	459.90	416.78	309.94	0	850.35
October 2014	846.34	443.30	400.17	288.65	0	845.32
November 2014	841.32	426.70	383.55	267.36	0	840.29
December 2014	836.30	410.09	366.93	246.07	0	835.26
January 2015	831.90	394.29	351.15	225.58	0	830.87
February 2015	827.51	378.50	335.37	205.09	0	826.48
March 2015	823.12	362.70	319.59	184.60	0	822.09
April 2015	819.10	346.90	303.81	164.12	0	818.08
May 2015	815.09	331.10	288.03	143.63	0	814.07
June 2015	811.07	315.30	272.25	123.14	0	810.06
July 2015	806.25	299.51	256.47	102.65	0	805.25
August 2015	801.42	283.71	240.69	82.16	0	800.43
September 2015	796.59	267.91	224.91	61.67	0	795.62
October 2015	791.28	252.11	209.13	41.18	0	790.32
November 2015	785.97	236.31	193.35	20.70	0	785.03
December 2015	780.65	220.51	177.57	0	0	779.73
January 2016	776.07	205.69	162.79	0	0	775.16
February 2016	771.48	190.87	148.00	0	0	770.59
March 2016	766.90	176.04	133.22	0	0	766.02
April 2016	762.76	161.22	118.44	0	0	761.89
May 2016	758.62	146.39	103.66	0	0	757.77
June 2016	754.48	131.57	88.87	0	0	753.64
July 2016	749.53	116.75	74.09	0	0	748.71
August 2016	744.58	101.92	59.31	0	0	743.77
September 2016	739.63	87.10	44.53	0	0	738.84
October 2016	734.22	72.28	29.75	0	0	733.45
November 2016	728.81	57.45	14.96	0	0	728.06
December 2016	723.41	42.63	0	0	0	722.67
January 2017	718.79	28.50	0	0	0	718.06

February 2017	714.17	14.37	0	0	0	713.46
March 2017	709.55	0	0	0	0	708.85
April 2017	705.41	0	0	0	0	704.73
May 2017	701.28	0	0	0	0	700.60
June 2017	697.14	0	0	0	0	696.48
July 2017	692.23	0	0	0	0	691.58
August 2017	687.32	0	0	0	0	686.68
September 2017	682.41	0	0	0	0	681.78
October 2017	677.08	0	0	0	0	676.47
November 2017	671.76	0	0	0	0	671.16
December 2017	666.43	0	0	0	0	665.85
January 2018	661.91	0	0	0	0	661.34
February 2018	657.39	0	0	0	0	656.82
March 2018	652.87	0	0	0	0	652.31
April 2018	648.83	0	0	0	0	648.29
May 2018	644.80	0	0	0	0	644.26
June 2018	640.77	0	0	0	0	640.24
July 2018	636.00	0	0	0	0	635.48
August 2018	631.24	0	0	0	0	630.72
September 2018	626.47	0	0	0	0	625.97
October 2018	621.32	0	0	0	0	620.81
November 2018	616.16	0	0	0	0	615.65
December 2018	611.01	0	0	0	0	610.49
January 2019	606.63	0	0	0	0	606.13
February 2019	602.26	0	0	0	0	601.77
March 2019	597.88	0	0	0	0	597.42
April 2019	593.98	0	0	0	0	593.53
May 2019	590.08	0	0	0	0	589.64
June 2019	586.17	0	0	0	0	585.75
July 2019	581.58	0	0	0	0	581.17
August 2019	576.99	0	0	0	0	576.59
September 2019	572.40	0	0	0	0	572.01
October 2019	567.45	0	0	0	0	567.07
November 2019	562.51	0	0	0	0	562.13
December 2019	557.56	0	0	0	0	557.19
January 2020	553.26	0	0	0	0	553.00
February 2020	548.96	0	0	0	0	548.80
March 2020	544.67	0	0	0	0	544.60
April 2020	540.37	0	0	0	0	540.86
May 2020	536.08	0	0	0	0	537.11
June 2020	531.78	0	0	0	0	533.36
July 2020	527.48	0	0	0	0	528.97
August 2020	523.19	0	0	0	0	524.58
September 2020	518.89	0	0	0	0	520.19

October 2020	514.59	0	0	0	0	515.47
November 2020	510.30	0	0	0	0	510.74
December 2020	506.00	0	0	0	0	506.01

Bottom-left panel
Treasury holdings

Monthly
\$ Billions

Period	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
January 2010	776.59	776.59	776.59	776.59	776.59	776.59
February 2010	776.59	776.59	776.59	776.59	776.59	776.59
March 2010	776.70	776.70	776.70	776.70	776.70	776.70
April 2010	776.70	777.99	777.99	777.99	777.99	777.99
May 2010	776.70	749.38	749.38	749.38	749.38	749.38
June 2010	776.70	745.76	745.76	745.76	745.76	745.76
July 2010	776.28	742.34	742.34	742.34	742.34	742.34
August 2010	776.28	735.28	735.28	735.28	735.28	735.28
September 2010	776.28	730.63	730.63	730.63	730.63	730.63
October 2010	776.28	727.88	727.88	727.88	727.88	727.88
November 2010	776.28	722.49	722.49	722.49	722.49	722.49
December 2010	776.70	717.11	717.11	717.11	717.11	717.11
January 2011	776.70	711.98	711.98	711.98	711.98	711.98
February 2011	776.70	704.42	704.42	704.42	704.42	704.42
March 2011	776.70	698.84	698.84	698.84	698.84	698.84
April 2011	776.70	690.87	690.87	690.87	690.87	690.87
May 2011	776.70	686.38	686.38	686.38	686.38	686.38
June 2011	776.70	681.14	681.14	681.14	681.14	681.14
July 2011	776.70	676.82	676.82	676.82	676.82	676.82
August 2011	776.70	670.02	670.02	670.02	670.02	670.02
September 2011	776.70	666.66	666.66	666.66	666.66	666.66
October 2011	776.70	661.50	661.50	661.50	661.50	661.50
November 2011	776.70	650.86	650.86	650.86	650.86	650.86
December 2011	776.70	645.73	645.73	645.73	645.73	645.73
January 2012	776.70	633.77	633.77	633.77	633.77	633.77
February 2012	776.70	619.03	619.03	619.03	619.03	619.03
March 2012	776.70	606.50	606.50	606.50	606.50	606.50
April 2012	776.70	584.57	584.57	584.57	584.57	584.57
May 2012	776.70	570.56	570.56	570.56	584.18	570.56
June 2012	776.70	562.70	562.70	562.70	626.68	562.70
July 2012	776.70	552.34	552.34	552.34	669.19	552.34
August 2012	776.70	534.65	534.65	534.65	711.73	534.65
September 2012	776.70	526.11	526.11	526.11	754.29	526.11
October 2012	776.70	517.71	517.71	517.71	796.55	517.71
November 2012	776.70	503.97	503.97	503.97	839.15	503.97

December 2012	776.70	495.51	495.51	495.51	881.78	495.51
January 2013	776.70	487.99	487.99	487.99	920.07	487.99
February 2013	776.70	478.37	478.37	478.37	962.44	478.37
March 2013	776.70	474.14	474.14	474.14	1001.61	474.14
April 2013	776.70	469.13	469.13	469.13	1041.94	469.13
May 2013	776.70	465.69	465.69	465.69	1081.16	465.69
June 2013	776.70	461.88	461.88	461.88	1120.60	461.88
July 2013	776.70	457.60	457.60	472.52	1129.47	457.60
August 2013	776.70	449.65	449.65	506.23	1138.37	449.65
September 2013	776.70	445.76	476.95	539.97	1147.30	445.76
October 2013	776.70	463.38	505.70	573.73	1156.25	443.03
November 2013	776.70	492.01	534.47	607.51	1165.23	437.59
December 2013	776.70	520.66	563.26	641.33	1174.23	433.88
January 2014	776.70	546.01	588.87	671.53	1181.36	428.10
February 2014	776.70	571.38	614.49	701.76	1188.52	421.10
March 2014	776.70	596.77	640.14	732.01	1195.69	415.66
April 2014	776.70	622.18	665.81	762.28	1202.89	410.33
May 2014	776.70	647.62	691.50	792.57	1210.10	402.30
June 2014	776.70	673.07	717.21	822.88	1217.34	397.39
July 2014	776.70	698.55	742.95	853.22	1224.61	392.58
August 2014	776.70	724.05	768.71	883.57	1231.90	385.84
September 2014	776.70	749.82	794.48	913.95	1239.20	381.30
October 2014	776.70	775.29	820.29	944.35	1246.54	376.45
November 2014	776.70	800.77	846.11	974.78	1253.89	371.26
December 2014	776.70	826.27	871.96	1005.23	1261.27	385.29
January 2015	776.70	849.86	895.53	1033.60	1268.03	397.01
February 2015	776.70	873.47	919.12	1062.00	1274.81	408.75
March 2015	776.70	897.10	942.74	1090.41	1281.61	420.51
April 2015	776.70	920.75	966.37	1118.85	1288.43	431.90
May 2015	776.70	944.42	990.03	1147.31	1295.27	443.32
June 2015	776.70	967.91	1013.70	1175.78	1302.13	454.75
July 2015	776.70	991.43	1037.40	1204.28	1309.01	467.02
August 2015	776.70	1014.96	1061.12	1232.80	1315.92	479.30
September 2015	776.70	1038.51	1084.85	1261.34	1322.84	491.60
October 2015	776.70	1062.08	1108.61	1289.90	1329.79	504.41
November 2015	776.70	1085.68	1132.39	1318.48	1336.75	517.24
December 2015	776.70	1109.29	1156.19	1346.81	1343.74	530.08
January 2016	776.67	1132.15	1178.84	1353.63	1350.65	543.06
February 2016	776.63	1155.02	1201.51	1360.47	1357.58	556.06
March 2016	776.60	1177.91	1224.20	1367.33	1364.53	569.08
April 2016	776.56	1200.83	1246.90	1374.21	1371.49	581.67
May 2016	776.53	1223.76	1269.63	1381.11	1378.48	594.28
June 2016	776.49	1246.70	1292.38	1388.02	1385.48	606.91

July 2016	776.46	1269.67	1315.14	1394.96	1392.51	620.37
August 2016	776.42	1292.66	1337.92	1401.91	1399.55	633.84
September 2016	776.39	1315.67	1360.73	1408.89	1406.61	647.34
October 2016	776.35	1338.69	1383.55	1415.88	1413.69	661.31
November 2016	776.32	1361.74	1406.39	1422.89	1420.80	675.30
December 2016	776.28	1384.81	1429.42	1429.92	1427.92	689.31
January 2017	776.28	1406.48	1436.35	1436.84	1434.82	701.91
February 2017	776.28	1428.17	1443.29	1443.78	1441.74	714.52
March 2017	776.28	1450.12	1450.25	1450.74	1448.68	727.16
April 2017	776.28	1457.46	1457.23	1457.72	1455.64	739.33
May 2017	776.28	1464.46	1464.23	1464.72	1462.62	751.52
June 2017	776.28	1471.48	1471.25	1471.74	1469.62	763.73
July 2017	781.83	1478.52	1478.29	1478.78	1476.64	776.73
August 2017	794.85	1485.58	1485.35	1485.83	1483.68	789.75
September 2017	807.88	1492.66	1492.43	1492.91	1490.74	802.80
October 2017	821.35	1499.76	1499.53	1500.01	1497.82	816.28
November 2017	834.84	1506.88	1506.65	1507.13	1504.92	829.77
December 2017	848.35	1514.03	1513.78	1514.26	1512.04	843.29
January 2018	860.56	1521.49	1521.24	1521.72	1519.46	855.51
February 2018	872.80	1528.97	1528.72	1529.20	1526.91	867.75
March 2018	885.06	1536.47	1536.22	1536.70	1534.38	880.01
April 2018	896.85	1543.99	1543.74	1544.22	1541.87	891.81
May 2018	908.66	1551.54	1551.28	1551.77	1549.38	903.62
June 2018	920.49	1559.10	1558.85	1559.33	1556.91	915.46
July 2018	933.07	1566.69	1566.43	1566.91	1564.46	928.05
August 2018	945.68	1574.30	1574.04	1574.52	1572.03	940.66
September 2018	958.30	1581.92	1581.66	1582.14	1579.62	953.29
October 2018	971.34	1589.57	1589.31	1589.79	1587.23	966.35
November 2018	984.40	1597.25	1596.98	1597.46	1594.87	979.43
December 2018	997.47	1604.94	1604.67	1605.15	1602.53	992.53
January 2019	1009.79	1612.79	1612.52	1613.00	1610.34	1004.83
February 2019	1022.13	1620.67	1620.39	1620.87	1618.17	1017.14
March 2019	1034.49	1628.56	1628.28	1628.77	1626.02	1029.48
April 2019	1046.40	1636.48	1636.20	1636.68	1633.90	1041.37
May 2019	1058.33	1644.42	1644.14	1644.62	1641.80	1053.29
June 2019	1070.28	1652.38	1652.09	1652.58	1649.72	1065.22
July 2019	1082.94	1660.37	1660.08	1660.56	1657.66	1077.87
August 2019	1095.62	1668.37	1668.08	1668.56	1665.62	1090.54
September 2019	1108.33	1676.40	1676.10	1676.59	1673.60	1103.23
October 2019	1121.41	1684.45	1684.15	1684.63	1681.61	1116.31
November 2019	1134.52	1692.53	1692.22	1692.70	1689.64	1129.41
December 2019	1147.65	1700.62	1700.31	1700.79	1697.69	1142.52
January 2020	1160.46	1709.03	1708.72	1709.20	1706.05	1155.20
February 2020	1173.28	1717.46	1717.14	1717.62	1714.44	1167.91

March 2020	1186.13	1725.91	1725.59	1726.07	1722.84	1180.63
April 2020	1199.00	1734.39	1734.06	1734.54	1731.27	1192.93
May 2020	1211.89	1742.89	1742.56	1743.03	1739.72	1205.24
June 2020	1224.80	1751.41	1751.07	1751.55	1748.20	1217.59
July 2020	1237.74	1759.95	1759.61	1760.09	1756.69	1230.59
August 2020	1250.70	1768.51	1768.18	1768.65	1765.21	1243.63
September 2020	1263.69	1777.10	1776.76	1777.23	1773.75	1256.68
October 2020	1276.70	1785.71	1785.37	1785.84	1782.32	1270.09
November 2020	1289.73	1794.35	1794.00	1794.47	1790.91	1283.53
December 2020	1302.78	1803.00	1802.65	1803.12	1799.52	1296.99

Bottom-right panel
Reserve balances

Monthly
\$ Billions

Period	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
January 2010	1153.96	1153.96	1153.96	1153.96	1153.96	1153.96
February 2010	1225.18	1225.18	1225.18	1225.18	1225.18	1225.18
March 2010	1053.88	1053.88	1053.88	1053.88	1053.88	1053.88
April 2010	976.08	977.20	977.37	962.28	976.73	977.40
May 2010	1082.13	1054.25	1054.59	1039.43	1053.32	1054.87
June 2010	1032.07	1000.30	1000.81	985.56	998.90	1001.85
July 2010	1035.91	1001.65	1002.16	986.07	937.85	1002.77
August 2010	1041.26	999.68	1000.20	985.03	904.63	1001.14
September 2010	962.42	915.91	916.60	923.22	789.15	917.74
October 2010	964.69	915.20	916.13	921.53	761.91	917.44
November 2010	973.87	918.77	919.94	924.12	736.03	921.41
December 2010	986.69	924.96	926.69	926.93	712.59	928.61
January 2011	967.24	899.75	903.09	897.52	662.33	904.39
February 2011	949.24	872.09	877.05	865.66	609.62	879.17
March 2011	921.84	846.40	852.96	835.76	558.88	846.54
April 2011	899.51	819.93	826.48	803.46	505.74	816.47
May 2011	878.51	796.93	803.46	774.63	456.06	791.22
June 2011	861.13	773.15	779.66	745.02	405.62	768.82
July 2011	842.48	750.84	756.78	716.33	356.08	745.95
August 2011	825.42	726.02	731.40	685.14	304.05	722.20
September 2011	809.49	704.64	709.45	657.37	255.45	703.02
October 2011	794.67	681.62	685.68	627.79	205.03	683.10
November 2011	778.67	653.12	656.42	592.72	149.13	656.54
December 2011	762.49	630.10	632.64	563.13	98.71	635.30
January 2012	745.03	600.59	589.02	523.82	44.36	605.91
February 2012	727.54	568.27	542.60	481.70	25.00	573.71
March 2012	710.03	538.14	498.36	441.77	25.00	543.70
April 2012	693.13	485.83	444.71	392.42	25.00	504.89

May 2012	676.19	440.04	398.95	350.96	25.00	473.99
June 2012	659.24	400.39	359.32	315.64	25.00	449.22
July 2012	641.83	358.21	317.17	277.80	25.00	421.47
August 2012	624.40	308.68	267.67	232.60	25.00	386.37
September 2012	606.94	268.27	227.29	196.53	25.00	360.40
October 2012	589.26	227.99	187.04	160.58	25.00	334.36
November 2012	571.56	182.33	141.41	119.26	25.00	302.94
December 2012	553.83	141.95	101.05	83.21	25.00	276.79
January 2013	538.78	106.06	65.02	42.16	25.00	254.22
February 2013	523.70	68.05	26.88	25.00	25.00	229.54
March 2013	508.60	35.40	25.00	25.00	25.00	210.21
April 2013	493.86	25.00	25.00	25.00	25.00	190.50
May 2013	479.09	25.00	25.00	25.00	25.00	172.33
June 2013	464.30	25.00	25.00	25.00	25.00	153.77
July 2013	449.06	25.00	25.00	25.00	25.00	134.30
August 2013	433.79	25.00	25.00	25.00	25.00	111.12
September 2013	418.50	25.00	25.00	25.00	25.00	91.98
October 2013	402.85	25.00	25.00	25.00	25.00	73.66
November 2013	387.17	25.00	25.00	25.00	25.00	52.60
December 2013	371.47	25.00	25.00	25.00	25.00	33.24
January 2014	358.51	25.00	25.00	25.00	25.00	25.00
February 2014	345.53	25.00	25.00	25.00	25.00	25.00
March 2014	332.52	25.00	25.00	25.00	25.00	25.00
April 2014	319.75	25.00	25.00	25.00	25.00	25.00
May 2014	306.95	25.00	25.00	25.00	25.00	25.00
June 2014	294.13	25.00	25.00	25.00	25.00	25.00
July 2014	280.67	25.00	25.00	25.00	25.00	25.00
August 2014	267.18	25.00	25.00	25.00	25.00	25.00
September 2014	253.66	25.00	25.00	25.00	25.00	25.00
October 2014	239.65	25.00	25.00	25.00	25.00	25.00
November 2014	225.61	25.00	25.00	25.00	25.00	25.00
December 2014	211.55	25.00	25.00	25.00	25.00	25.00
January 2015	199.82	25.00	25.00	25.00	25.00	25.00
February 2015	188.07	25.00	25.00	25.00	25.00	25.00
March 2015	176.30	25.00	25.00	25.00	25.00	25.00
April 2015	164.89	25.00	25.00	25.00	25.00	25.00
May 2015	153.46	25.00	25.00	25.00	25.00	25.00
June 2015	142.01	25.00	25.00	25.00	25.00	25.00
July 2015	129.73	25.00	25.00	25.00	25.00	25.00
August 2015	117.43	25.00	25.00	25.00	25.00	25.00
September 2015	105.10	25.00	25.00	25.00	25.00	25.00
October 2015	92.27	25.00	25.00	25.00	25.00	25.00
November 2015	79.42	25.00	25.00	25.00	25.00	25.00
December 2015	66.54	25.00	25.00	25.00	25.00	25.00

January 2016	53.52	25.00	25.00	25.00	25.00	25.00
February 2016	40.48	25.00	25.00	25.00	25.00	25.00
March 2016	27.41	25.00	25.00	25.00	25.00	25.00
April 2016	25.00	25.00	25.00	25.00	25.00	25.00
May 2016	25.00	25.00	25.00	25.00	25.00	25.00
June 2016	25.00	25.00	25.00	25.00	25.00	25.00
July 2016	25.00	25.00	25.00	25.00	25.00	25.00
August 2016	25.00	25.00	25.00	25.00	25.00	25.00
September 2016	25.00	25.00	25.00	25.00	25.00	25.00
October 2016	25.00	25.00	25.00	25.00	25.00	25.00
November 2016	25.00	25.00	25.00	25.00	25.00	25.00
December 2016	25.00	25.00	25.00	25.00	25.00	25.00
January 2017	25.00	25.00	25.00	25.00	25.00	25.00
February 2017	25.00	25.00	25.00	25.00	25.00	25.00
March 2017	25.00	25.00	25.00	25.00	25.00	25.00
April 2017	25.00	25.00	25.00	25.00	25.00	25.00
May 2017	25.00	25.00	25.00	25.00	25.00	25.00
June 2017	25.00	25.00	25.00	25.00	25.00	25.00
July 2017	25.00	25.00	25.00	25.00	25.00	25.00
August 2017	25.00	25.00	25.00	25.00	25.00	25.00
September 2017	25.00	25.00	25.00	25.00	25.00	25.00
October 2017	25.00	25.00	25.00	25.00	25.00	25.00
November 2017	25.00	25.00	25.00	25.00	25.00	25.00
December 2017	25.00	25.00	25.00	25.00	25.00	25.00
January 2018	25.00	25.00	25.00	25.00	25.00	25.00
February 2018	25.00	25.00	25.00	25.00	25.00	25.00
March 2018	25.00	25.00	25.00	25.00	25.00	25.00
April 2018	25.00	25.00	25.00	25.00	25.00	25.00
May 2018	25.00	25.00	25.00	25.00	25.00	25.00
June 2018	25.00	25.00	25.00	25.00	25.00	25.00
July 2018	25.00	25.00	25.00	25.00	25.00	25.00
August 2018	25.00	25.00	25.00	25.00	25.00	25.00
September 2018	25.00	25.00	25.00	25.00	25.00	25.00
October 2018	25.00	25.00	25.00	25.00	25.00	25.00
November 2018	25.00	25.00	25.00	25.00	25.00	25.00
December 2018	25.00	25.00	25.00	25.00	25.00	25.00
January 2019	25.00	25.00	25.00	25.00	25.00	25.00
February 2019	25.00	25.00	25.00	25.00	25.00	25.00
March 2019	25.00	25.00	25.00	25.00	25.00	25.00
April 2019	25.00	25.00	25.00	25.00	25.00	25.00
May 2019	25.00	25.00	25.00	25.00	25.00	25.00
June 2019	25.00	25.00	25.00	25.00	25.00	25.00
July 2019	25.00	25.00	25.00	25.00	25.00	25.00

August 2019	25.00	25.00	25.00	25.00	25.00	25.00
September 2019	25.00	25.00	25.00	25.00	25.00	25.00
October 2019	25.00	25.00	25.00	25.00	25.00	25.00
November 2019	25.00	25.00	25.00	25.00	25.00	25.00
December 2019	25.00	25.00	25.00	25.00	25.00	25.00
January 2020	25.00	25.00	25.00	25.00	25.00	25.00
February 2020	25.00	25.00	25.00	25.00	25.00	25.00
March 2020	25.00	25.00	25.00	25.00	25.00	25.00
April 2020	25.00	25.00	25.00	25.00	25.00	25.00
May 2020	25.00	25.00	25.00	25.00	25.00	25.00
June 2020	25.00	25.00	25.00	25.00	25.00	25.00
July 2020	25.00	25.00	25.00	25.00	25.00	25.00
August 2020	25.00	25.00	25.00	25.00	25.00	25.00
September 2020	25.00	25.00	25.00	25.00	25.00	25.00
October 2020	25.00	25.00	25.00	25.00	25.00	25.00
November 2020	25.00	25.00	25.00	25.00	25.00	25.00
December 2020	25.00	25.00	25.00	25.00	25.00	25.00

Exhibit 3 Macroeconomic Consequences Under Alternative Balance Sheet Strategies

Greenbook-consistent Projections

Top-left panel *Federal funds rate*

Percent

Date	Option 1	Option 2	Option 5	Option 6*
31 March 2010	0.12	0.12	0.12	0.12
30 June 2010	0.12	0.12	0.12	0.12
30 September 2010	0.12	0.12	0.12	0.12
31 December 2010	0.12	0.12	0.12	0.12
31 March 2011	0.12	0.12	0.12	0.12
30 June 2011	0.12	0.12	0.12	0.12
30 September 2011	0.12	0.12	0.12	0.12
31 December 2011	0.12	0.13	0.12	0.13
31 March 2012	0.45	0.18	0.13	0.30
30 June 2012	0.78	0.48	0.29	0.61
30 September 2012	1.16	0.84	0.64	0.98
31 December 2012	1.57	1.23	1.04	1.38
31 March 2013	2.06	1.71	1.52	1.86
30 June 2013	2.46	2.09	1.91	2.26
30 September 2013	2.78	2.41	2.24	2.58
31 December 2013	3.03	2.66	2.50	2.83

31 March 2014	3.22	2.85	2.71	3.02
30 June 2014	3.38	3.01	2.88	3.18
30 September 2014	3.51	3.14	3.03	3.31
31 December 2014	3.62	3.27	3.17	3.44
31 March 2015	3.70	3.36	3.27	3.52
30 June 2015	3.77	3.44	3.37	3.60
30 September 2015	3.83	3.50	3.43	3.66
31 December 2015	3.88	3.54	3.48	3.71
31 March 2016	3.92	3.58	3.53	3.75
30 June 2016	3.95	3.61	3.56	3.78
30 September 2016	3.98	3.64	3.60	3.81
31 December 2016	4.00	3.66	3.63	3.84

* Redemptions for Treasury and agency securities, redemptions and prepayments for agency mortgage-backed securities; no asset sales. [Return to table](#)

Top-right panel
10-year Treasury interest rate

Percent

Date	Option 1	Option 2	Option 5	Option 6
31 March 2010	3.85	3.85	3.85	3.85
30 June 2010	3.90	3.90	3.90	3.90
30 September 2010	3.95	4.17	4.33	4.08
31 December 2010	4.05	4.27	4.43	4.18
31 March 2011	4.10	4.31	4.47	4.23
30 June 2011	4.20	4.41	4.56	4.32
30 September 2011	4.25	4.45	4.59	4.37
31 December 2011	4.35	4.54	4.66	4.46
31 March 2012	4.40	4.58	4.68	4.50
30 June 2012	4.44	4.62	4.70	4.54
30 September 2012	4.50	4.67	4.74	4.60
31 December 2012	4.53	4.69	4.73	4.61
31 March 2013	4.58	4.73	4.76	4.66
30 June 2013	4.61	4.74	4.76	4.68
30 September 2013	4.64	4.76	4.77	4.70
31 December 2013	4.65	4.76	4.75	4.70
31 March 2014	4.65	4.74	4.73	4.70
30 June 2014	4.66	4.74	4.72	4.70
30 September 2014	4.67	4.73	4.72	4.71
31 December 2014	4.69	4.74	4.72	4.71
31 March 2015	4.69	4.73	4.71	4.71
30 June 2015	4.70	4.73	4.70	4.71
30 September 2015	4.71	4.72	4.70	4.71
31 December 2015	4.73	4.73	4.70	4.72
31 March 2016	4.74	4.73	4.70	4.72

30 June 2016	4.76	4.73	4.70	4.73
30 September 2016	4.77	4.74	4.71	4.74
31 December 2016	4.78	4.74	4.72	4.75

Middle-left panel
30-year mortgage rate

Percent

Date	Option 1	Option 2	Option 5	Option 6
31 March 2010	5.00	5.00	5.00	5.00
30 June 2010	5.30	5.30	5.30	5.30
30 September 2010	5.45	5.66	5.97	5.57
31 December 2010	5.55	5.76	6.06	5.67
31 March 2011	5.60	5.81	6.10	5.72
30 June 2011	5.70	5.90	6.19	5.82
30 September 2011	5.75	5.94	6.22	5.86
31 December 2011	5.85	6.04	6.29	5.96
31 March 2012	5.92	6.09	6.33	6.02
30 June 2012	5.96	6.22	6.35	6.06
30 September 2012	6.01	6.26	6.37	6.10
31 December 2012	6.04	6.29	6.39	6.13
31 March 2013	6.11	6.35	6.43	6.19
30 June 2013	6.17	6.40	6.46	6.24
30 September 2013	6.23	6.45	6.36	6.30
31 December 2013	6.29	6.49	6.39	6.34
31 March 2014	6.34	6.52	6.42	6.38
30 June 2014	6.38	6.55	6.45	6.42
30 September 2014	6.42	6.58	6.47	6.46
31 December 2014	6.47	6.61	6.50	6.49
31 March 2015	6.50	6.63	6.52	6.52
30 June 2015	6.53	6.65	6.53	6.54
30 September 2015	6.57	6.67	6.55	6.57
31 December 2015	6.60	6.69	6.57	6.59
31 March 2016	6.62	6.70	6.59	6.61
30 June 2016	6.65	6.72	6.60	6.63
30 September 2016	6.68	6.74	6.62	6.65
31 December 2016	6.70	6.76	6.64	6.67

Middle-right panel
*Real GDP growth**

Percent

Date	Option 1	Option 2	Option 5	Option 6
31 March 2010	2.30	2.30	2.30	2.30
30 June 2010	3.40	3.40	3.40	3.40

30 September 2010	3.72	3.72	3.73	3.72
31 December 2010	3.27	3.18	3.11	3.22
31 March 2011	3.73	3.53	3.40	3.62
30 June 2011	3.90	3.60	3.39	3.73
30 September 2011	4.17	3.77	3.49	3.93
31 December 2011	4.39	3.98	3.72	4.15
31 March 2012	4.43	4.05	3.81	4.21
30 June 2012	4.57	4.24	4.05	4.38
30 September 2012	4.66	4.37	4.24	4.50
31 December 2012	4.71	4.48	4.41	4.59
31 March 2013	4.87	4.69	4.68	4.79
30 June 2013	4.80	4.66	4.70	4.74
30 September 2013	4.67	4.58	4.65	4.64
31 December 2013	4.45	4.39	4.49	4.43
31 March 2014	4.12	4.11	4.23	4.13
30 June 2014	3.84	3.85	3.99	3.86
30 September 2014	3.58	3.62	3.77	3.61
31 December 2014	3.41	3.49	3.63	3.46
31 March 2015	3.33	3.43	3.57	3.39
30 June 2015	3.21	3.34	3.46	3.29
30 September 2015	3.08	3.21	3.33	3.16
31 December 2015	2.95	3.09	3.19	3.03
31 March 2016	2.82	2.95	3.04	2.90
30 June 2016	2.74	2.86	2.94	2.82
30 September 2016	2.67	2.81	2.88	2.76
31 December 2016	2.61	2.76	2.82	2.71

* Q4/Q4 growth rate [Return to text](#)

Bottom-left panel
Unemployment rate

Percent

Date	Option 1	Option 2	Option 5	Option 6
31 March 2010	9.72	9.72	9.72	9.72
30 June 2010	9.57	9.57	9.57	9.57
30 September 2010	9.58	9.58	9.58	9.58
31 December 2010	9.36	9.38	9.39	9.37
31 March 2011	8.99	9.04	9.07	9.02
30 June 2011	8.81	8.89	8.96	8.86
30 September 2011	8.60	8.73	8.82	8.68
31 December 2011	8.31	8.47	8.59	8.40
31 March 2012	7.95	8.15	8.29	8.07
30 June 2012	7.53	7.75	7.90	7.66
30 September 2012	7.06	7.31	7.47	7.21

31 December 2012	6.60	6.86	7.02	6.75
31 March 2013	6.21	6.48	6.63	6.36
30 June 2013	5.91	6.19	6.34	6.07
30 September 2013	5.69	5.98	6.11	5.85
31 December 2013	5.54	5.82	5.93	5.69
31 March 2014	5.44	5.72	5.82	5.59
30 June 2014	5.37	5.64	5.72	5.52
30 September 2014	5.32	5.58	5.65	5.46
31 December 2014	5.28	5.52	5.57	5.40
31 March 2015	5.24	5.46	5.50	5.35
30 June 2015	5.21	5.42	5.44	5.31
30 September 2015	5.19	5.38	5.40	5.29
31 December 2015	5.17	5.35	5.36	5.26
31 March 2016	5.17	5.33	5.33	5.25
30 June 2016	5.17	5.32	5.31	5.24
30 September 2016	5.17	5.30	5.29	5.23
31 December 2016	5.17	5.29	5.27	5.22

Bottom-right panel
*Core PCE inflation**

Percent

Date	Option 1	Option 2	Option 5	Option 6
31 March 2010	1.38	1.38	1.38	1.38
30 June 2010	1.16	1.16	1.16	1.16
30 September 2010	1.14	1.11	1.10	1.12
31 December 2010	1.01	0.97	0.95	0.99
31 March 2011	1.06	1.02	0.99	1.03
30 June 2011	1.02	0.97	0.94	0.99
30 September 2011	1.00	0.96	0.94	0.98
31 December 2011	0.98	0.94	0.92	0.96
31 March 2012	0.99	0.95	0.93	0.97
30 June 2012	1.01	0.97	0.95	0.99
30 September 2012	1.04	1.00	0.98	1.02
31 December 2012	1.08	1.05	1.03	1.06
31 March 2013	1.14	1.10	1.08	1.11
30 June 2013	1.20	1.15	1.13	1.17
30 September 2013	1.26	1.21	1.19	1.23
31 December 2013	1.32	1.27	1.25	1.29
31 March 2014	1.39	1.33	1.30	1.36
30 June 2014	1.45	1.38	1.36	1.41
30 September 2014	1.50	1.43	1.40	1.46
31 December 2014	1.55	1.48	1.45	1.51
31 March 2015	1.59	1.52	1.48	1.55
30 June 2015	1.63	1.55	1.52	1.59

30 September 2015	1.67	1.59	1.55	1.62
31 December 2015	1.70	1.61	1.58	1.66
31 March 2016	1.73	1.64	1.60	1.68
30 June 2016	1.76	1.66	1.63	1.71
30 September 2016	1.78	1.68	1.65	1.73
31 December 2016	1.81	1.70	1.66	1.75

* Q4/Q4 growth rate [Return to text](#)

Appendix 3: Materials used by Mr. Madigan

Material for Briefing on FOMC Participants' Economic Projections

Brian Madigan
April 27, 2010

Class I FOMC - Restricted Controlled (FR)

Exhibit 1. Central tendencies and ranges of economic projections, 2010-12 and over the longer run

Actual values for years 2005 through 2009.

Change in real GDP Percent

	2005	2006	2007	2008	2009	2010	2011	2012	Longer Run
Actual	2.7	2.4	2.5	-1.9	0.1	-	-	-	-
Upper End of Range	-	-	-	-	-	4.0	4.6	5.0	3.0
Upper End of Central Tendency	-	-	-	-	-	3.7	4.5	4.5	2.8
Lower End of Central Tendency	-	-	-	-	-	3.2	3.4	3.5	2.5
Lower End of Range	-	-	-	-	-	2.7	3.0	2.8	2.4

Unemployment rate Percent

	2005	2006	2007	2008	2009	2010	2011	2012	Longer Run
Actual	5.0	4.5	4.8	6.9	10.0	-	-	-	-
Upper End of Range	-	-	-	-	-	9.7	8.7	7.7	6.3
Upper End of Central Tendency	-	-	-	-	-	9.5	8.5	7.5	5.3
Lower End of Central Tendency	-	-	-	-	-	9.1	8.1	6.6	5.0
Lower End of Range	-	-	-	-	-	8.6	7.2	6.4	5.0

PCE inflation Percent

	2005	2006	2007	2008	2009	2010	2011	2012	Longer Run
Actual	3.3	1.9	3.6	1.7	1.2	-	-	-	-
Upper End of Range	-	-	-	-	-	2.0	2.4	2.2	2.0
Inner End of Central Tendency	-	-	-	-	-	1.5	1.9	2.0	2.0

Upper End of Central Tendency						1.2	1.1	1.2	1.7
Lower End of Central Tendency	-	-	-	-	-	1.2	1.1	1.2	1.7
Lower End of Range	-	-	-	-	-	1.1	0.9	0.7	1.5

Core PCE inflation

Percent

	2005	2006	2007	2008	2009	2010	2011	2012
Actual	2.3	2.3	2.5	2.0	1.5	-	-	-
Upper End of Range	-	-	-	-	-	1.6	2.4	2.2
Upper End of Central Tendency	-	-	-	-	-	1.2	1.5	1.6
Lower End of Central Tendency	-	-	-	-	-	0.9	1.0	1.2
Lower End of Range	-	-	-	-	-	0.7	0.6	0.6

Note: Definitions of variables are in the notes to table 1. The data for the actual values of the variables are annual.

Exhibit 2: Economic Projections for 2010-2012 and Longer Run

Real GDP Growth

	2010	2011	2012	Longer Run
Central Tendency	3.2 to 3.7	3.4 to 4.5	3.5 to 4.5	2.5 to 2.8
<i>January projections</i>	2.8 to 3.5	3.4 to 4.5	3.5 to 4.5	2.5 to 2.8
Range	2.7 to 4.0	3.0 to 4.6	2.8 to 5.0	2.4 to 3.0
<i>January projections</i>	2.3 to 4.0	2.7 to 4.7	3.0 to 5.0	2.4 to 3.0
Memo: Greenbook	3.5	4.4	4.7	2.5
<i>January Greenbook</i>	3.6	4.7	4.5	2.5

Unemployment Rate

	2010	2011	2012	Longer Run
Central Tendency	9.1 to 9.5	8.1 to 8.5	6.6 to 7.5	5.0 to 5.3
<i>January projections</i>	9.5 to 9.7	8.2 to 8.5	6.6 to 7.5	5.0 to 5.2
Range	8.6 to 9.7	7.2 to 8.7	6.4 to 7.7	5.0 to 6.3
<i>January projections</i>	8.6 to 10.0	7.2 to 8.8	6.1 to 7.6	4.9 to 6.3
Memo: Greenbook	9.3	8.2	6.7	5.2
<i>January Greenbook</i>	9.5	8.2	6.1	5.2

PCE Inflation

	2010	2011	2012	Longer Run
Central Tendency	1.2 to 1.5	1.1 to 1.9	1.2 to 2.0	1.7 to 2.0
<i>January projections</i>	1.4 to 1.7	1.1 to 2.0	1.3 to 2.0	1.7 to 2.0
Range	1.1 to 2.0	0.9 to 2.4	0.7 to 2.2	1.5 to 2.0
<i>January projections</i>	1.2 to 2.0	1.0 to 2.4	0.8 to 2.0	1.5 to 2.0
Memo: Greenbook	1.3	1.0	1.1	2.0
<i>January Greenbook</i>	1.4	1.1	1.3	2.0

Core PCE Inflation

	2010	2011	2012
Central Tendency	0.9 to 1.2	1.0 to 1.5	1.2 to 1.6

<i>January projections</i>	<i>1.1 to 1.7</i>	<i>1.0 to 1.9</i>	<i>1.2 to 1.9</i>
Range	0.7 to 1.6	0.6 to 2.4	0.6 to 2.2
<i>January projections</i>	<i>1.0 to 2.0</i>	<i>0.9 to 2.4</i>	<i>0.8 to 2.0</i>
Memo: Greenbook	0.9	0.9	1.1
<i>January Greenbook</i>	<i>1.2</i>	<i>1.1</i>	<i>1.2</i>

NOTE: See Table 1 for variable definitions

Exhibit 3. Risks and Uncertainty in Economic Projections

Top-left panel

Uncertainty about GDP Growth

Number of participants

	Lower	Similar	Higher
April projections	0	5	12
January projections	0	3	14

Top-right panel

Risks to GDP Growth

Number of participants

	Downside	Balanced	Upside
April projections	0	14	3
January projections	1	16	0

Bottom-left panel

Uncertainty about PCE Inflation

Number of participants

	Lower	Similar	Higher
April projections	1	3	13
January projections	1	3	13

Bottom-right panel

Risks to PCE Inflation

Number of participants

	Downside	Balanced	Upside
April projections	2	13	2
January projections	1	14	2

Appendix 4: Materials used by Mr. Sheets

Europe: Average Residual Maturity of Outstanding Government Debt

	Years
Germany	6.0
Portugal	6.4
Spain	6.7
Ireland	6.8
France	6.8
Italy	7.1
Greece	7.6
United Kingdom	12.5

* Average residual maturity of marketable debt, as of April 15, 2010.

In 2007, 98.5 percent of Greek debt issuance had maturity of at least 5 years.

Appendix 5: Materials used by Mr. Sack

Federal Reserve System

Date: April 28, 2010

To: Federal Open Market Committee

From: William English, Brian Madigan, and Brian Sack

Subject: Redemption of Treasury Securities Under Alternative Approaches

In yesterday's discussion of the redemption strategy for the Federal Reserve's holdings of Treasury securities, several FOMC members raised the possibility of running down our holdings of longer-term securities while continuing to reinvest in shorter-term issues. The table below summarizes the amount of redemptions achieved under several potential strategies along these lines.

Cumulative Redemptions of Treasury Securities Under Alternative Approaches

(\$ Billions)

	2010	2011	2012	2013
Full Redemption Strategy	60	130	268	330
Redeem Holdings of Longer-term Securities				
Original Maturity of 3 Years or More	16	58	192	254
Original Maturity of 5 Years or More	12	46	105	158
Original Maturity of 7 Years or More	3	8	18	34
Reinvest Maturing Holdings into Short-term Instruments				
Invest in Bills at Auction	39	99	216	264
Invest in Bills and 2-yr Notes at Auction	16	30	102	123
Invest in Bills, 2- and 3-yr Notes at Auction	0	0	0	0
Invest in Bills in Secondary Market	0	0	0	0

Appendix 6: Materials used by Chairman Bernanke

Comparison of Taylor Rule Prescriptions

Two line charts display the Taylor (1993) and Taylor (1999) policy rule prescriptions for the setting of the federal funds rate, from 2000 through 2010. In addition, the actual nominal federal funds rate is plotted in each of the figures.

Top panel

Inflation Measure: CPI or GDP Deflator

In the first chart, two variants of each of these rule prescriptions are provided: one using the CPI inflation rate as the inflation measure, and one for which inflation is computed using the GDP deflator. The interest rate prescriptions initially are generally above the actual federal funds rate and take values of around 7 percent, then fall to around 2 percent by mid-2002. The federal funds rate falls in 2001 and takes values below 2 percent over much of 2002 and 2003, slowly picking up from 2004 onward. The Taylor rule prescriptions rise in value more rapidly, reaching around 6 percent by the start of 2006. As the actual federal funds rate stabilizes for around a year at 5 percent, the Taylor rule prescriptions using CPI inflation drop sharply, then stabilize before rising to around 6-7 percent during 2008, thereafter falling to minus 6 percent and minus 10 percent for the 1993 and 1999 rule prescriptions, respectively. Using the GDP deflator inflation rate, the Taylor rule prescriptions move more closely with the actual federal funds rate, slowly decreasing to the effective lower bound by 2009 then dropping below the lower bound for the remainder of the period.

Bottom panel

Inflation Measure: Core CPI or Core PCE

The second chart brings out the implications of using core PCE inflation and core CPI inflation as the inflation series in the computation of prescriptions from the two Taylor rules. The prescriptions using core inflation rates do not generally imply deviations from the actual federal funds rate as large as the Taylor rule prescriptions using the headline rates. The rule prescriptions using core instead tend to move closely with the federal funds rate. The general shape of the rule prescriptions' movements mirrors that seen in the previous figure. Prescribed values move from around 6 percent down to 2 percent by 2004, then rising to around 5 percent by 2007. The prescribed values from the rules then fall below the federal funds rate for a brief period; by 2008, however, the funds rate is decreasing more rapidly than the rule-prescribed values. The funds rate reaches its lower bound by the beginning of 2009, at which time the Taylor (1993) rule prescription is somewhat above the lower bound, and the Taylor (1999) rule prescription has dropped to around minus 5 to 6 percent.

Page 2

Top panel

The Unemployment Gap and the Commencement of Tightening

A line chart plots two series: the real-time estimate of the unemployment gap and the revised (or ex post) estimate of the unemployment gap (unemployment minus the full-employment rate of unemployment) over the period from 1980 to 2010. In addition, the figure shows three vertical lines corresponding to June 1983, February 1994, and June 2004, each of which roughly corresponds to a period in which a monetary policy tightening period began. For the first three years of the period, the real-time unemployment gap is not shown, leaving only the revised gap which increases from zero to its November 1982 maximum of 4.3 percent, which was then closed over the following five years. The real-time gap until the late 1980s is roughly a quarter percentage point wider than the revised gap. In 1990, both gaps widen again and the difference between the two series is minor over the next two years; both series reach a maximum of about 2.3 percent in June 1992. Both gaps then close, with the real-time

gap declining more steeply for three years, being roughly zero at the time of the February 1994 tightening. The gaps then decrease more gradually for approximately five years; for 2000, both series imply unemployment was about 1 percent below the sustainable rate. Subsequently, they both show a steep rise, taking very similar values, reaching about 1.4 percent in June 2003, and then begin a more moderate decline until 2007 (being about 0.7 percent at the time of the 2004 tightening). The final three years are associated with a steep widening of the gaps, which stand at 4.9 percent in October 2009.

Middle panel

Net Changes in Nonfarm Payrolls

Dates	Millions	Percent
Nov. 1982 to June 1983	1.24	1.4
June 1992 to Feb. 1994	4.04	3.7
June 2003 to June 2004	1.60	1.2
Oct. 2009 to March 2010	0.12	0.1

Bottom panel

The Recent Evolution of Consumer Prices and M2

(Annualized Changes through March 2010, in Percent)

	CPI	Core CPI	CPI ex. OER	Core CPI ex. OER	M2
3-Month	0.9	-0.2	1.5	0.1	-1.5
6-Month	1.7	0.6	2.4	1.1	1.3
12-Month	2.3	1.1	3.1	1.6	1.5

Appendix 7: Materials used by Mr. English

Material for **FOMC Briefing on Monetary Policy Alternatives**

Bill English
April 27-28, 2010

Class I FOMC - Restricted Controlled FR

March FOMC Statement

Information received since the Federal Open Market Committee met in January suggests that economic activity has continued to strengthen and that the labor market is stabilizing. Household spending is expanding at a moderate rate but remains constrained by high unemployment, modest income growth, lower housing wealth, and tight credit. Business spending on equipment and software has risen significantly. However, investment in nonresidential structures is declining, housing starts have been flat at a depressed level, and employers remain reluctant to add to payrolls. While bank lending continues to contract, financial market conditions remain supportive of economic growth. Although the pace of economic recovery is likely to be moderate for a time, the Committee anticipates a gradual return to higher levels of resource utilization in a context of price stability.

With substantial resource slack continuing to restrain cost pressures and longer-term inflation expectations stable, inflation is likely to be subdued for some time.

The Committee will maintain the target range for the federal funds rate at 0 to 1/4 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 provide support to mortgage lending and housing markets and to improve overall conditions in private credit markets, the Federal Reserve has been purchasing \$1.25 trillion of agency mortgage-backed securities and about \$175 billion of agency debt; those purchases are nearing completion, and the remaining transactions will be executed by the end of this month. 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.

In light of improved functioning of financial markets, the Federal Reserve has been closing the special liquidity facilities that it created to support markets during the crisis. The only remaining such program, the Term Asset-Backed Securities Loan Facility, is scheduled to close on June 30 for loans backed by new-issue commercial mortgage-backed securities and on March 31 for loans backed by all other types of collateral.

[Note: In the April FOMC Statement Alternatives, strong emphasis (bold) indicates bold red underlined text in the original document.]

April FOMC Statement--Alternative A

Information received since the Federal Open Market Committee met in **March** suggests that economic activity has continued to strengthen and that the labor market is **showing signs of improving**. **Although growth in household spending has picked up recently, it is likely to remain constrained by high unemployment, modest income growth, lower housing wealth, and tight credit.** Business spending on equipment and software has risen significantly; however, investment in nonresidential structures is declining and employers remain reluctant to add to payrolls. Housing starts have **edged up but remain** at a depressed level. While bank lending continues to contract, financial market conditions remain supportive of economic growth.

Although longer-term inflation expectations **have remained** stable, **recent data suggest** inflation **has been trending down in response to** substantial resource slack. **The Committee anticipates that** inflation is likely to be **quite** subdued for some time.

To promote a more robust economic recovery in a context of price stability, the Committee **anticipates maintaining** the target range for the federal funds rate at 0 to ¼ percent for an extended period--**until** economic conditions **such as appreciably higher** rates of resource utilization, **increasing inflation pressures, or rising** inflation expectations warrant **a less accommodative monetary policy**. 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.

[To gradually reduce the size of the Federal Reserve's balance sheet and return it to a more normal composition over time, the Committee will maintain its approach of not reinvesting the proceeds of maturing agency debt and payments on mortgage-backed securities held by the System Open Market Account. The Committee is continuing to roll over maturing Treasury securities.]

In light of improved functioning of financial markets, the Federal Reserve has **closed all but one of** the special liquidity facilities that it created to support markets during the crisis. The only remaining such program, the Term Asset-Backed Securities Loan Facility, is scheduled to close on June 30 for loans backed by new-issue commercial mortgage-backed securities; **it closed** on March 31 for loans backed by all other types of collateral.

April FOMC Statement--Alternative B

Information received since the Federal Open Market Committee met in **March** suggests that economic activity has continued to strengthen and that the labor market is **beginning to improve**. **Growth in household spending has picked up recently** but remains constrained by high unemployment, modest income growth, lower housing wealth, and tight credit. Business spending on equipment and software has risen significantly; however, investment in nonresidential structures is declining and employers remain reluctant to add to payrolls. Housing starts have **edged up but remain** at a depressed level. While bank lending continues to contract, financial market conditions remain supportive of economic growth. Although the pace of economic recovery is likely to be moderate for a time, the Committee anticipates a gradual return to higher levels of resource utilization in a context of price stability.

With substantial resource slack continuing to restrain cost pressures and longer-term inflation expectations stable, inflation is likely to be subdued for some time.

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. 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.

[To gradually reduce the size of the Federal Reserve's balance sheet and return it to a more normal composition over time, the Committee will maintain its approach of not reinvesting the proceeds of maturing agency debt and payments on mortgage-backed securities held by the System Open Market Account. The Committee is continuing to roll over maturing Treasury securities.

OR

To gradually reduce the size of the Federal Reserve's balance sheet over time, the Committee will maintain its approach of not reinvesting the proceeds of maturing agency debt and payments on mortgage-backed securities held by the System Open Market Account. In addition, on May 3 the Committee will stop reinvesting the proceeds of maturing Treasury securities.]

In light of improved functioning of financial markets, the Federal Reserve has **closed all but one of** the special liquidity facilities that it created to support markets during the crisis. The only remaining such program, the Term Asset-Backed Securities Loan Facility, is scheduled to close on June 30 for loans backed by new-issue commercial mortgage-backed securities; **it closed** on March 31 for loans backed by all other types of collateral.

April FOMC Statement--Alternative C

Information received since the Federal Open Market Committee met in **March indicates** that economic activity has continued to strengthen and that the labor market is **improving**. **Though** investment in nonresidential structures is declining, housing starts have **edged up**, **growth in** household spending **has increased**, and business spending on equipment and software has risen significantly. While bank lending continues to contract, financial market conditions **have become more** supportive of economic growth. **With** economic recovery **under way**, the Committee anticipates a gradual return to higher levels of resource utilization.

Although energy prices have risen on balance in recent months, inflation **has remained** subdued. **The Committee will adjust the stance of monetary policy as necessary over time to ensure that** longer-term inflation expectations **remain well anchored and that inflation outcomes are consistent with price stability**.

The Committee will maintain the target range for the federal funds rate at 0 to 1/4 percent and **now** anticipates 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 **some time**.

The Committee will maintain its approach of not reinvesting the proceeds of maturing agency debt and payments on mortgage-backed securities held by the System Open Market Account. In addition, on May 3 the Committee will stop reinvesting the proceeds of maturing Treasury securities. To further reduce the size of the Federal Reserve's balance sheet, and to return the balance sheet to a more normal composition, the Committee anticipates that it will soon begin gradual sales of agency debt and mortgage-backed securities. The timing and pace of such sales will depend on evolving economic and financial conditions. 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.

In light of improved functioning of financial markets, the Federal Reserve has **closed all but one of** the special liquidity facilities that it created to support markets during the crisis. The only remaining such program, the Term Asset-Backed Securities Loan Facility, is scheduled to close on June 30 for loans backed by new-issue commercial mortgage-backed securities; **it closed** on March 31 for loans backed by all other types of collateral.

Table 1: Overview of Alternatives for the April 28 FOMC Statement

	March Statement	April Alternatives		
		A	B	C
	<i>Economic Activity</i>			
Recent Developments	has continued to strengthen			

Labor Market	is stabilizing; high unemployment; employers remain reluctant to add to payrolls	is showing signs of improving; high unemployment; employers remain reluctant to add to payrolls	is beginning to improve; high unemployment; employers remain reluctant to add to payrolls	is improving
Outlook	recovery likely to be moderate for a time; gradual return to higher levels of resource utilization	---	recovery likely to be moderate for a time; gradual return to higher levels of resource utilization	recovery under way; gradual return to higher levels of resource utilization
<i>Inflation</i>				
Recent Developments	substantial slack is restraining cost pressures; stable inflation expectations	stable inflation expectations but recent data suggest inflation is trending down in response to slack	substantial slack is restraining cost pressures; stable inflation expectations	energy prices have risen on balance in recent months but inflation remains subdued
Outlook	likely to be subdued for some time	likely to be quite subdued for some time	likely to be subdued for some time	policy adjustments will ensure inflation outcomes consistent with price stability
<i>Federal Funds Rate Target</i>				
Intermeeting Period	0 to ¼ percent	0 to ¼ percent	0 to ¼ percent	0 to ¼ percent
Forward Guidance	economic conditions are likely to warrant exceptionally low levels for an extended period	anticipate maintaining the 0 to ¼ percent target range for an extended period--until economic conditions such as ... warrant a less accommodative policy	economic conditions are likely to warrant exceptionally low levels for an extended period	economic conditions are likely to warrant exceptionally low levels for some time
<i>Reinvestment and Sales of SOMA Assets</i>				
Approach		[do not reinvest proceeds of agency debt and MBS but continue to roll over maturing Treasuries]	[do not reinvest proceeds of agency debt and MBS but continue to roll over maturing Treasuries] OR [no reinvestment]	no reinvestment; "Committee anticipates that it will soon begin gradual sales of agency debt and MBS"

March 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 complete the execution of its purchases of about \$1.25 trillion of agency MBS and of about \$175 billion in housing-related agency debt by the end of March. The Committee directs the Desk to engage in dollar roll 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.

[Note: In the April 2010 FOMC Directive Alternatives, strong emphasis (bold) indicates bold red underlined text in the original document.]

April 2010 FOMC Directive -- Alternative A

The Federal Open Market Committee seeks monetary and financial conditions that will foster price stability and promote sustainable growth in output. To further its long-run objectives, the Committee seeks conditions in reserve markets consistent with federal funds trading in a range from 0 to ¼ percent. The Committee directs the Desk to engage in dollar roll transactions as necessary to facilitate settlement of the Federal Reserve's agency MBS transactions. **[To gradually reduce the size of the Federal Reserve's balance sheet and return it to a**

more normal composition over time, the Committee directs the Desk to not reinvest the proceeds of maturing agency debt and payments on mortgage-backed securities held by the System Open Market Account.] 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.

April 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 engage in dollar roll transactions as necessary to facilitate settlement of the Federal Reserve's agency MBS transactions. **[To gradually reduce the size of the Federal Reserve's balance sheet and return it to a more normal composition over time, the Committee directs the Desk to not reinvest the proceeds of maturing agency debt and payments on mortgage-backed securities held by the System Open Market Account. OR To gradually reduce the size of the Federal Reserve's balance sheet over time, the Committee directs the Desk to not reinvest the proceeds of maturing Treasury and agency debt and payments on mortgage-backed securities held by the System Open Market Account.]** 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.

April 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 engage in dollar roll transactions as necessary to facilitate settlement of the Federal Reserve's agency MBS transactions. **To gradually reduce the size of the Federal Reserve's balance sheet over time, the Committee directs the Desk to not reinvest the proceeds of maturing Treasury and agency debt and payments on mortgage-backed securities held by the System Open Market Account.** The System Open Market Account Manager and the Secretary will keep the Committee informed of ongoing developments regarding the System's balance sheet that could affect the attainment over time of the Committee's objectives of maximum employment and price stability.

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