

The Financial-Market Effects of the Federal Reserve's Large-Scale Asset Purchases

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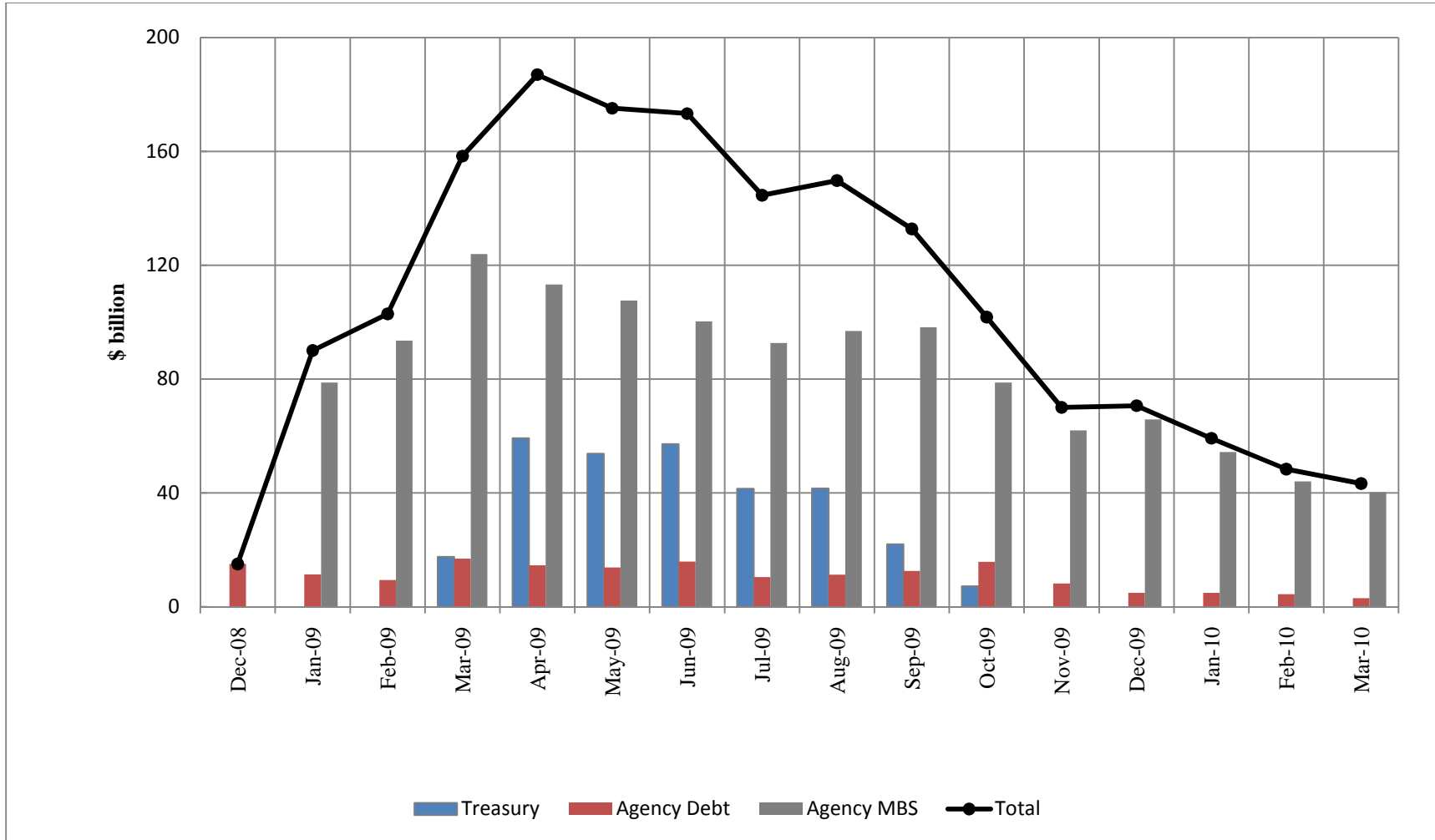
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- Large-scale asset purchases (LSAPs) removed 22% of longer-term Agency, Agency MBS, and Treasury securities from the market.
 - This represents a large reduction in the duration of debt securities available to private investors.
- Portfolio balance model suggests that this policy action could have a significant effect on the term premium.
 - As in Operation Twist, only much bigger.
 - Term premium effect likely to be persistent.
- Purchases also had calming effects on stressed markets.
 - These effects likely faded as conditions returned to normal.

Chart 4: Pace of Purchases by Asset Class



Source: Federal Reserve Bank of New York

- November 25, 2008: Fed announces \$600 billion purchases of agency debt and agency MBS.
 - Designed to aid mortgage market.
- December 1, 2008: Chairman Bernanke says Fed “could purchase longer-term Treasury securities ... in substantial quantities.”
- December 16, 2008: FOMC sets federal funds rate at zero bound and affirms possibility of buying longer-term Treasury securities.
- January 28, 2009: FOMC puts off Treasury purchases.
- March 18, 2009: FOMC expands purchases to \$1750 billion of longer-term assets, including \$300 billion of longer-term Treasury securities.

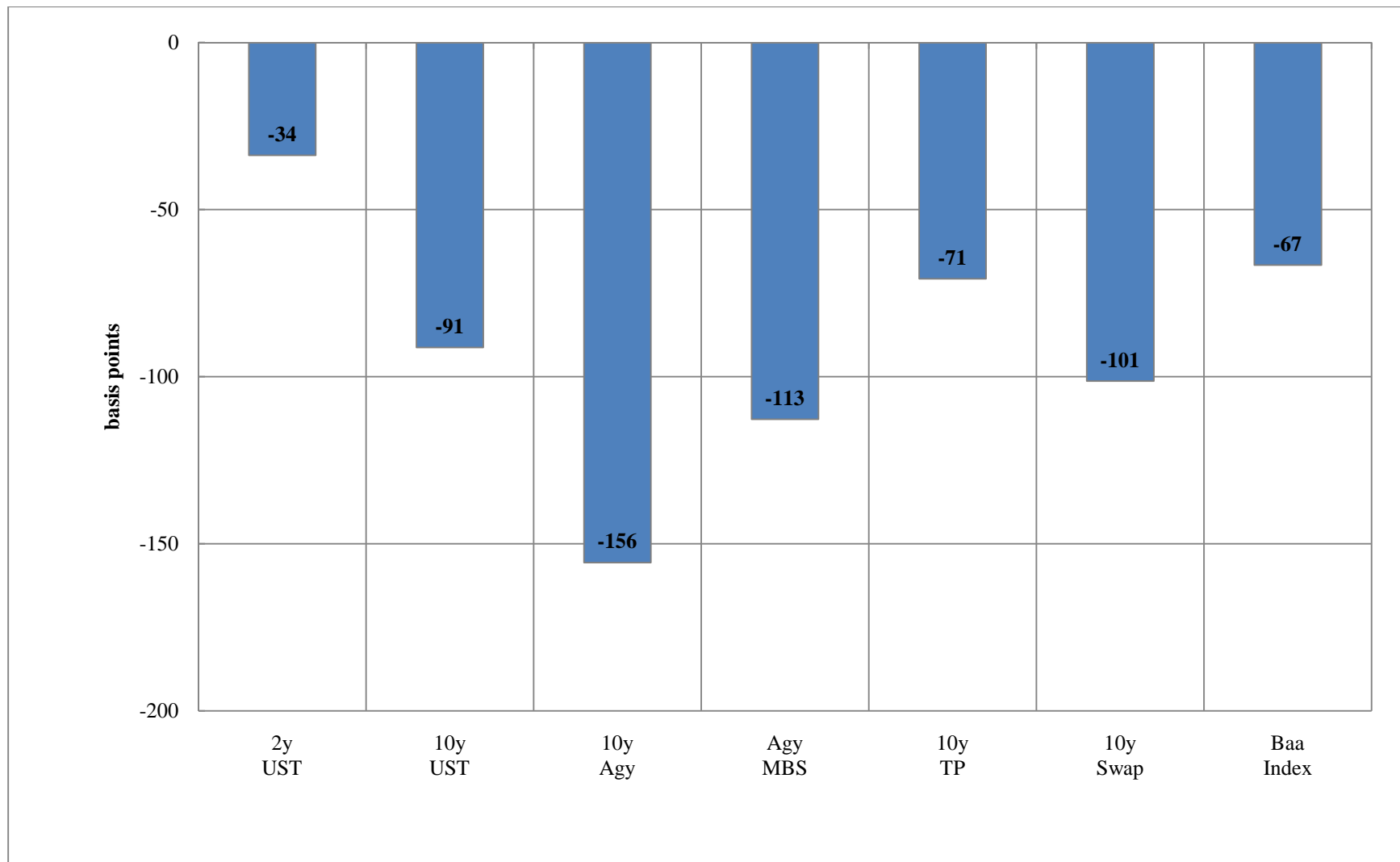
Table 1: Interest Rate Changes around Baseline and Extended Event Set Announcements

Date	Event	2y UST	10y UST	10y Agy	Agy MBS	10y TP	10y Swap	Baa Index
11/25/ 2008*	Initial LSAP Announcement	-2	-22	-58	-44	-17	-29	-18
12/1/ 2008*	Chairman Speech	-8	-19	-39	-15	-17	-17	-12
12/16/ 2008*	FOMC Statement	-9	-26	-29	-37	-12	-32	-11
1/28/ 2009*	FOMC Statement	10	14	14	11	9	14	2
3/18/ 2009*	FOMC Statement	-22	-47	-52	-31 [#]	-40	-39	-29
4/29/ 2009	FOMC Statement	1	10	-1	6	6	8	-3
6/24/ 2009	FOMC Statement	10	6	3	2	4	4	5
8/12/ 2009*	FOMC Statement	-2	5	4	2	3	1	2

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Chart 5: Cumulative Interest Changes on Baseline Event Set Days



Source: Bloomberg, Barclay's Capital

Term Premium = $\alpha + \beta$ Unemp. + γ Δ Core CPI + δ Inf. Dis. + θ Bond Vol. + λ Bond Supply

Bond Supply = [US Treasuries (>1 year maturity) held by private investors]/US GDP

Table 2: OLS Regression of 10-Year Term Premium, January 1985 – June 2008

	Coefficient	Std Error	Coefficient	Std Error	Coefficient	Std Error
Constant	-2.182***	0.348	-2.324***	0.349	-1.852***	0.334
<i>Cyclical Factors</i>						
Unemployment Gap	0.180**	0.064	0.185**	0.063	0.252***	0.070
Core CPI Inflation	0.307***	0.056	0.298***	0.057	0.480***	0.062
<i>Uncertainty</i>						
Inflation Disagreement	0.377**	0.131	0.394**	0.133	0.286*	0.123
Realized Volatility	0.943***	0.207	0.994***	0.206	0.944***	0.271
<i>Supply</i>						
Unadjusted	0.044***	0.009	-	-	-	-
Duration-Adjusted	-	-	0.064***	0.014	-	-
Adjusted R-squared	0.84		0.84		0.78	
Std Err of Regression	0.36		0.37		0.43	
Number of Obs	282		282		282	

Newey West standard errors (12 lags). ***, **, * denote significance at the 1, 5, 10 percent levels.

Table 5b: Total Effect of LSAPs on 10-Year Term Premium (bps)

	OLS Term Premium Model	DOLS Term Premium Model*	Yield Level Model
Unadjusted [95% CI]	52 [31 to 74]	50 [31 to 69]	82 [50 to 115]
Duration- Adjusted [95% CI]	38 [22 to 54]	36 [20 to 53]	58 [31 to 84]

* Long-run effect.