Federal Reserve Policy During the 2020 Coronavirus Crisis

A Comparative Primer to the Great Recession

January 2021

Federal Reserve Policy from the Great Depression to the Great Recession

During the Great Recession of 2007-2009, the United States Federal Reserve, with Ben Bernanke at the helm, acted in a comparatively decisive manner to that of times past. Not since the 1929-1933 Great Depression had we been exposed to a crisis of this magnitude, and the Fed under Chairman Bernanke deserves credit for limiting the contraction of real GDP to approximately 15% of that during the Great Depression. In hindsight, the Federal Reserve policy action during the Great Depression can be described as a series of missteps, including allowing bank reserves to decline during a panic, limiting the effect of gold inflows that would otherwise have enlarged the monetary base, doubling reserve requirements as an insurance policy against large levels of excess reserves in the banking system, and indecisive teetering action around expansionary policies of open market purchases.

In response to the economic and financial crisis that ensued between 2007 to 2009, the Fed injected a large amount of funds into the U.S. banking system, introduced several new programs to mitigate the loss of credit channels, slashed FFR target rates, completely opened up its lending facilities, and employed more precise forward guidance. The chronology of events began with the Federal Reserve slashing short-term interest rates on multiple occasions, beginning in the fourth quarter of 2017, before the FFR target rate stood at 0 to 0.25% by the end of 2008, the lowest rate on record. In hindsight, the overwhelming majority of economists indicate that the Fed should have reduced rates to near-zero more aggressively when many of the major banks came to the brink of collapse in March 2008. With near-zero rates, the normal channels of financial intermediation became constrained. As a result, the Bernanke-led Federal Reserve immediately stepped in to aggressively implement a series of non-conventional monetary policy measures to keep credit flowing. When demand for liquidity surged, the money supply multiplier contracted by more than 40%, an even larger decline than during the Great Depression. Accordingly, the Fed implemented an array of emergency lending programs and initiatives followed by large purchases of mortgage backed securities, federal agency securities, and Treasury bonds to dramatically increase bank reserves and the monetary base to prevent a potentially more severe contraction of the U.S. money supply. Between December 2007 and December 2009, the Federal Reserve's balance sheet expanded 2.5x, from $894.3B to $2,237.3B (Appendix A).

While price deflation and a catastrophic depression was averted as a result of the Fed's Monetary Policy response, it would take several years before the economy recovered and unemployment normalized, with additional quantitative easing programs into 2013. In fact, the Fed's balance sheet expanded further to >$3,500B with three additional quantitative easing and maturity extension programs, beginning with QE2 in November 2010 and ending with QE3 in September 2012 (Appendix B). The result was an unprecedented balance sheet expansion of ~4x and a corresponding 20x increase in bank reserves, all within a six-year span.

Federal Reserve Policy During the 2020 Coronavirus Crisis

At the onset of 2020, global health authorities became increasingly aware of the risks of a quickly spreading coronavirus. As the first months of the year progressed, the virus spread to nations around the globe, leaving a devastating wake of public health challenges and looming economic turbulence. As hospitals and healthcare resources became increasingly overloaded, significant government stimulus measures were required to equip the world's health system for the months ahead. Governments and health authorities collaborated to enforce adequate restrictions to ensure safety precautions, and the economies of all major nation's began to shut. Dislocations in Treasury and investment-grade corporate bond markets became evident in March, with yields increasingly sharply and more drastically than credit default swaps. Foreign central banks, bond funds, and hedge funds began disproportionately selling Treasuries, sparking a liquidity run. With Treasuries as the focal point, the demand for liquidity was markedly different than during the GFC, which was more heavily weighted towards mortgage-backed securities. Normally a key source of liquidity, dealers and market makers were unable to provide necessary liquidity as a result of regulatory constraints and risk limits. The Fed recognized that intervention was immediately imperative. Rates were cut to near-zero, a quantitative easing program was announced, and several facilities were opened to stabilise a tumultuous economy (Appendix C). The Fed also lowered

the primary credit rate by 150bps to encourage banks to use the discount window, similar to the GFC, and allowed for greater flexibility in bank capital requirements.

Quantitative Easing Actions

On March 15th, the Federal Reserve leveraged one of their primary tools, forward guidance, to announce a $700 billion ($500 billion of Treasury securities and $200 billion MBS) quantitative easing program with no limit, including an immediate $80 billion purchase of Treasuries. The announcement made it clear that the Fed would step in to act as a lender of last resort. However, unlike the impactful announcement effects of the GFC (Appendix D), Treasury yields continued to rise. On March 19th, two events occurred to realize a stabilisation in bond markets and stimulate the economy. First, the Fed made whole on their commitment to purchase $80 billion of Treasuries (Appendix E). Second, the settlement of the first USD swap lines of $162 billion occurred (Appendix F). The combination of these events marked a turning point, with Treasury yields declining. In contrast, forward guidance on corporate bond purchases had a great effect in lowering yields and slowing outflows upon announcement. Thus, actual purchases on May 12th were delayed and modest as the announcement achieved, in large part, it's stabilisation goal (Appendix G). In the MBS market, the Fed's QE announcement had a similar effect to Treasuries, with risk premiums rising in the days following the announcement and only declining upon large actual purchases on March 20th (Appendix H).

Takeaways

The coronavirus shock brought forth a much-needed policy revolution in which policymakers rely more on direct financial support for economic and financial stabilisation. In turn, the intersectoral action experienced required closer coordination between central banks and fiscal authorities, giving rise to an incremental blurring of monetary and fiscal policy. The Global Recession and the Coronavirus Crisis are defined by vastly different underlying fundamentals, which have considerable dissimilarities in the magnitude and protraction of the financial turmoil that ensued. The K-recovery of the Coronavirus shock lends itself to a relatively less pervasive loss of wealth than during the GFC, which negatively affected all businesses as a result of the double bursting of housing and stock market bubbles. The 2020 financial crisis is one of "natural disaster", as Bernanke describes it, thereby further putting it in stark contrast to the 08/09 financial crisis which was propagated by a direct deterioration and loss of confidence in the banking system.

Ultimately, the current economic crisis is reliant on global health authority guidance, the effectiveness and speed to market of vaccinations, and the recovery in the health of nations from the virus. Moreover, not only would previously optimal fiscal policy intervention be misguided under such circumstances, but it would instead have accelerated the problem further. The virus feeds off economic activity, so to speak, making the choice and allocation of fiscal stimulus all the more critical. This presented policymakers and economists with entirely new challenges, to which they aggregately responded quickly and appropriately. The Fed's policy response has been as decisively bold as that of the underlying crisis and has successfully stimulated the economy and financial markets in such a way as to not fuel the virus further and create additional economic damage. We look forward to hearing Chairman Bernanke's recount of the actions and performance of the Fed through this crisis and the way forward for the global economy.

Appendix

Appendix A

Changing Federal Reserve Asset Structure ($ billions) - GFC

Date	Treasury Securities*	Mortgage Backed Bonds	Term Auction Credit	Other Loans	Total Assets
12/27/2007	797.1	-	20.0	4.5	894.3
4/14/2008	615.6	-	125.0	27.9	880.7
9/03/2008	588.7	-	150.0	19.1	905.7
9/17/2008	577.8	-	150.0	121.3	996.1
9/24/2008	572.6	-	150.0	262.3	1,214.4
10/15/2008	570.7	-	263.1	441.4	1,772.4
10/29/2008	570.1	-	301.4	369.8	1,970.7
11/12/2008	569.4	-	415.3	316.1	2,214.5
4/08/2009	564.7	236.7	467.3	115.2	2,090.0
8/08/2009	813.4	542.9	233.6	105.7	1,992.2
12/30/2009	936.5	908.3	75.9	89.7	2,237.3

**includes federal agency securities*

Source: http://www.federalreserve.gov/releases/h41

Appendix B

QE and Maturity Extension Programs - GFC

Program	Date Announced	Program Time Period	Assets Purchased
QE1	Nov. 25, 2008	Nov 2008 – Mar 2010	Fannie Mae and Freddie Mac bonds and MBS ($1,750 B)
QE2	Nov. 3, 2010	Nov 2010 – Jun 2011	Long-term Treasury bonds ($600 B)
Operation Twist	Sept. 21, 2011	Sept 2011 – Dec 2012	Long-term Treasury bonds ($400 B) financed by sale of ST Treasuries
QE3	Sept. 13, 2012	Open Ended	Long-term MBS ($40 B) and long-term Treasury bonds ($45 B) per month

Source: Federal Reserve System Monetary Policy Reports

Appendix C

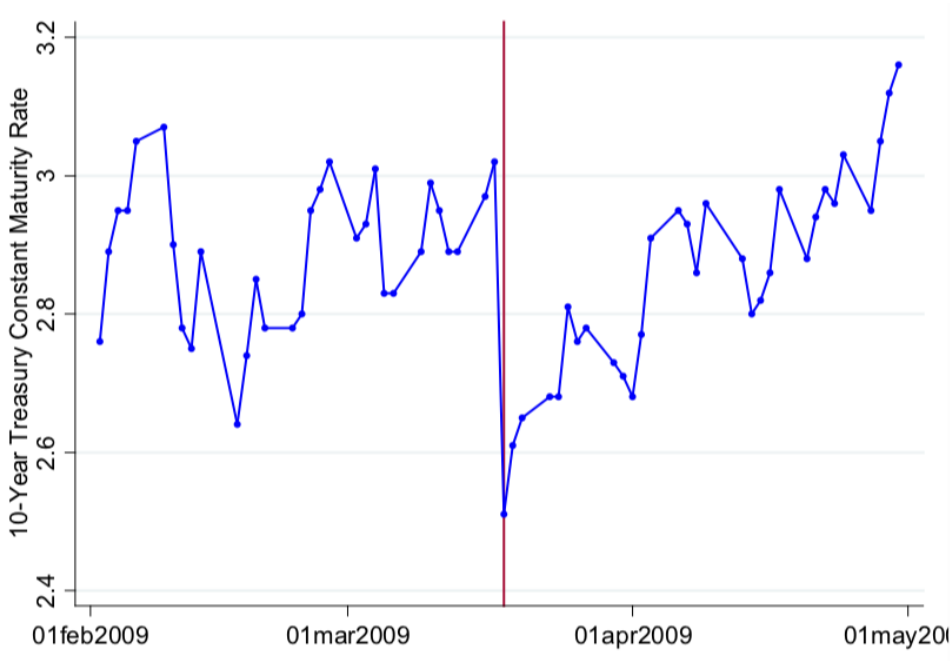
Timeline of Fed Emergency Lending Facilities

Announcement Date	Operational Date	Facility	Funded by CARES Act?
March 17	March 20	Primary Dealer Credit Facility (PDCF)	No
	April 14	Commercial Paper Funding Facility (CPFF)	No
March 18	March 23	Money Market Mutual Fund Liquidity Facility (MMLF)	No
March 23	May 12	Secondary Market Corporate Credit Facility (SMCCF)	$25 B
	June 17	Term Asset-Backed Securities Loan Facility (TALF)	$10 B
	June 29	Primary Market Corporate Credit Facility (PMCCF)	$50 B
April 9	April 16	Paycheck Protection Program Liquidity Facility (PPPLF)	No
	June 15	Main Street Lending Program	$75 B
	May 26	Municipal Liquidity Facility	$35 B

Source: Federal Reserve System Policy Tools Section

Appendix D

March 18, 2009 Quantitative Easing Announcement – 50bps Drop in 10yr Treasury



Source: Vissing-Jorgensen, UC Berkeley, Dec 2020

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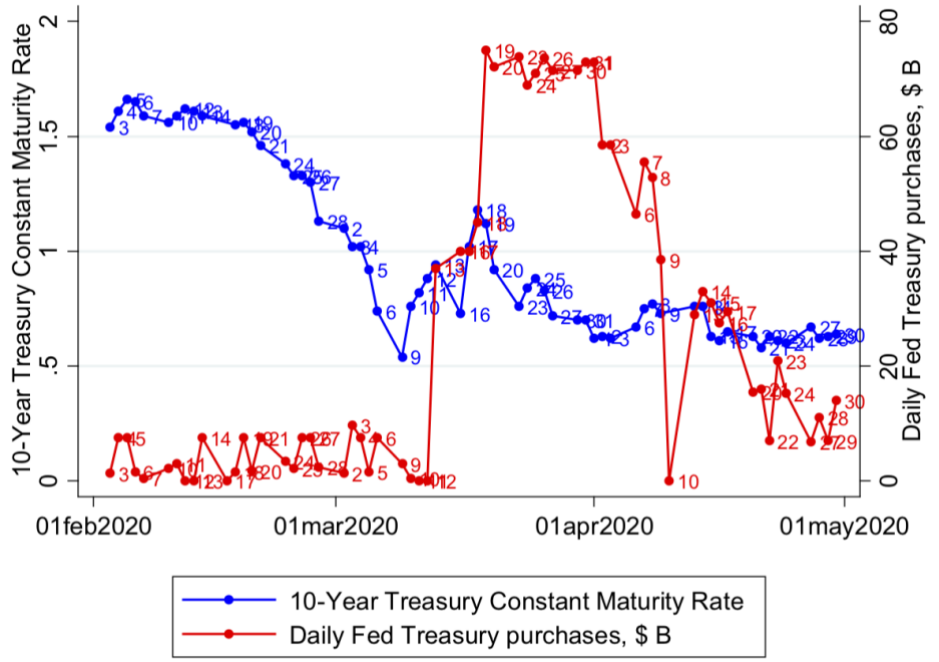
Appendix E

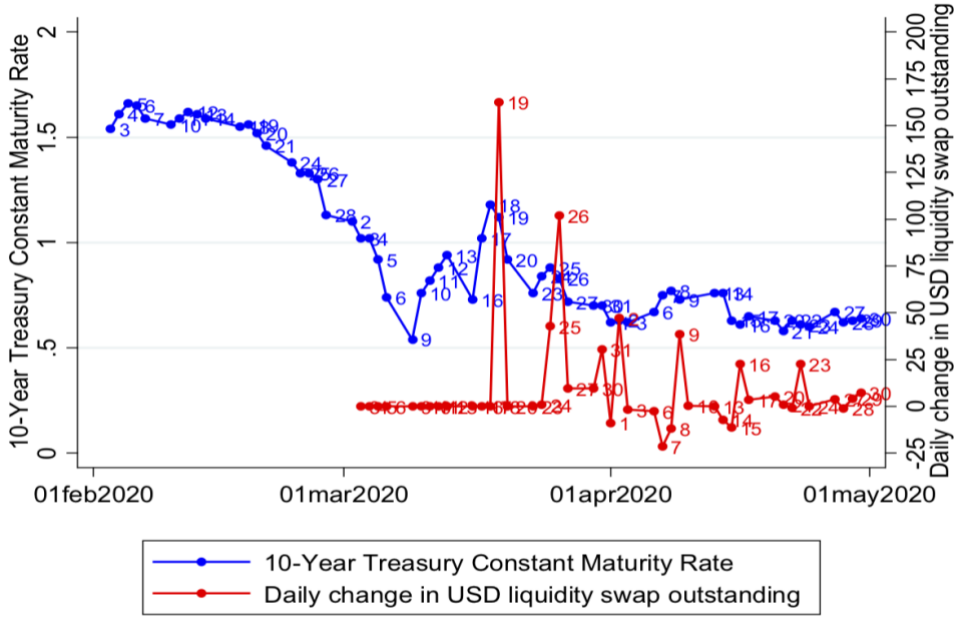
Federal Reserve Treasury Purchases



Source: Vissing-Jorgensen, UC Berkeley, Dec 2020

Appendix F

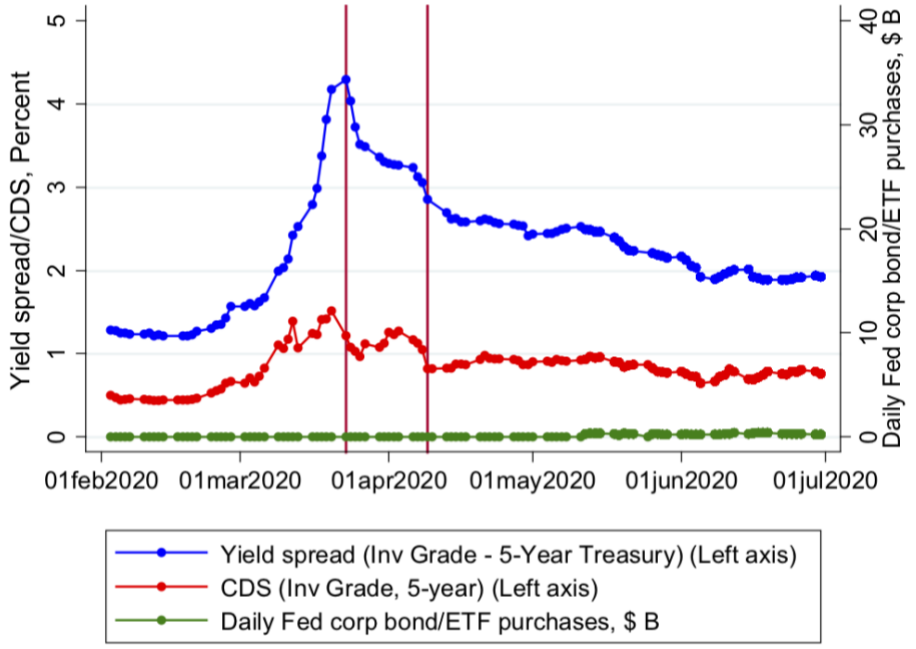
Settlement Schedule of USD Swap Lines



Source: Vissing-Jorgensen, UC Berkeley, Dec 2020

Appendix G

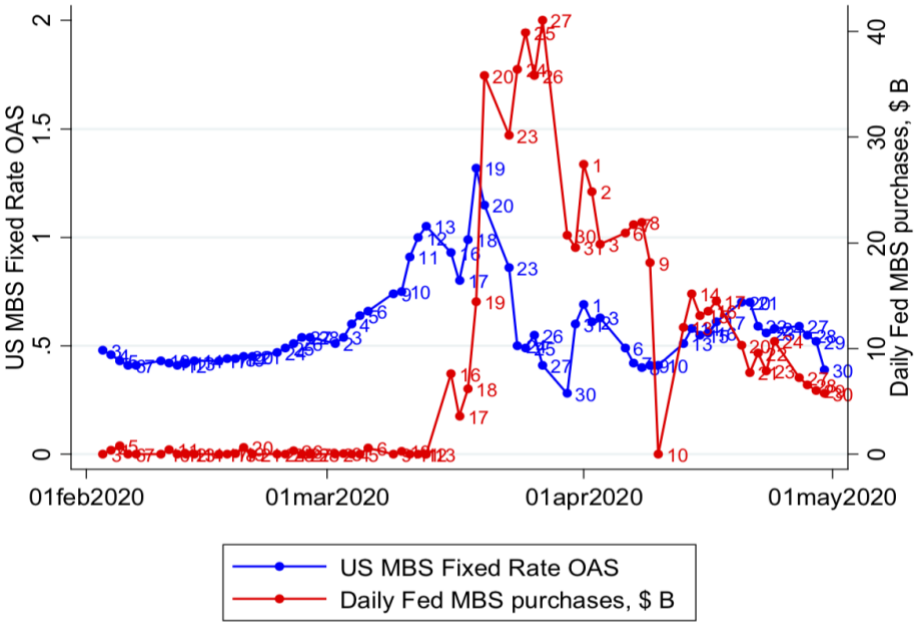
Corporate Bond Quantitative Easing Announcement Impact and Purchases



Source: Vissing-Jorgensen, UC Berkeley, Dec 2020

Appendix H

Federal Reserve Mortgage-Backed Security (MBS) Purchases



Source: Vissing-Jorgensen, UC Berkeley, Dec 2020

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