Federal Reserve Response to the 2007 Financial Crisis. Monetary Policy Instruments

Bonta (Mitea) Liana-Antonela
"Babes-Bolyai" University of Cluj-Napoca, Faculty of Economics and Business Administration / Economics and International Relations
tonyaliana@yahoo.com

Abstract

This paper will present a radiography of the actions taken by the Federal Reserve after the debut of the subprime crisis. FED's reaction is very important as it served as a model for the other central banks, especially for the European Central Bank. The below analysis will show that FED's traditional actions as lender of last resort were not enough and FED had to come up with some new and unconventional monetary solutions and track their impact on the US economy.

Key words: FED, crisis, lender of last resort, monetary policy instruments
J.E.L. classification: E51, E52, E58

1. Introduction

The purpose of this paper is to analyze the FED's actions in the 2007 subprime crisis context. I will present the monetary tools used to counteract the crisis and also their consequences. My analysis will begin with FED's actions as lender of last resort

2. Theoretical background. Federal Reserve response to the crisis acting as lender of last resort role

"Lender of last resort role of central banks was emphasized by Walter Bagehot, since 1873 (De Grauwe, 2011, p. 8) ". Central banks should take into consideration the following when they are making use of this function:

- They should have the possibility to lend without any constraints, freely.
- For the granted loans, central banks should receive an interest, but it should be seen as a penalty, so the applicants not to be tempted by risky ingestions (Bagehot, 1873, p.25). Related to this point Paul de Grauwe considers that small interest rates are more beneficial to the economy during the crisis (De Grauwe, 2011, p. 8).
- Only "good" collaterals should be accepted as a guarantee and central banks should lend only to that type of counterparties which can provide them.
- Only counterparties which lack liquidity should be borrowed, not the insolvent ones. During the crisis is a little bit difficult to follow this last principle as an illiquid counterparty can fast become an insolvent one only by the fact that their actives can fast lose value and they can be evaluated for a short period of time on low prices.

The purpose of FED's actions was to foster maximum employment and also to achieve and maintain price stability.

As is also mentioned on FED's official website, FED's response to the financial crisis was proactive using three sets of instruments:

- Traditional monetary instruments;
- Non-standard monetary instruments;
- Open market operations, but with an extended role.

3. Traditional monetary instruments used by the FED

From the beginning of the crisis until Lehman Brothers bankruptcy, FED used traditional measures in order to provide liquidity into the market. The first action was to cut the interest rate to 0% as you can see in the chart below. Lower interest rates generated a monetary policy relaxation. This measure along with the open market operations had the purpose to sustain the credit market by lowering credit costs and encouraging banks to lend each other, avoiding a systemic crisis. This action created also an important increase on FED's balance sheet (FED, 2017).

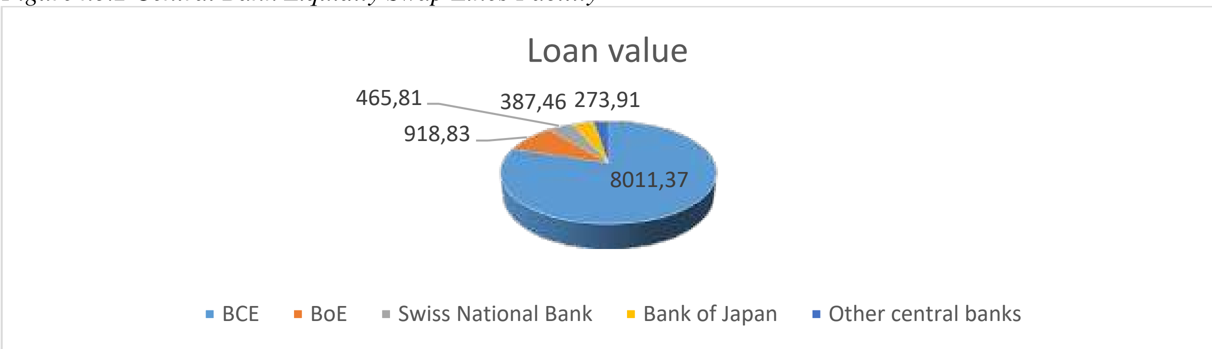
Figure no.1. US FED Funds Rate

Source: Chart processed by the author using data from https://tradingeconomics.com/united-states/interest-rate (Access:29.05.2018)

Being proactive, FED noticed the inefficiency of these classical measures and gave banks the opportunity to lend in a group through the Term Auction Facility (TAF). This tool had an impact only on the assets composition not also on their volume (Felkerson, 2011: 8). More details about this topic will be discussed in the next section.

Central Bank Liquidity Swap Lines were opened to other central banks under repo transactions, to provide liquidity also on the foreign market. Foreign exchange swap agreements were concluded with 14 foreign central banks, allowing them to provide cash in dollars to affiliated commercial banks.

Figure no.2 Central Bank Liquidity Swap Lines Facility



Source: Chart processed by the author using data from FED, https://www.federalreserve.gov/regreform/reform-swaplines.htm (Access:29.05.2018)

Through this facility, a total of 569 loans were granted in the total amount of 10,057.4 billion dollars between December 2007 and February 2010. The main five banks that accessed this facility were: ECB, England's Central Bank, Bank of Japan and the National Bank of Denmark.

4. Unconventional monetary policy instruments used by the FED

As traditional measures were not enough, the FED had to find another way to provide liquidity to the market, so it implemented a series of monetary policy instruments which were not used before.

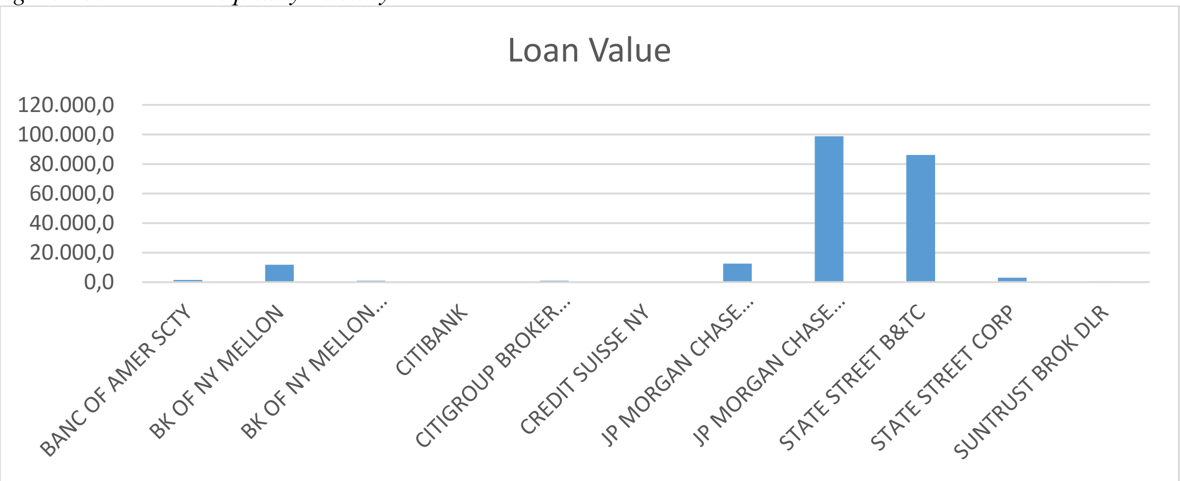
Federal Reserve actions focused on two directions. In my view, the most important direction was the intervention to prevent the bankruptcy of systemic institutions such as AIG and Bear Stearns. The second was focused on introducing special facilities which had the aim to provide liquidity to domestic and foreign banks, mutual funds and brokers, that they can continue to support lending.

In March 2008, the FED bailed out one of the largest investment firms in the US, Bear Stearns, which was taken over by JP Morgan Chase. After this measures, the FED's assets did not register a significant increase.

Starting September 2008, the FED is aware that traditional measures are not sufficient and implements unprecedented measures through unconventional funding programs in order to maintain and create liquidity in the market, as we will see. New refinancing instruments were introduced as I will show below.

- **"Money Market Investor Funding Facility (MMIFF)"** (FED, 2015). The purpose of **t**his facility was to provide liquidity to industry and large businesses, to fund the acquisition of assets from eligible investors, for a one-year period, from October 2008 to November 2009. Fed borrowed 57.9 billion dollars in the auto industry. These measures saved General Motors and Chrysler, but from this program benefited also Nissan, Ford, Volkswagen, Toyota, and BMW.
- **"Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF)"** (FED, 2015)**.** This program, whose main purpose was to stimulate liquidity into the security market, started on 22th of September 2008 and had as principle condition that all granted loans had to be guaranteed. The beneficiaries of this new lending facility were the bank holdings, depository institutions and also the foreign bank subsidiaries. As it was no market and no conditions to treat this instruments, FED introduced regulations for this new instrument.

Figure no. 3 AMLF Liquidity Facility



Source: Chart processed by the author using data from FED, https://www.federalreserve.gov/monetarypolicy/expiredtools.htm (Access:29.05.2018)

- **"Commercial Paper Funding Facility (CPFF)"** (FED, 2015), was aimed at maintaining short-term liquidity, also playing an important role in increasing access to credit facilities for businesses and private consumers. The interest rate for these facilities was between 0.25% and 1.5 %.
- **"Other unconventional measures** used by FED were: Primary Dealer Credit Facility (PDCF) used for the entire market, Term Securities Lending Facility (TSLF) for financing the Treasury" (FED, 2015).

- "**Term Auction Facility (TAF)**" (FED, 2015) was an instrument which was used in order to accept a wider range of guarantees as collaterals. The interest rate for the fixed amount used has been determined through the auction. (Federal Reserve 2008, p. 219). These auctions were held twice a week: $ 75 billion for a 28-day term and $ 25 billion for an 84-day term. The total amount committed through this facility was $ 3.818 billion. The most important banking institutions that benefited from this program were Bank of America Corporation, Barclays PLC (United Kingdom) and Royal Bank of Scotland (United Kingdom). All these sums were returned on time and the facilities were closed, respecting the terms of this program.
- **"Asset-Backed Securities Loan Facility (TALF)"** (FED, 2015)**.**
  This facility was used to support households and also small businesses, with Fed New York lending over $ 200 billion, it was the last of the special facilities used to maintain and create liquidity into the market. These loans were secured by these assets backed securities. These operations were started in March 2009 and granted until June 2010, with a final reimbursement deadline of October 2014. The TALF structure differed from the other liquidity programs initiated by the FED but its role was to ensure liquidity to the financial system. Another important role was to encourage the credit flow. This program was designed to support the securitized credit market by focusing on supporting credit intermediation on the market. (Brian P. Sack, 2010).
- **"Maturity Extension Program and Reinvestment Policy)"** (FED, 2015). Under this program, the FED sold or redeemed a total of $ 667 billion of short-term treasury securities and used the proceeds to buy long-term treasury bonds, thus extending the average maturity of the securities in its portfolio. By exerting a downward pressure on longer-term interest rates, the maturity extension program was meant to help wider market conditions relax and provide support for economic recovery. FOMC announced in September 2011 a $ 400 billion program which was extended until the end of 2012, selling and redeeming another 267 billion USD.

As the economy recovered, some of these credit facilities were withdrawn. Although these liquidity maintenance programs are no longer in place, the FED continues to monitor and take action to achieve its objectives.

The second half of 2009 and 2010 were characterized by a visible improvement in financial markets. This was possible due to the prompt intervention of the EDF and the government to support both financial institutions and households.

These measures presented above have once again proved the importance of FED as a central bank and its important role as lender of last resort.

5. Conclusions

The above analysis emphasizes that FED's actions were proactive and also flexible, but the need for changing the monetary policy, in order to maintain its objectives is a must.

These actions were urgently needed to prevent the collapse of the global financial markets/system. My opinion that these interventions have achieved their intended purpose, namely to support economic activity.

Due to FED's capacity to support the liquidity of financial institutions, a major financial collapse was avoided. The crisis has revealed major regulatory gaps. Critical financial institutions, of which I had certain expectations, were not resilient enough to cope with such shocks without receiving assistance.

FED has gained credibility through the measures analyzed above because these measures have been aimed at achieving the long-term objectives. As Bliner has pointed out, the FED has clearly expressed the objective of mitigating the effects of the crisis and preventing a new one, and this credibility is due to facts (Blinder, 2012).

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