International Journal of Economics & Strategic Management of Business Process (ESMB)
Vol.16 pp.7-10

Considerations regarding the unconventional monetary policies and their effects on the economy

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***Abstract*— The purpose of this paper is to present the main current unconventional monetary policies, as well as the effects that the introduction of such policies have on certain macroeconomic variables. Given the fact that in times of major crises, the monetary policy instruments normally used by central banks may no longer have the same effects that they have during the periods of economic stability, a number of unconventional monetary policies, such as quantitative easing, should be used in order to stimulate the economy. The first part of this paper aims to create an overview of the concept of unconventional monetary policy by highlighting the most relevant definitions, as well as presenting the main current measures of unconventional monetary policy, while the second part of the paper aims to identify the effects that the introduction of such monetary policies have on the economy and on certain macroeconomic variables.**

***Keywords*— monetary policy, central banks, unconventional monetary policy, quantitative easing, macroeconomic effects**

I. Introduction

Over more than a decade after the outbreak of the recent financial crisis, it can be said that its effects are still felt, more or less, by the economic world. Even though most of the countries have overcome the shocks caused by the outbreak of the recent crisis, their current state does not rise to the financial robustness they had in 2007.

In order to overcome the global financial crisis, it was necessary to rethink the interaction between the financial economy and the real economy, central banks used monetary policies that were considered unconventional, together with a tightening in the regulatory and supervisory policies. „Bold and unprecedented action by public authorities, accompanied by progress in the institutional and regulatory financial architecture, have, however, helped to reduce economic slack, to bring down record unemployment and to put the world economy and the euro area, at last, back on a path of solid economic expansion". [1]

II. Considerations regarding the concept of unconventional monetary policy

Before the start of the global financial crisis, central banks, especially the central banks from advanced economies, were facing a calm economy, the monetary policy strategies used were predictable and the transmission mechanism of monetary policy was clear.

As a result of the recent financial crisis, central banks have been forced to adopt a number of unconventional monetary policies, which had two major objectives: restoring the functioning of financial markets and ensuring a monetary policy accommodation at a zero-lower bound. The final goal of these types of policies was to ensure macroeconomic stability.

„Central banks have recently been forced to rely on unconventional monetary policies due to the ineffectiveness of conventional policies at the zero-lower bound. The unconventional policies include altering the size and composition of Central banks' balance sheets (i.e. Large-Scale Asset Purchases programmes, or LSAP) and/or issuing announcements about the future path of short-term interest rates (i.e. forward guidance)". [2]

Even though the concept of unconventional monetary policy has become more popular after the global financial crisis that started in 2007, there is an ample history in intellectual debates about the adequacy of such measures, and during the Great Depression (1929 - 1939), some of these unconventional measures were widely debated.

Keynes identified and discussed some contemporary unconventional monetary policies. „He recognized that monetary policy operates through short-term interest rates and could not necessarily influence the long-term interest rate which contains future expected interest rates and therefore is also important for investment". [3] He also discussed the issue of time incoherence faced by monetary decision-makers: „a monetary policy which strikes the public as being experimental in character or easy to change may fail in its objective of greatly reducing the long-term rate of interest". Of course, "the same policy might prove easily successful…if it is…rooted in strong conviction and promoted by an authority unlikely to be superseded". [4]

III. Types of unconventional monetary policies used by central banks

In order to stimulate aggregate demand, several central banks, such as the Federal Reserve of United States of America, Bank of England and Bank of Japan, have started to purchase bonds. Regarding the transmission channels of the unconventional monetary policy the International Monetary Fund [5], has identified the importance of the following transmission channels, related to bond purchasing in order to decrease the nominal long-term yields:

ISSN 1737-9288

International Journal of Economics & Strategic Management of Business Process (ESMB)
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- the signaling channel – this channel refers to the situations in which the central bank is starting to purchase bonds, operation which could convince the financial markets that the bank wants to weaken the position of the monetary policy;

- the scarcity channel – through this channel central banks can reduce the supply of certain bonds that exist in the financial market, by buying a larger quantity of that type of bond;

- the duration channel – when central banks want to reduce long-term bonds, they will purchase a very large amount, and as a result, the investor portfolios will become safer and they may accept lower yields.

The effects of the bonds purchasing on the macroeconomic conditions were positive. However, it is difficult to quantify the size of the impact this type of approach has had on the economy.

Currently, the most popular unconventional monetary policies are quantitative easing, forward guidance and negative interest rates.

Several central banks, through which the most important are Bank of Japan and European Central Bank, have adopted and implemented negative interest rates through which they charged commercial banks for the reserves that were held by the central bank, instead of being paid. The effects that this unconventional monetary policy behavior expected were a decrease in the amount of currency that commercial banks keep in central bank's reserves, along with a use of these reserves in order to increase credit or investing them in the financial markets. The final goal of this unconventional monetary policy was reducing the interest rate on the loans provided for customers by commercial banks together with an increase in the prices of financial markets products.

There have been several concerns regarding this measure taken by central banks because the introduction of negative interest rates would lead to a decrease in the profitability of commercial banks. However, commercial banks have found other ways to maintain their profitability, namely by increasing the fees charged.

Forward guidance refers to the action of providing a series of information regarding the future intentions of monetary policy makers to market participants. According to International Monetary Fund [6], „one version, the central bank aims to clarify how monetary policy will evolve in the future depending on its own expectations for economic activity or inflation. In the alternative and potentially more powerful version, the central bank commits to keeping interest rates low even if economic conditions improve in the future and warrant a monetary tightening”.

The effectiveness of forward guidance can be influenced by several factors, as it follows:

- there is a possibility that announcing a guideline that assumes that interest rates will remain low for a long period of time could not be effective if financial market participants do not believe this commitment to be credible or if they have already expected such a measure;
- in the case of the orientations according to which interest rates will remain at a low level for a longer period of time than initially anticipated, they may have negative effects on the confidence of market participants;
- if consumers and companies are considering that the actions of central banks will be successful and will lead to a rise in real GDP and inflation, it may lead to an increase in long-term interest rates.

Quantitative easing mainly refers to large-scale securities purchases made by central banks. Usually, this is implemented by announcing a specific timetable, as well as the amount of securities that will be purchased. Ben Bernanke [7] has appreciated that „quantitative easing works in practice, but it doesn’t work in theory”. He referred to the fact that government bond purchases made by central banks should have no effect on bond yields under a purely theoretical model where there are no fractions of the financial market and no free movement of investors, regardless of the asset categories. However, in practice, the situation is quite different, through the acquisition of bonds, the central banks are leading to a reduction of yields and, therefore to a decrease in their price.

Also, quantitative easing, does not refer strictly to the purchase of government securities. For example, the Central Bank of Japan focused not only on the acquisition of government bonds, but also on the acquisition of exchange-traded funds, corporate bonds and real-estate investment funds. Also, the European Central Bank made purchases of covered bonds in three tranches between 2009 and 2017, and corporate limits starting in mid-2016.

Zero-lower bound (ZLB) is encountered when the short-term interest rate is close to zero, and therefore, the central bank cannot further decrease it, in order to stimulate the economy. Before the crisis, this phenomenon was considered a very rare phenomenon, and was associated with the Central Bank of Japan, which kept short-term interest rates close to zero for several years. However, after the financial crisis started, both Federal Reserve and European Central Bank were forced to reduce their interest limit in order to stimulate the economy. In the US an interest rate limit close to zero was maintained for 7 years (December 2008-December 2015). The European Central Bank has come la zero-lower bound in 2013, and „when the zero-lower bound became more and more a constraint after the sovereign debt crisis, the operational framework proved broad and flexible enough to allow the ECB to expand its tool set with other non-standard policy measures”. [8]

„Since traditional expansionary policies of lowering interest rates cannot be implemented at the zero-lower bound, Central banks had to rely on alternative monetary policies to stimulate the economy. Monetary policy at the zero lower bound has been generally dealt with by using two kind of unconventional monetary policy interventions: forward guidance and large-scale asset purchases. Large scale asset purchases ("LSAP") refer to purchases of assets of private

ISSN 1737-9288

International Journal of Economics & Strategic Management of Business Process (ESMB)
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financial firms to inject liquidity and counteract the tightening in financial markets. Forward guidance refers to announcements that are intended to change the public belief about future Central banks' actions." [9]

In the following section it will be analyzed the unconventional monetary policies used by three of the most important central banks worldwide, namely Federal Reserve, European Central Bank and Bank of Japan.

Following the outbreak of the crisis, the Federal Reserve addressed a number of unconventional monetary policies, and the most important were quantitative easing and forward guidance.

In the United States of America, quantitative easing had referred to a set of four purchasing programmes: „the three Large-Scale Asset Purchases (LSAPs), commonly known as QE1, QE2, and QE3; and the Maturity Extension Programme (MEP), also known as the second "Operation"1 Twist." [10]. The key features of these programmes are:

- announced in November 2008, QE1 was limited to the acquisition of government-financed debt (200 billion dollars), treasuries (300 billion dollars) and securities backed by securities agencies (1,250 billion dollars);
- QE2, announced in November 2010, consisted in the acquisition of 600 billion dollars of longer-term treasuries;
- MEP was implemented in September 2011 and it consisted in the acquisition of 6 to 30 year treasuries (667 billion dollars);
- QE3, was adopted in September 2012 and it consisted in monthly purchase of 40 billion dollars of mortgage-backed securities and, from December 2012, it included monthly purchases of 45 billion dollars of treasury securities.

As a result of this programme, the total assets of the Federal Reserve increased by approximately 3 trillion dollars, from 1 trillion in 2007 to 4 trillion.

Regarding the forward guidance, this unconventional monetary policy consists in transmitting information of the likely trajectory of future interest rates more explicitly than under a conventional monetary policy regime. In other words, it can translate into an increase in the transparency of the actions taken by central banks in order to simulate the economy.

The European Central Bank has given more importance to liquidity injection in order to restore interbank activity. Only later, in 2010, its monetary policy has focused on the purchase of sovereign bonds, following the onset of the sovereign debt crisis in Greece, Portugal and Ireland.

The implementation of the unconventional monetary policy by the European Central Bank can be divided into three phases, as follows:

- the first phase (September 2008 - December 2009) - in this phase the European Central Bank focused on providing support to the banking system;
- the second phase (January 2010 - December 2012) - was the period when the sovereign debt crisis manifested. During this period, the European Central Bank focused on the acquisition of government bonds;
- the third phase (starting in mid-2013) - the European Central Bank adopted a more aggressive monetary policy strategy, proceeding with large-scale acquisitions, targeted lending policies and negative interest rates.

„Following the lead of the Federal Reserve, also the ECB has introduced different forms of UMP. The very first actions had limited scope and modest size. However, the strength of UMP practices has been largely reinforced when the sovereign debt crisis affected several EU members between 2011 and 2014. During the and Covered Bonds Purchase Programmes – which 1st 2nd have respectively been implemented during the 2009-2010 and the 2011-2012 periods – a total amount of 100 billion Euro has been created by the ECB." [11] Further, at the beginning of 2015, the European Central Bank adopted the Asset Purchase Programme, which consisted of four securities purchase programmes:

- corporate sector purchase programme (CSPP);
- public sector purchase programme (PSPP);
- asset-backed securities purchase programme (ABSPP);
- third covered bond purchase programme (CBPP3).

Asset Purchase Programme proposed the acquisition of monthly securities (sovereign bonds, corporate securities, asset backed securities and other covered bonds), adding up to the end of the project purchases amounting to 2,650 billion euros. According to the European Central Bank [12] and as it can be seen in Fig. 1, „during the net asset purchase phase, monthly purchases were conducted at average paces of:

- €60 billion from March 2015 until March 2016;
- €80 billion from April 2016 until March 2017;
- €60 billion from April 2017 to December 2017;
- €30 billion from January 2018 to September 2018;
- €15 billion from October 2018 to December 2018".

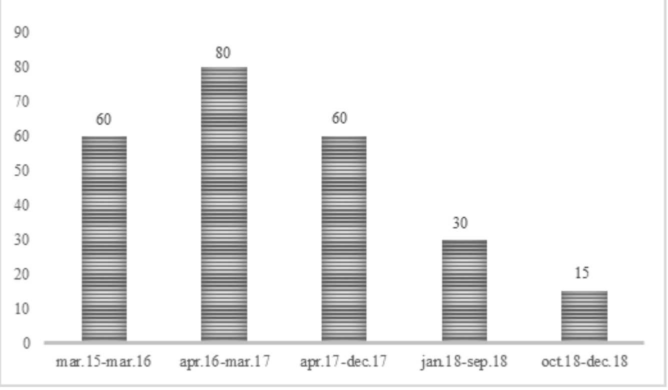

Fig. 1 Monthly asset purchases made in the APP

ISSN 1737-9288

As in the case of the Federal Reserve, in the case of the European Central Band, its total assets have also appreciated, from 1.2 trillion euros in 2007 to 3.5 trillion euros.

Other unconventional monetary policy actions promoted by the European Central Bank implied: Supplementary Long Term Refinancing Operations (SLTROs) and Very Long Term Refinancing Operations (VLTROs), Outright Monetary Transactions (OMTs) and Securities Markets Programme (SMP).

Prior to the emergence of the recent global financial crisis, zero-lower bound was just a concept that was discussed among university professors, being considered purely theoretical. Of course, the case of Japan is considered an exception because, due to the decrease in the natural interest rate, the Central Bank of Japan has gradually reduced the interest rate of monetary policy and, as a result of the effects of monetary easing, leading to the introduction of the zero interest rate policy in 1999

As a result of a slowdown of the economy, „in March 2001 introduced the quantitative easing policy, which set the outstanding balance of current accounts at the Bank as the operating target (Chart 3). This policy was unique, in that it focused on the current accounts, which are on the liability side of the central bank's balance sheet. However, it paved the way for the introduction of large-scale asset purchases in many economies as well as quantitative and qualitative monetary easing (QQE) in Japan." [13]

Regarding the response of the Central Bank of Japan to the collapse of Lehman Brothers in 2008, it was a relatively weak one and involved, for the most part, forward guidance announcements (2010-2012) and limited asset purchases. „The Bank of Japan delivered much stronger monetary stimulus after the election of Prime Minister Shinzo Abe in 2012, by adopting a 2 percent inflation target and launching very large quantitative easing programmes in 2013 and 2014. In 2016, the Bank of Japan entered a third phase of monetary stimulus by introducing the "yield curve control" framework and charging negative interest rates on central bank reserves". [14]

IV. Conclusions

This paper aimed to create an overview of the concept of unconventional monetary policy and to identify the main types of contemporary unconventional monetary policies, together with the effects that their implementation has had on the economy.

In this article we identified that the most important transmission channels of unconventional monetary policy are: the signaling channel, the scarcity channel and the duration channel. The paper also highlights the fact that, currently, worldwide, the most known unconventional monetary policies are quantitative easing, forward guidance and negative interest rates.

The last part of the article focused has analyzed the unconventional monetary policies used by three of the most important central banks worldwide, namely Federal Reserve, European Central Bank and Bank of Japan.

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ISSN 1737-9288