*Journal of Advanced Economic Research / V : 08 (ISS : 01) / 2023*

*PISSN : 2572-0198 / EISSN : 2676 -1572*

# *The financial consequences of adopting an unconventional monetary policy: The case of the Euro Area*

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***Received:*** *2022-07-16* ***Accepted:*** *2023-03-10* ***Published:*** *2023-03-31*

***Abstract:***

*Unconventional monetary policies are measures implemented by central banks to stem financial and banking crises.*

*The objective of adopting unconventional monetary policies is to make up for the failure and inadequacies of conventional monetary policies, by exercising control over the money supply, interest rates, market liquidity and economic growth.*

*The purpose of this article is to analyze the financial consequences of adopting an unconventional monetary policy.*

***Keywords:*** *monetary policy, financial crisis, financial markets, unconventional financing, sovereign debt.*

***Jel Classification Codes:*** *E44, E40.*

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## 1. Introduction:

Following the financial crisis that began in 2007 on the US market, the European Central Bank (ECB) began non-routine monetary policy measures, to try to cope with this exceptional economic situation and to stabilize the financial environment of the euro area. Thus, the ECB has made a historic and considerable reduction in its key interest rates. However, the financial crisis worsened with the bursting of the speculative bubble in 2008 and the bankruptcy of the American bank Lehman Brothers, which generated a real crisis of confidence that spread from the American market. To this are added other disturbances that continued to shake the Eurozone, especially with sovereign debt (2010), going as far as a crisis of European governance. Faced with this highly fragile atmosphere, the Eurosystem was forced to conduct a whole series of unusual, so-called unconventional, new policies.

The euro area has embarked on its program of implementing unconventional monetary policies with a view to containing and limiting the adverse effects of the financial crisis, while at the same time trying to have direct consequences on the financing conditions, on the one hand. On the other hand, through indirect effects resulting from the fact that unconventional monetary policies are accompanying measures to ensure that interest rates have an impact on credit conditions.

In order to do so, the Eurosystem has been forced to react quickly and to innovate in terms of instruments and channels for transmitting such unconventional measures. These drastic efforts resulted in the implementation of original policies, which initially proved effective in the face of the financial instability of the time, but which were quickly caught up by the heterogeneity of the European environment.

It is in this context that this article, through which we try to find out what are the financial consequences of the adoption of an unconventional monetary policy in the euro area?

To try to provide answers to this problem, we have built our work around three axes. The first is to give a brief overview of unconventional monetary policies, by analysing the various instruments of this policy and its transmission channels. The second axis aims to study the experience of the euro area following the adoption of unconventional policies. As a result, we first distinguish the measures that were implemented in the context of the “subprime” crisis, before moving on to an analysis of the unconventional instruments that were adopted following the sovereign debt crisis. Finally, the third axis focuses on a set of conclusions concerning the consequences of these unconventional measures put in place by the Eurosystem. Thus, to provide a more relevant answer to our problem, we propose to distinguish between short and medium-term consequences that are rather positive, and those long-term ones that are more risky and therefore more burdensome to assume.

## 2. Brief overview of unconventional monetary policies

In a “normal” situation, banks express a need for financing that comes from the introduction of banknotes and minimum reserves. To refinance them, the Central Banks set a key interest rate, which allows them to control short-term interest rates without any constraints on their balance sheets. It is through this process that monetary policy is implemented (DRUMETZ & Al. 2015). These bank refinancing operations with the Central Bank are characterized by the short-term duration of the financing granted and the periodic fixing of interest rates by the Monetary Policy

Committee. As for the rates applied to longer maturities, they are freely established on the financial markets, according to the expectations of the fundamental economic factors (PFISTER., VALLA. 2016).

### 2.1. Definition of non-conventional monetary policy:

Unconventional monetary policy refers to a set of measures aimed either at easing certain norms of conventional monetary policy (qualitative easing) or at injecting massive amounts of liquidity into the financial system (quantitative easing).

According to Carré (2015), unconventional monetary policy is a triptych in that it focuses on a final objective which is price stability, an instrument which is the interest rate, and a transmission channel which is the interest rate channel. As a result, unconventional monetary policies are adopted in the event of a crisis affecting one of the above elements.

Indeed, in a context where the economic and financial environment is disrupted either because of a financial crisis, a stock market crash, a risk of deflation, or the bankruptcy of a credit institution of significant size, The Central Bank is forced to take unconventional measures to put an end to these disruptions. However, recourse to these measures only occurs if the conventional instruments of monetary policy (namely key interest rates, open market operations and minimum reserves) prove insufficient to provoke the expected effect.

### 2.2. Instruments of Unconventional Monetary Policy:

The objective of adopting unconventional monetary policies is to make up for the failure and inadequacies of conventional monetary policies, by exercising control over the money supply, interest rates, market liquidity and economic growth. To do this, several unconventional instruments are possible, the main ones of which are explained in the following lines.

- **Quantitative Easing (QE) :**

Quantitative easing is a broad asset-buying program that consists, for a Central Bank, in the massive purchase of securities with the aim of lowering long-term interest rates over time, on the one hand, and flooding the market with liquidity on the other. In other words, this policy consists in increasing the size of the Central Bank’s balance sheet by increasing the base, but at the same time stabilizing the liquidity and risk of the portfolio held by the BoC. The objective of this unconventional instrument is to allow economic agents easy access to credit at a lower cost.

The adoption of quantitative easing allows Central Banks to broaden the category of eligible assets that banks can ask them to exchange for liquidity. This has the effect of easing the rules of access to bank refinancing operations.

The assets eligible for CB refinancing are generally corporate bonds and treasury bills. This instrument favors assets that are low risk and have a good rating, which tends to facilitate their exchange on the financial market. However, other assets may be subject to this massive buy-in program, including doubtful asset-backed securities. The purpose of the purchase of this asset class is to clean up the banks' balance sheets so that they can provide more loans. Indeed, Central Banks use quantitative easing in times of economic recession, or to counter a risk of deflation.

**- Qualitative (credit) easing:**

Unlike the unconventional quantitative easing policy, qualitative easing, or credit easing, is about making changes in the CB's asset mix. This change in the CB's balance sheet structure relates to the acquisition of less liquid and risky assets while preserving the size of the balance sheet. Thus, to keep the balance sheet size constant, the CB is required to do Twist operations. The latter consists in bringing down the long rates of the CB through the sale of long-term securities, and the purchase of their equivalent having a longer maturity.

**- Negative interest rates:**

The negative interest rate policy is based on a policy rate that facilitates lending, charging an interest rate based on bank deposits with the BoC. Thus, by calculating a negative interest rate on the amounts deposited by the banks with the BoC, the BoC avoids remunerating the banks' deposits and encourages them to grant more credit to economic agents.

**- Targeted Long Term Refinancing Operations (TLTRO):**

This measure aims to limit the banks' use of their liquidity for speculative purposes by encouraging them to inject it into the real economy through targeted long-term refinancing operations.

Through this unconventional policy, the BoC lends money to banks at very advantageous rates (deposit facility rate) against the increase in their outstanding credit with individuals and businesses. However, if the bank does not achieve this objective, it will no longer benefit from the deposit facility rate but will be forced to repay its entire loan to the CB at a higher rate.

The objective of these targeted long-term refinancing operations is to encourage banks to direct their liquidity towards traditional lending activity, while at the same time reducing their speculative objectives.

## 2.3. Transmission channels for unconventional monetary policy:

According to the economic literature, unconventional monetary policy can be transmitted through several channels, for example the channel of credit, currency, expectations, asset prices, and the channel of the exchange rate.

**- The Credit Channel:**

The transmission of the unconventional policy can be done through the credit channel, which reflects the reaction of commercial banks to the change in the key interest rate made by the BoC.

According to the explanations provided by Christiano & Eichenbaum (1991. 1992) and Kim & Ghazali (1998), output and inflation increase while interest rates decrease as a result of liquidity. The interest rate continued to fall as a result of unanticipated monetary expansion. Thus, the credit channel focuses on the valuation of assets on the liabilities of economic agents, which they are likely to present as collateral to their banks (Borio & Disyatat. 2010).

- **Asset Price Channel:**

According to the logic of the transmission of monetary policy through asset prices, the adoption of an expansionary policy generates an inevitable increase in asset prices. Unconventional transactions affect the price of assets through three channels: the liquidity channel, the anticipations channel, and the portfolio reallocation channel.

The channel of liquidity is based on an imperfect substitutability between money and long-term assets held by economic agents (Andrés & Al. 2004). This relationship induces a fall in the term premium in the event of a currency shock, which results in a reduction in the long-term rate. As a result, asset prices are trending upwards because of the liquidity induced by the CB's operations.

The expectation channel is based on the assumption that the fundamental value of the assets corresponds to an inverse function of its interest rate. As a result, lower interest rate expectations lead to lower returns on long-term assets. In addition, the portfolio reallocation channel causes the term premium to fall when the CBs purchase the assets held by investors.

- **The channel of anticipations:**

Based on the channels of signal and confidence, the channel of anticipations explains the impact of the adoption of an unconventional monetary policy on the establishment of a climate of confidence in the markets following a crisis. Indeed, this policy is perceived by investors as a signal that the BoC has reoriented its monetary policy in order to find new perspectives in a crisis situation. These new commitments of the BC are supposed to increase the confidence of investors and all economic operators.

- **The channel of money:**

The transmission of unconventional monetary policy through the currency channel can be analyzed according to two distinct principles: the principle of money supply and demand, and the principle of the monetary multiplier.

Depending on the supply and demand of money, conventional monetary policy (and more particularly quantitative easing) is seen as a shock to the supply of money. According to the multiplier principle, any change in the monetary base induces a change in the money supply. Similarly, the speed of circulation of money is stable over time.

- **The exchange rate channel:**

The exchange rate is a very sensitive channel for the transmission of unconventional monetary policy. Indeed, the fall in interest rates in countries that have used unconventional instruments is pushing banks to invest in foreign securities with more attractive returns. This leads to a depreciation of the national currency following its massive sale. This has led to higher prices for imported products and to a climate of inflation expectations.

After briefly presenting the conceptual framework governing unconventional monetary policies, we will discuss the experience of the Euro Area following the adoption of these measures.

## 3. Experience of the euro area following the adoption of unconventional monetary policies:

Following the financial crisis of 2007/2008, and in the face of the consequences of sovereign debt, the Eurosystem implemented a set of unconventional measures. This has been reflected in the historic fall in key interest rates to extremely low levels in the euro area, and in the implementation of unconventional monetary policies. In this second part, we will discuss the measures taken by the Eurosystem in a context of financial crisis and sovereign debt.

### 3.1. Measures taken by the Eurosystem in a context of financial crisis:

The measures taken by the Eurosystem following the "subprime" crisis are presented in chronological order.

**- 2007: Spread of the subprime crisis from the United States to Europe:**

The spread of the financial crisis on European markets has put German banks in a delicate situation. They could no longer use interbank financing, because the cost of interbank financing had increased considerably. However, the fluctuations in interest rates at the time were considered temporary distortions. Nevertheless, in order to cope with this consequence, the Eurosystem intervened on the money market through fine-tuning operations, to guide the liquidity offered on the interbank market. In order to set short-term interest rates, the Eurosystem used competitive variable-rate tenders.

**- 2008: Bankruptcy of the Lehman Brothers American Investment Bank:**

Following the failure of this world-renowned bank, a crisis of confidence has exacerbated the financial crisis already experienced by the global financial system. In an attempt to stabilize the financial environment, key interest rates have been massively reduced and large amounts of liquidity have been made available to banks. However, the loss of confidence caused by the bankruptcy of Lehman Brothers has significantly affected the transfer of liquidity between banks. In this context, the Eurosystem has secured interbank transactions while committing to refinance banks to meet their needs and at fixed rates. These refinancing operations with the Eurosystem were carried out in Central Bank money, provided that sufficient guarantees were provided.

**- 2009: Real estate speculative bubble bursts:**

Following the bursting of the speculative bubble, the Eurosystem decided to follow the approach adopted by the FED in the United States in 2008, which consists in launching a program to buy securities. In the euro area, the Eurosystem has launched the Government Bond Purchase (Covered) program with the aim of enabling banks to obtain new financing resources.

### 3.2. Measures taken by the Eurosystem in a context of sovereign debt:

This new context was characterized by the emergence of extreme tensions on several financial markets, on the one hand, and by the emergence of sovereign debt, notably the Greek debt crisis, on the other.

**- 2010: Transition from financial crisis to sovereign debt:**

While the consequences of the financial crisis were still being felt, the Eurozone was hit by a sovereign debt crisis that exacerbated the disruptions in the financial environment. To this end, the

Eurosystem has adopted a second Eurozone government bond purchase program on the Securities Market Program secondary market.

- **2012: Massive liquidity injection:**

In January 2012, the Eurosystem made a massive injection of liquidity into the money system through two three-year fixed-rate tenders. The total amount injected is 1000 Billion Euro. These refinancing operations[1] have resulted in a large surplus of liquidity which has shaken the euro area, even to the point of pushing investors to speculate on a possible breakup of the monetary union of the zone. In order to respond to these speculations and to calm people's minds, the ECB President had launched an unlimited program to purchase public debt. This decision, which has never been implemented on the ground, has nevertheless served to restore a climate of confidence in financial markets.

- **2014: Targeted long-term refinancing operations:**

In June 2014, the Eurosystem took the decision to implement a program to finance the real economy through targeted long-term refinancing operations and to apply a negative rate of -0.10% to the deposit facility. The Eurosystem had set a two-year period (2014 to 2016) in which two targeted long-term refinancing operations will be carried out, each with a duration of up to four years. In addition, the ECB has put in place an extensive asset purchase program whereby euro area CBs would purchase government bonds, and asset-backed securities.

- **2015: Quantitative Easing Program:**

In January 2015, the Eurosystem launched its quantitative easing program (with several additions), which consists in the purchase of bonds issued by Eurozone states, European institutions and agencies. These transactions take place on the secondary market, and the securities are acquired by the national central banks. Through this quantitative easing program, the CBs increase the liquidity in circulation and drive down interest rates, affecting deflation risk and slowing economic growth.

- **2016: ECB key interest rates:**

In March 2016, the ECB launched another four-year targeted refinancing program, with the expansion of the quantitative easing program to the purchase of corporate bonds. Subsequently, the ECB set its main policy rate at 0%, and the deposit facility rate at -0.40%.

- **2019: New measures:**

In January 2019, the Eurosystem decided to stop net purchases of assets. However, for assets that have matured, the Eurosystem has decided to reinvest them.

All the unconventional measures taken by the Eurosystem are aimed at easing the monetary policy of the euro area, to compensate for the shortcomings of the conventional monetary policy in a context of falling interest rates. Nevertheless, to improve the effectiveness of these policies the euro area has used the forward guidance method. The latter is a method of communication through which the Central Bank announces in advance the future directions of monetary policy, and

[1] These transactions are referred to as the Very Long Term Refinancing Operation – VLTRO.

indicates the trajectory of key interest rates. The use of this mechanism allows commercial banks and all economic agents to base their decisions on more stable prospects, and with better visibility. However, these measures have consequences for the stability of the financial environment.

## 4. The financial consequences of non-conventional policies in the euro area:

In the context of the financial crisis and sovereign debt, in which unconventional monetary policy measures have been implemented, they have proved effective in the short and medium term and extremely risky in the long term. In this last part, we will detail the financial consequences of adopting non-conventional policies in the euro area. Thus, we provide a direct answer to the problem addressed in this paper.

### 4.1. The consequences of unconventional monetary policies on the short and medium term:

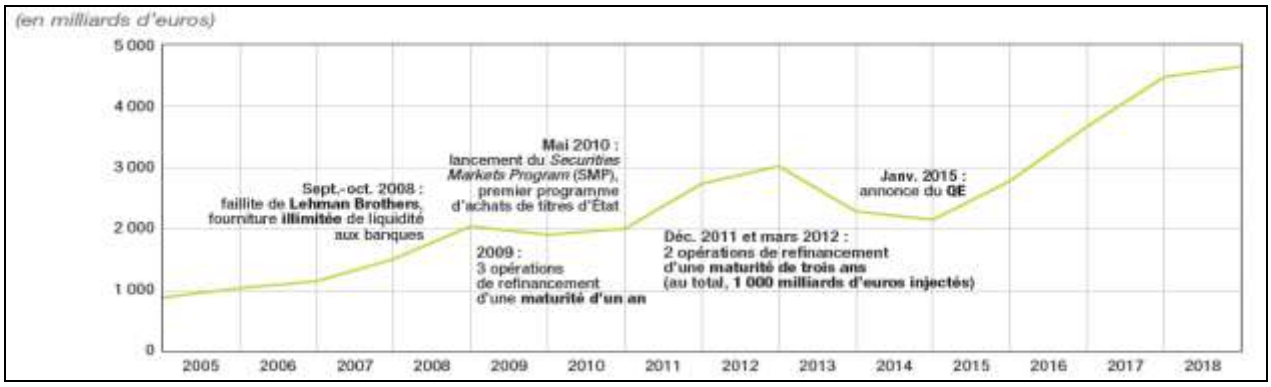
The policy of negative rates combined with forward guidance, long-term targeted refinancing operations, the repurchase of sovereign debt, and changes in the size and financial structure of the ECB's balance sheet and the national "quantitative easing" CBs, all these measures have proved to be of considerable effectiveness in the short and medium term. Indeed, it should be noted that since the implementation of these policies, a sharp decrease in interest rate spreads on 10-year sovereign debt has been observed, particularly in the case of Spanish and Italian securities.

Moreover, these policies have been of paramount importance in maintaining the currency unity of the euro area. Indeed, following speculation about the possible breakup of this monetary union, Mario Draghi (President of the ECB) said that the Eurosystem was ready to do anything to avoid this. This statement was followed by the announcement of a vast program of unlimited purchase of public debt securities. Despite the fact that this program was never implemented on the ground, it nevertheless served to maintain the currency unit and save the Euro.

In addition, negative interest rates and long-term refinancing operations have helped to avoid a major banking crisis in the Eurozone States and have helped to maintain some financial stability.

Finally, at the macroeconomic level, the increase in the size of the ECB's balance sheet has resulted in an increase in output in the euro area and an increase in GDP proportional to that of the balance sheet size. The graph below shows the evolution of the Eurosystem balance sheet since the adoption of unconventional monetary policy measures.

**Graph 1: Change in the Eurosystem balance sheet total after the main unconventional monetary policy measures.**




**Source: Banque de France (data at 31/12 of each year).**

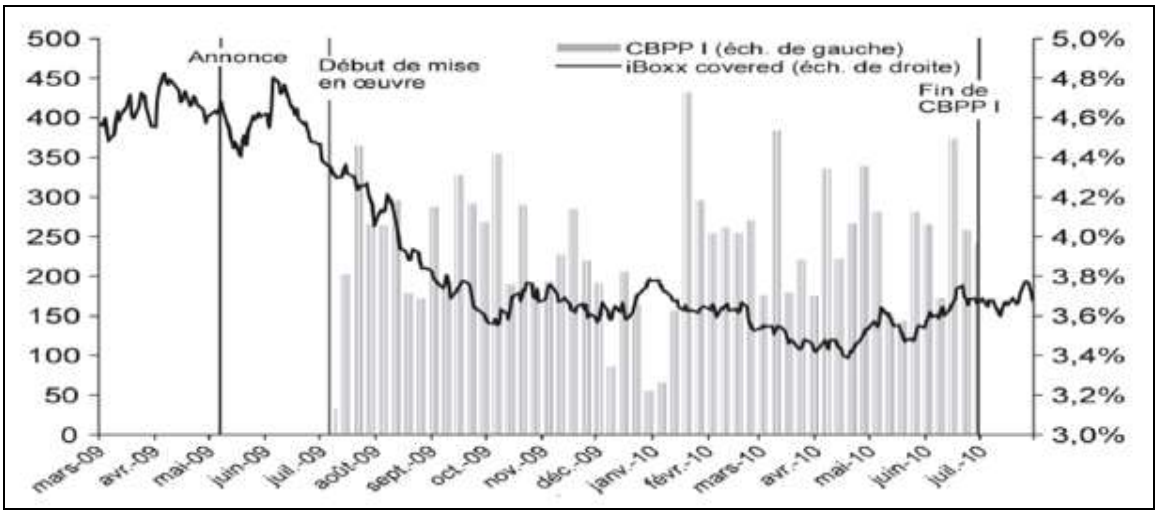
### 4.2. The long-term consequences of unconventional monetary policies:

Despite the positive effects of unconventional measures in the euro area since the start of the financial crisis in 2007, these have proved to be risky in the long term. Indeed, unconventional monetary policies have proved incapable of providing relevant solutions to the economic crisis and solving the structural problems of the euro area.

The many long-term financial consequences of applying unconventional measures in the euro area can be listed in the following points.

- The sovereign debt purchase programs have directly affected the bond market segment, which will lead to a loss in the value of government bonds when interest rates are raised. This will inevitably lead to a bond crisis. The chart below shows the impact of purchasing sovereign securities on bond yields.

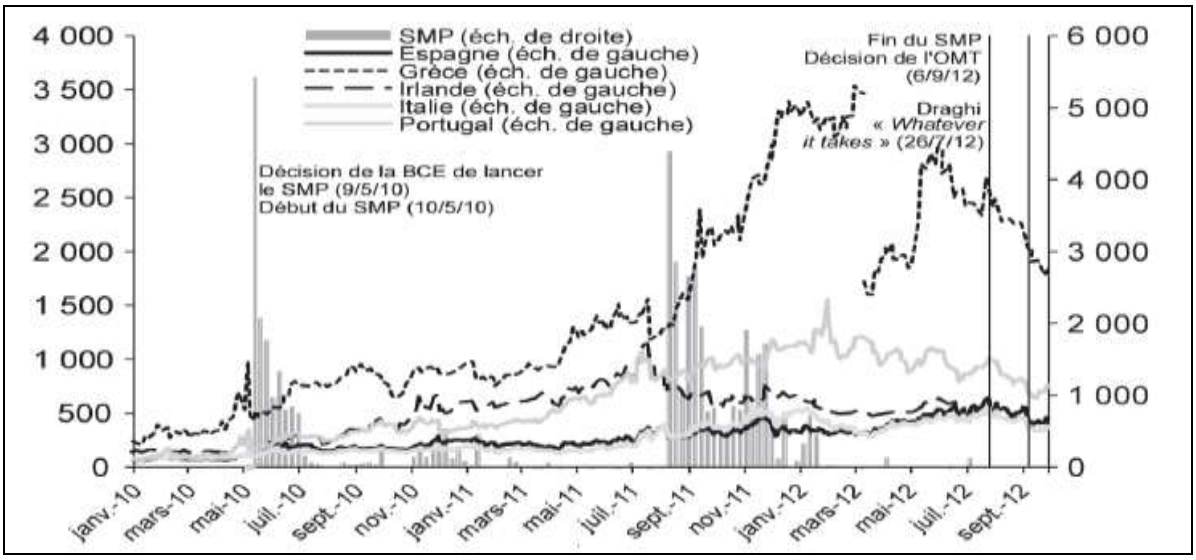
**Graph 2: Impact of the government bond buying program on bond yields.**




**Source: Bundesbank, Reuters**

- The application of quantitative easing measures combined with negative interest rates causes asset yields to fall on the financial market. In the long term, the persistence of these measures leads to market volatility, which is likely to cause further financial instability when the Eurosystem decides to raise interest rates. The chart below shows the impact of the bond purchase program on interest rate spreads.

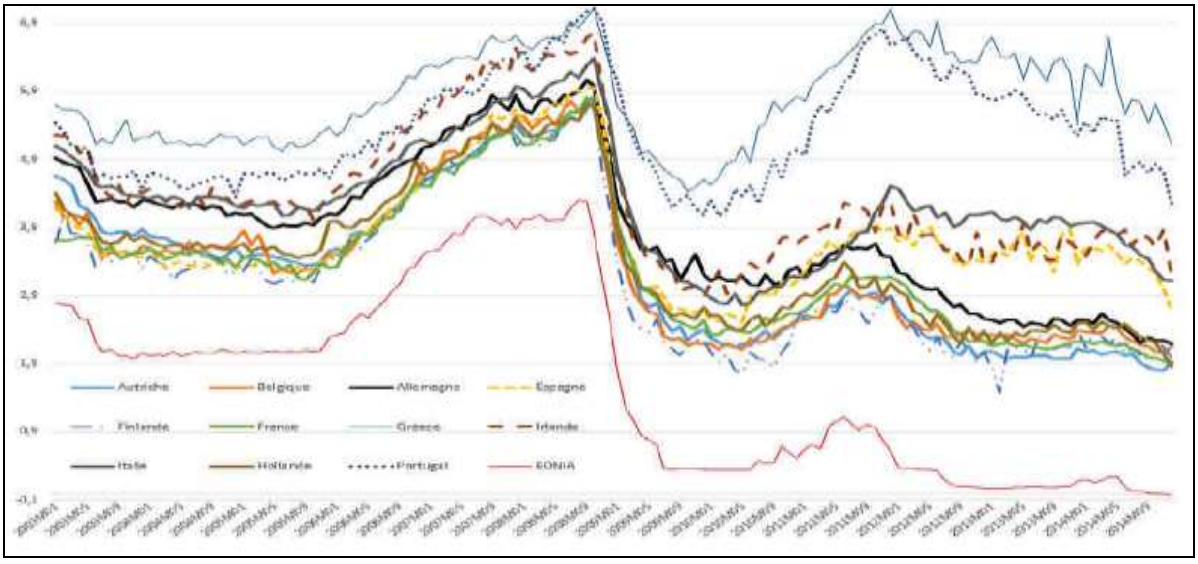
**Graph 3: Impact of the bond purchase program on interest rate spreads (over a 10-year period)**




**Source: Bundesbank, Bloomberg.**

- The decision to refinance unlimited fixed-rate banks resulted in the over-liquidity of the market in terms of Central Bank money. This surplus of liquidity is all the more important because the interest rates applied to it are negative. This gap provides substantial reserves to commercial banks that could use it for speculative purposes, thus leading to the appearance of a large speculative bubble, given the over-liquidity of the market. The graph below shows the evolution of the cost of credit in the euro area countries before the start of the crisis until after the adoption of unconventional monetary policies.

**Graph 4: Development of the cost of credit in the area as a result of non-conventional measures.**




**Source: ECB data**

This graph shows that there is some heterogeneity in the credit costs of the euro area countries. Indeed, in some countries such as Germany, France, Belgium, Austria, the Netherlands and Finland, the average cost of borrowing following the implementation of unconventional measures was less than 3%. In other countries, for example Portugal and Greece, the same cost exceeded 5%. This heterogeneity increased with the advent of the sovereign debt crisis.

- In view of the surplus of Central Bank money available to commercial banks, the application of very low interest rates over the long term makes them insensitive to any increases in the latter. In addition, the sharp rise in interest rates will challenge the financial stability of the Eurozone by causing a sudden rise in government debt;
- On the economic front, unconventional monetary policies are ineffective in stimulating economic growth. This is mainly due to two factors. The first relates to the nature of the money created which in no way affects the money supply in circulation. Indeed, within the framework of the unconventional monetary policies put in place by the euro area, the created currency consists of a Central Bank currency whose objective is limited to reassure commercial banks. The second factor is asymmetrical and stems from the lack of coordination between the federal monetary policies of the Member States of the European Union and national budgetary policies. These asymmetric shocks have resulted in the ineffectiveness of unconventional monetary policies in the euro area in terms of boosting economic growth.

## 5. Conclusion:

In order to remedy the inadequacies of conventional monetary policies and to make up for their failure, the unconventional instruments propose a set of measures to regain control over the money supply and to act on economic growth, market liquidity and inflation through multiple transmission channels.

Thus, the Central Banks use the unconventional instruments of monetary policy to cope with an exceptional economic situation, characterized either by negative quarterly inflation or an inflation rate close to zero over a significant period, a prolonged recession or a major economic crisis. In the first case, unconventional monetary policies serve to avoid a risk of deflation. In the second situation, they support economic activity and stimulate growth.

Unconventional measures in the Eurozone have been implemented precisely in a context of financial crisis and sovereign debt. In this sense, the Eurosystem has been particularly responsive and innovative. However, the effectiveness of these measures has been short-lived, as after having managed to stabilize the financial environment over the medium and short term through the massive fall in interest rates and forward guidance, targeted long-term refinancing operations, government bond buying program (sovereign debt buyback), quantitative easing measures (increase in balance sheet size), qualitative easing measures (change in balance sheet structure), the risks of these policies are beginning to be felt and weigh heavily on the Member States of the European Union.

The multiple long-term consequences of unconventional measures in the euro area, can be attributed to the heterogeneity of the European environment and the lack of coordination between the federal monetary policies of the Member States of the European Union and national budgetary policies. However, it is important to note that the euro area has benefited from a favorable international environment in parallel with the implementation of its unconventional instruments.

Indeed, these measures have not had a catastrophic effect in terms of inflation, despite their expansionary nature. This was avoided on the one hand, thanks to the issue of Central Bank money which had no effect on the money supply in circulation. In other words, instead of operating the banknote board, the ECB preferred to issue BC currency whose purpose is only to ensure payments between commercial banks while securing their assets. On the other hand, the risk of an inflationary bubble has been considerably reduced thanks to the international environment characterized by the drastic fall in oil prices.

In short, we will remember from this modest paper, which attempted to give an overview of the European experience in the use of unconventional monetary policy instruments, that the implementation of such measures must be carefully prepared beforehand, and heavily supported and monitored downstream. To avoid the negative effects of unconventional instruments, broad cooperation is needed at all levels. Because even though these instruments are reputed to relaunch the intermediation activity of banks through the easing of financing conditions for companies, In return, they generate highly destabilizing inflationary expectations for the financial system and the economic environment in general.

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