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The unconventional monetary policy of the ECB: effectiveness *versus* exhaustion

António Mendonça

**Professor of Economics
Lisbon School of Economics & Management
Universidade de Lisboa**

Abstract

In this paper, we discuss the issue of the effectiveness versus the exhaustion of monetary policy followed by the ECB in response to the Eurozone effects of global economic and financial crisis.

We discuss the nature and justifications for the use of unconventional policy measures in the context of the crisis developments. We concentrate on two central issues to understand the limits of monetary policy effectiveness, the so-called liquidity trap and the endogeneity versus exogeneity issue of money creation.

Additionally, we discuss the contradictions between the fiscal and monetary policies stances as a booster factor in exhausting the effect of the monetary policy, and conclude by affirming the absolute need to reform the Euro system.

Keywords

Unconventional monetary policy - Financial crisis - Money creation

1. Introduction

According to the Treaty on the Functioning of the EU, the main objective of the European System of Central Banks (ESCB), which includes the ECB, is to maintain price stability. Without prejudice to this primary objective, the ESCB supports the economic policies of the Union, considering the fulfilling of the objectives of this Union as defined in Article 3 of the Treaty on European Union. Of note among these objectives is point 3 of the Article which sets out growth and economic principles, based on price stability. The goal of full employment is also mentioned but at a secondary level and subordinated to the fulfilment of the main objective. The role of the ESCB in this context is to define and implement the monetary policy of the Union, through short-term interest rates management, thus influencing the development of economic conditions in order to ensure mid-term price stability in the euro area. Price stability is defined in terms of the annual increase in the Harmonised Index of Consumer Prices (HIPC), at a rate close but below 2% over the medium term. As monetary policy instruments, the ECB uses open market operations, designed to manage liquidity in the banking system and signal the stance of monetary policy, standing facilities, designed to provide or absorb liquidity in the overnight market, and reserve requirements, designed to maintain stabilization of interest rates in the money market and to create or enlarge a structural liquidity shortage. This is what is considered the conventional monetary policy tools.

Following the effects deepening of the international economic and financial crisis the ECB decided to improve the tool box of the monetary policy using more and more the so-called unconventional measures, to the exact extent of the loss of effectiveness of the so-called conventional measures.

In this paper, we aim to discuss the issue of the effectiveness versus the exhaustion of the monetary policy of the ECB, trying to understand the relationship between the development of the crisis, the use of increasing unconventional measures and the limits of the monetary policy as a main tool to deal with the Eurozone asymmetric effects of the international crisis.

We present our discussion in four sections, in addition to this introduction.

In section 2 we consider the development of four phases on the increasing use of the unconventional monetary policy. On section 3, we discuss the so-called liquidity trap hypothesis. On section 4 we recall the endogeneity *versus* exogeneity hypotheses of money supply. Finally, on section 5 we conclude.

2. The four phases of development of the so-called unconventional monetary policy.

Following the third quarter of 2008, after the outbreak of the international economic and financial crisis, the ECB decided to introduce a set of additional monetary policy measures, completely unprecedented regarding their nature, scope and magnitude, which were designated as "unconventional measures". As early as August 2007, when the signs of the global crisis were already visible, the ECB decided to intervene, like its major partners, through the use of strong liquidity injections in an attempt to limit the effects on the functioning of the banking and financing system. Since then, the ECB has continued using these and other unconventional measures, given that it was its normal or conventional practice until then, widening the range of instruments that it started to use against the context in which the international economic and financial crisis developed and the way it manifested in the Eurozone. A new era of ECB intervention was opened, with all its titles unprecedented and which, through evolving in stages, has extended to the present.

2.1. First phase: direct liquidity injection in the market (September 2008 - June 2014).

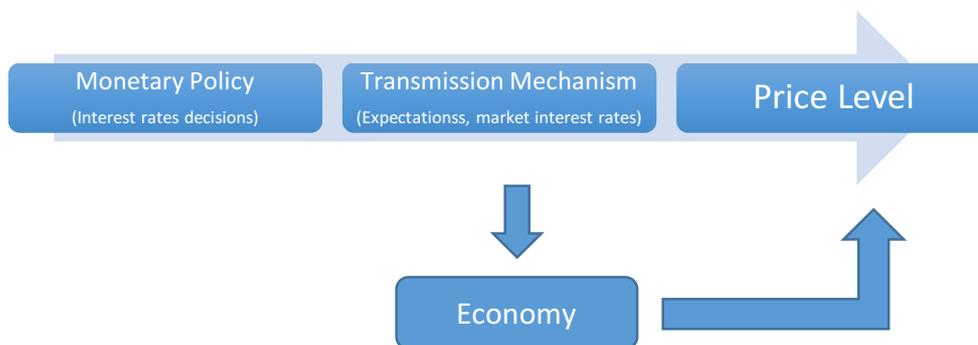
With the introduction of this new type of measures, the ECB widened the range of intervention possibilities in managing the crisis, expanding the toolbox available to deal with the operational needs of the monetary and financial system. However, simultaneously, it pushed the limits of its own field of intervention, statutorily established in the treaties of the Union, in particular concerning the financing of states and public institutions, and approaching the traditional intervention of central banks as lenders of last resort.

This evolution of the ECB regarding the conduct of monetary policy in the context of the European crisis has led to a number of serious divergences between European leaders, which have deepened since then, with the Bundesbank and the German government being their main opponents. A situation that has led the main heads of the ECB to refine the theoretical argument and the practical justification in which to frame the progressive adoption of less and less "conventional" measures, especially that of the Vice-President, Vítor Constâncio, who has had the most active role in this respect (see, in particular, Constâncio, 2011, 2013, 2015a, 2015b and 2016).

The main argument for unconventional monetary policy is the idea that the conventional monetary policy transmission mechanism ceased to function properly, as a result of the dysfunctions produced in the financial markets, and proved itself unable to contain the deflationary pressures that followed the crisis and, consequently, failed to properly secure the objective of price stability - an inflation rate below but close to 2%.

The monetary policy transmission mechanism is the process through which monetary policy decisions are transmitted to the economy and, ultimately, to the prices level, the main target of the ECB's intervention (see ECB website, monetary policy). The scheme of this process can be schematically summarized by the diagram below.

Fig. 2: The Monetary Policy Transmission Mechanism (“Normal” functioning)



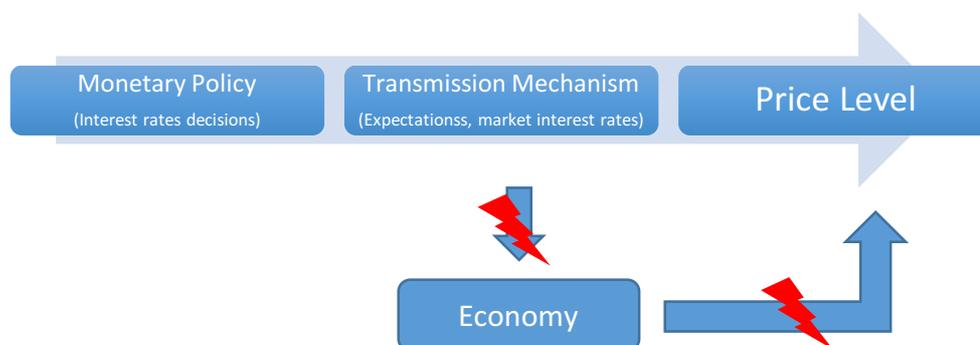
This process can be disturbed by several factors that are not controllable by monetary policy, namely variation in risk premiums, changes in bank capital that affect their credit conditions, changes in the economic environment and in the global economy, changes in fiscal policy or changes in commodity prices. These are called shocks outside the control of the central bank.

At the same time, even in normal conditions, the transmission mechanism is characterized by operating dynamics that are somewhat lengthy, variable and uncertain, particularly in contexts where shocks outside central bank control become dominant. This has been the case with the economic and financial crisis triggered on 2008, making monetary policy uncertain in its effects or, in extreme cases, completely ineffective.

In this extreme situation, there has been a malfunction of the mechanism transmitting central bank decisions to the economy that has distorted or even prevented the arrival of the effects, at least in the desired way, to the ultimate goal of the ECB, which is the level of prices. This malfunction justified the adoption of exceptional measures, designated "unconventional",

creating a sort of "bypass" between monetary policy and the level of prices, avoiding the constraints of normal financing channels (Fig. 3 and Fig. 4, below).

Fig. 3: The Monetary Policy Transmission Mechanism (Malfunctioning)



According to the official justification of the ECB, the basis of the adoption of unconventional monetary policy was the malfunctioning of some segments of the financial markets that have prevented normal financing of the economy, thus disturbing the operating of the transmission mechanism (Fig. 3). Direct supply of liquidity to the market by the ECB seeks to prevent the collapse of important financial institutions, with the central bank assuming the role of lender of last resort in a liquidity crisis context.

A second justification for the introduction of unconventional monetary policy refers to the nature and scope of the measures. In addition, this domain introduces the so-called "separation principle" (Constâncio, 2011).

According to this principle, there is a clear separation between the purposes of conventional and unconventional measures. Unconventional measures are complementary to the former in having clearly defined and temporally limited objectives. They are intended to ensure that disruptions in financial markets do not prevent the conventional policy from doing its job by influencing prices through interest rates. In addition, they should be used as long as the malfunctioning of the monetary policy transmission mechanism is evident and withdrawn as soon as this feature is recovered.

In this sense, and also according to the heads of the ECB, non-standard measures are distinct from the "quantitative easing" that is used by the Fed or the BoE, because they are not intended as a substitute for conventional interest rate policy in the context of "zero lower bound" or as a way to manage the "trade-off" between inflation volatility in the short run and price stability

in the long run. Rather, unconventional measures are designed to ensure that the conventional measures are effective in all timeframes.

They work thus as a support mechanism to the conventional policy in a period of exception when disruptions in the normal financing channels of the financial system and of the economy manifest. They are no longer necessary when the situation normalizes and conventional monetary policy regains its effectiveness, and must therefore be removed. This is what automatically occurs in those situations, where financing operations have a defined time horizon and are not an object of explicit renewal. This was the case with the first measures adopted after the 2008 crisis that materialized in a huge direct liquidity injection in the market

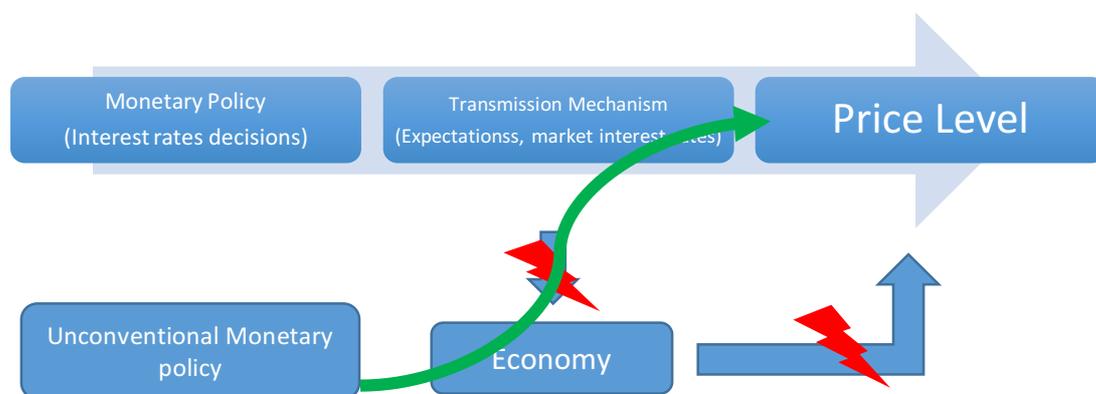
2.2. Second phase: approaching the role of “lender of last resort” (June 2014 – March 2016).

Despite the statement regarding the exceptional and temporary character of unconventional measures, the reality is that they came to stay and eventually become as "normal" as conventional measures, being adopted regularly in a form expected by economic agents and with increasing diversity. As a result of the persistent disturbance of the monetary policy transmission mechanism, of accentuation of deflationary trends and of the evolution of the actual economic and financial crisis, successive new "unconventional" measures were used, namely, liquidity provided at fixed rates, full liquidity allotment, extension of maturities for loans granted by the ECB, including those granted for very long terms, widened eligibility conditions for collateral, direct purchases of government bonds and mortgage bonds, decreased requirements for minimum reserves, in a continuous process growing in scale, the creativity of which tending to accelerate.

In June and September 2014 more unconventional measures were introduced, considered of a new class: two programs of assets purchased from the private sector – an Asset Backed Securities Purchase Program (ABSPP) and a third Covered Bond Purchase Program (CBPP3), adopted in order to allow selective intervention in the markets with decisive influence on the financing of the non-financial sector; and a new series of Targeted Long-term Refinancing Operations (TLTROs), up to 4 years, to improve bank lending to the non-financial private sector in the euro area. According to officials of the ECB, the measures marked a new phase in the development of unconventional monetary policy. A stage where the ECB clearly stated the willingness to actively expand the size of its balance sheet up to the levels needed to ease the monetary policy stance, in a situation where interest rates reached their lowest level.

These new measures represented a qualitative leap over previous measures in that they no longer intended only to overcome the dysfunctions of the transmission mechanism. They wanted to directly influence the economy through specific channels overtaking this transmission mechanism in its role. We reached a stage where the ECB no longer relies on the ability of the banking system to use well the liquidity facilities that are provided, by injecting itself more money into the economy through lending operations, creating direct channels of monetary transmission, as shown in Fig. 4, below.

Fig. 4: The “bypass” of unconventional monetary policy



At the same time, the ECB aimed to create better conditions for the banking system itself to be able to make a correction of their balance sheets without this translating into a narrowing of credit for the economy.

It meant, in fact, a new attitude of the ECB involving a closer approach more of a "quantitative easing" stance, followed by the Fed and other central banks, in line with the role of "lender of last resort". A formally rejected stance, or at least not assumed up to here.

At the same time, these new measures also meant the ECB's commitment to the maintenance of low interest rates, in an extended time horizon, even beyond the achievement of economic recovery. A situation of inflation rate "overshooting" is even accepted, in the context of economic growth that is intended to encourage the use of these and other measures of an unconventional character.

2.3. Third phase: the liquidity trap (March 2016 -).

A third phase of unconventional monetary policy was opened following the decisions of the Governing Council meeting of March 10, 2016.

The "zero lower bound" is fully reached with the setting of the interest rate on the main refinancing operations at 0%. However, the most significant fact is the acceptance of the possibility of financing the economy at rates as low as the rate applicable to the permanent facility deposit existing at the operation start date – that is, at negative rates. This possibility is foreseen under the new target long-term refinancing operations (TLTRO II) in the case of banks exceeding a reference value of net credit provided to the economy.

With this decision, a new stage of intervention is opened. A real Pandora's Box from which no one truly knows what can result, despite all the declarations that monetary policy will continue to be able to use the interest rate instrument. The next step, with it still being necessary to reduce interest rates, can only be the setting of the main refinancing rate in negative territory. Which can only be considered as a denial of monetary policy theory, not to mention its actual practice.

The important question in this situation is this: will the unconventional monetary policy work? Despite all the positive reassurances on this issue, the reality is that the use of increasingly radical unconventional measures may only show otherwise. That is, unconventional monetary is entering a progressive exhaustion process in its ability to influence the economy in the desired direction, as a drug addict who requires increasingly stronger doses to address the symptoms of a disease, as the body will be used to the substance and the disease does not stop spreading.

This is an image that can be applied to the so-called liquidity trap, a situation where, according to many opinions, the global economy, and European economy in particular, find themselves in.

3. The liquidity trap: some considerations using the IS/LM model.

The analysis of the liquidity trap can be used as a reference for understanding the ongoing economic situation in Europe and also, with the necessary adaptations, the current situation of the global economy (see, among others, Krugman, 2012 and Temin & Vines, 2014).

We are faced with significantly lower investment levels compared to pre-crisis levels. Furthermore, at the same time, interest rates have reached negative levels, if we refer to the banking system's relations with the ECB, with obvious effects over the non-financial sector.

The traditional IS/LM model, despite the simplifying assumptions that underpin it, can be a useful analytical framework for understanding what is happening to monetary policy, both in its conventional and unconventional components.

As it is known, the IS curve (Investment/Saving) is constructed from three relationships: the investment demand function; changes on aggregate demand as a result of changes on investment decisions when the interest rate varies; and the relationship between different levels of interest rate and output and the equality between savings and investment. On the other hand, the derivation of the curve satisfies the following propositions: an increase in the interest rate causes a reduction in investment demand, which in turn is reflected in an output reduction.

The IS curve represents, therefore, the combinations of interest rate and output levels that ensure the equilibrium condition in the market of goods and services. That is, total demand D , given the income level Y and the cost of credit i , equals the total supply Y , ($D(Y, i) = Y$), always bearing in mind the equality between investment and saving. Its slope is, therefore, negative, in the space of the interest rate and output dynamics.

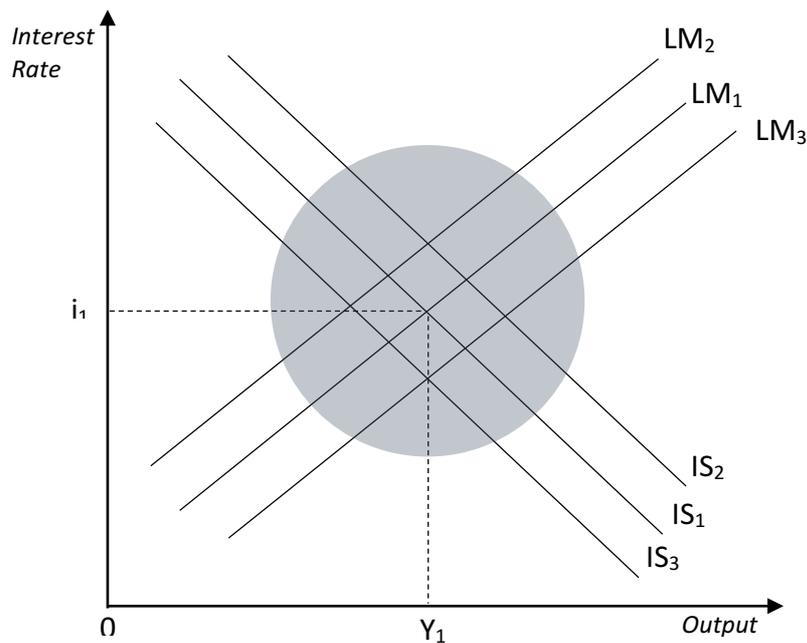
In turn, the LM curve (Liquidity Preference, Money Supply) is derived from the following relationships: the relationship between output and money demand; the relationship between money demand and interest rate; and the relation between the money market equilibrium (money demand and money supply balance) and the different levels of the real interest rate. The derivation of the LM curve conforms to the following propositions: an increase in output generates an increase in money demand which, in turn, generates an increase in the interest rate.

The LM curve represents, then, the different combinations of interest rate and level of output that ensure equilibrium in the money market. That is, the balance between money demand and money supply, $M^d(Y, i) = M/P$, given the nominal supply of money M and the price level P . The slope of the LM curve is therefore positive in the space of the interest rate and output dynamics.

In "normal" conditions, simultaneous equilibrium in the market of goods and services and the money market produces a positive interest rate (i_I) and a certain level of real output (Y_I). The equilibrium point is located graphically in the 1st quadrant, with movements to the left and to the right being conceivable for both curves, ensuring the conditions for monetary and fiscal policies effectiveness and different combinations of simultaneous equilibrium in both markets,

represented by the different intersections of IS/LM curves within the shaded circle of Figure 4, below:

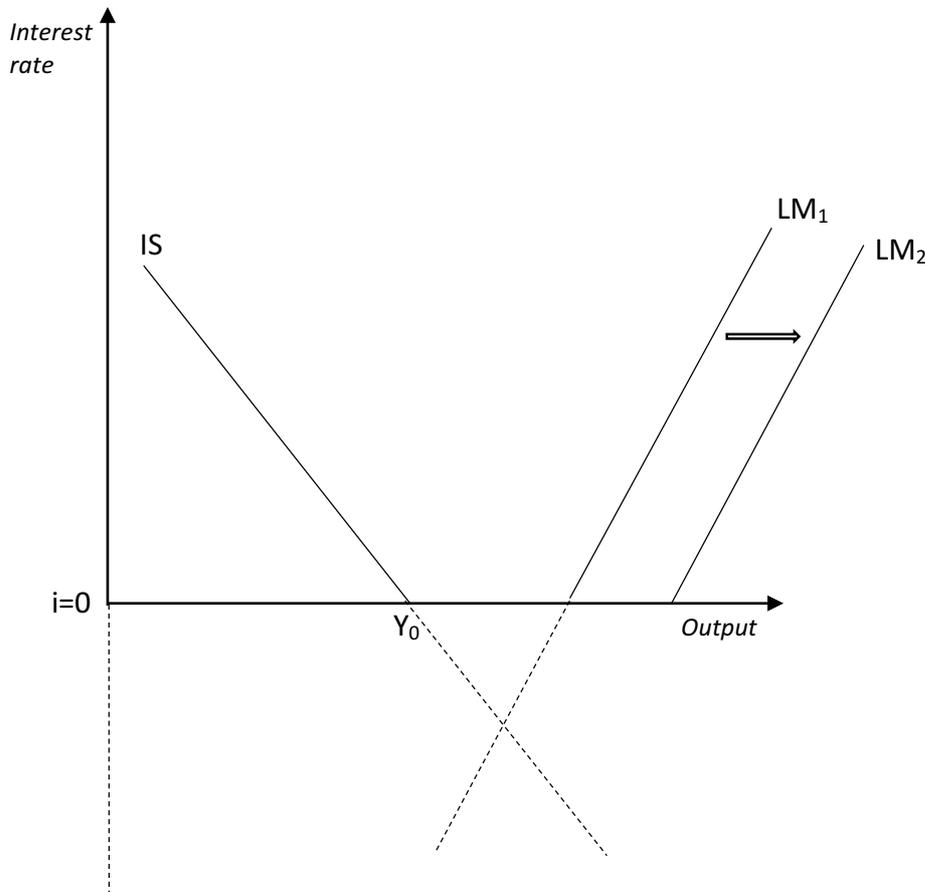
Fig. 4: “Normal” simultaneous equilibria in both the markets for goods and services (IS) and money (LM).



Consider, however, the case where the intersection of the IS/LM curves does not match in the 1st quadrant, but in the 4th quadrant. That is, a situation where theoretically the intersection occurs in an area of negative levels of interest rates for different output levels.

This can occur in a context where the IS curve has a strong shift to the left as a result of contractionary fiscal policies as happened in Europe following the so-called sovereign debt crisis in Europe, where concerns with containment of deficits and public debt led to a widespread decline in public spending.

Fig. 5: “Abnormal” simultaneous equilibrium



In such a situation, represented in Fig. 5 above, equilibrium output is given by Y_0 and the interest rate is equal to 0. An increase in the money supply moves the LM curve to the right, ($LM_1 \rightarrow LM_2$) but has no effect on the interest rate that, at least theoretically, cannot go down more. This means that investment can no longer be stimulated in this way. Monetary policy becomes ineffective.

By contrast, fiscal policy, through public spending or by tax reduction, can shift the IS curve to the right stimulating, in this way, the output level. Fiscal policy acquires an additional effectiveness to the extent that, given the loss of effectiveness of monetary policy, it becomes the only way to increase output.

It can also be seen, regarding the effectiveness of monetary and fiscal policy, that the LM curve can be modified only through the action of two factors: changes in the money supply and changes in autonomous money demand. The IS curve, in turn, is influenced by five factors: autonomous consumption spending, investment spending, government consumption, net exports and the level of taxes. This means that in a situation of monetary policy blocking, the

IS curve can be shifted to the right, through the influence that fiscal policy directly or indirectly has on the economy through the operation of these channels.

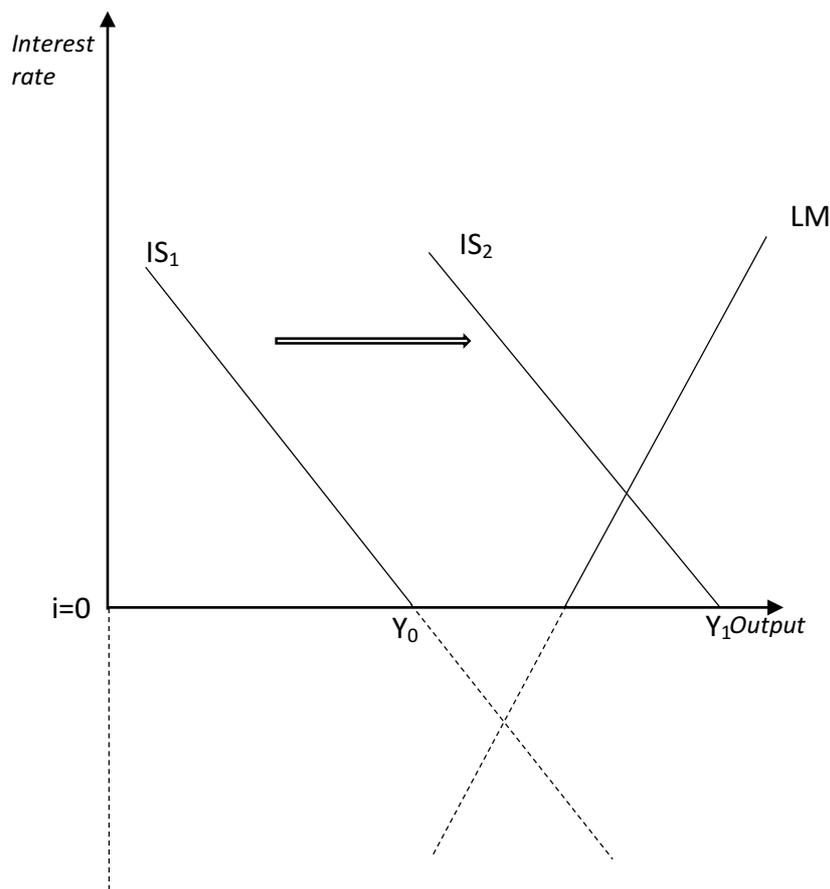
The analysis using the IS/LM model can also explain the relationship between the two macroeconomic policies. Fiscal policy works through the economic relationship represented in the IS curve. In turn, monetary policy works through the relationship translated by the LM curve. However, as can be seen in Fig. 4, the LM curve only affects the economy when it intersects the IS curve with a positive interest rate. In a situation where the intersection between the two curves, theoretically, only operates in a negative interest rate zone, monetary policy become completely ineffective and the economy falls in the liquid trap.

Moreover, we come to the crux of the matter. Can monetary policy back to play a role in this situation?

No longer working through its normal channels, monetary policy may act indirectly facilitating the operation of fiscal policy to move the IS curve to the right ($IS_1 \rightarrow IS_2$) (Fig. 6). This can be done through the accommodation of any public deficits, that result from the use of expansionary fiscal policy, through direct funding from the central bank.

Which, to a certain, it is already being carried out by the ECB and other central banks.

Fig. 6: The role of fiscal policy



4. Exogeneity *versus* endogeneity of money supply.

Another important issue for understanding the current situation relates to the discussion of the process of monetary creation by the economic system.

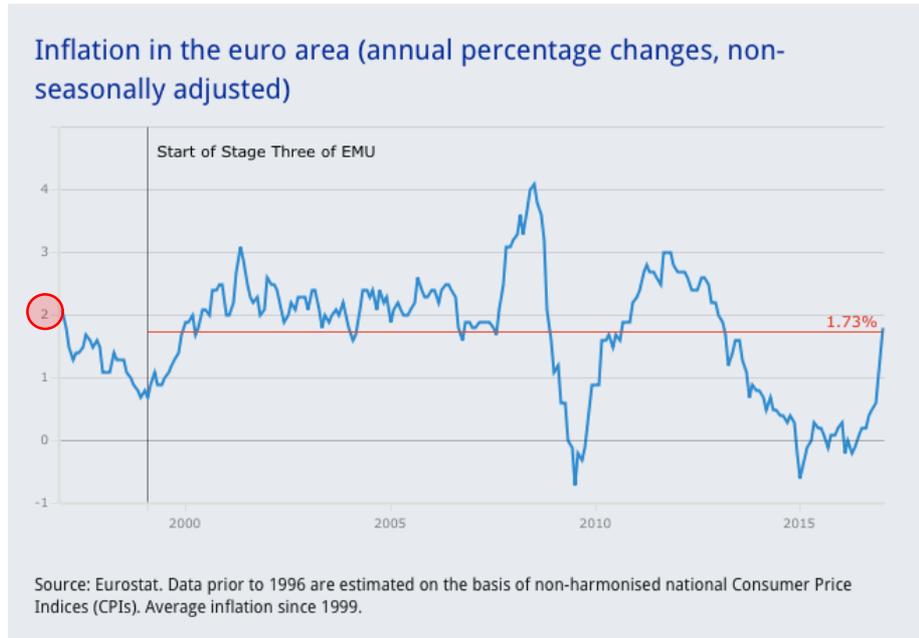
In the framework of the IS/LM model, the construction of the LM curve is associated with the hypothesis of exogenous money supply. That is, it is assumed that money supply is controlled by the central bank, being independent from the demand that results from the activity of economic agent.

Underlying this idea is the theory of the money multiplier, which introduces the separation between the Monetary Base - composed of currency in circulation and the required reserves held by the Central Bank - and the money supply itself, which is the money, created by the banks in their relations with economic agents. The money multiplier mechanism works between these, which is supposed to convey the changes in the monetary base, the central bank's responsibility, to the money supply, as represented in the movements in the LM curve. This exogeneity of money supply, as described here, has always been controversial in economic theory. Moreover, the current situation involving the intervention of the ECB, in particular with its evident inability to influence the economy, with the desired strength, through its conventional and unconventional liquidity injections, has raised more doubts about this exogeneity hypothesis, giving strength to the opposite hypothesis of money supply endogeneity. That is, unlike the exogenous money supply hypothesis, banks first provide liquidity to the economy through the credit they grant and only then do they turn to the central bank for refinancing to establish the reserves needed to cover the deposits that they manage through lending. Therefore, the route is not from the central bank to the economy, but from the economy to the central bank.

According to the endogeneity hypothesis, the central bank can only accommodate the money created by commercial banks in their relations with economic agents, and had no ability to determine any quantitative goals for money supply. This is, incidentally, one of the arguments most frequently used by the heads of the ECB to justify the adoption of unconventional measures, as a means to undo the tensions in the banking system funding. Instead of causing an uncontrolled expansion of the money supply (M3) generating inflation, the expansion of the ECB balance sheet has served above all to prevent its further decline (Graph. 1 and Fig. 7). According to the proponents of unconventional monetary policy, in the absence of unconventional measures the growth of money supply would have fallen much more. Probably,

it would have reached the levels seen in the crisis of the 1930s, with all the known consequences for levels of economic activity and unemployment.

Graph. 1: Inflation in the euro area



The endogeneity hypothesis of money supply is very important and allows us to understand several difficulties that monetary policy is facing today.

Recalling the relation of the monetary base with lending by commercial banks, we can describe the following sequence:

Fig. 7: Money creation sequence

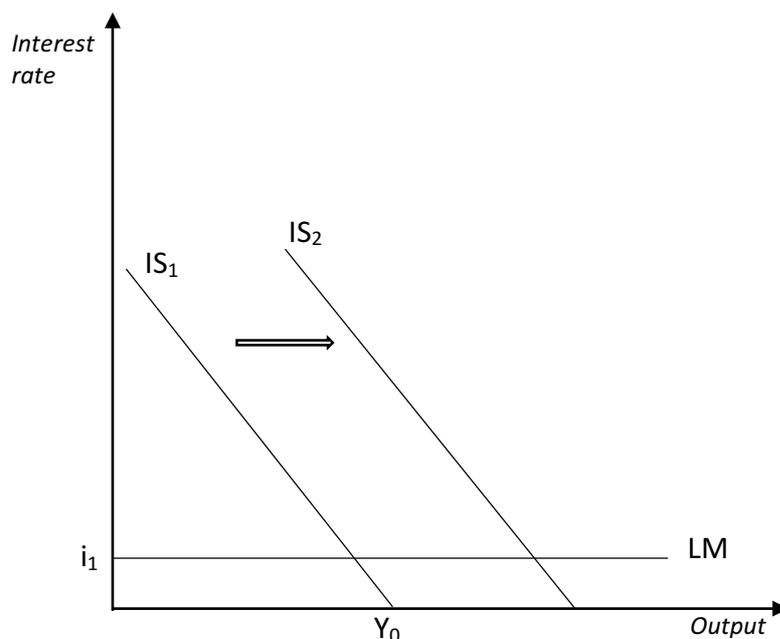


Obviously, the demand for credit depends on the state of the economy and the level of confidence in the future by economic agents.

The fact that money supply can be considered endogenously determined means that the LM curve is horizontal for a given interest rate, the financing being elastic at this interest rate. The

IS curve to the right ($IS_1 \rightarrow IS_2$) ceases to have any influence in determining the interest rate. This situation is shown in Fig. 8, below.

Fig. 8: Endogeneity of Money supply



As is easily understandable, when the economy reaches a situation of this nature, it means that monetary policy ceases to have any role in determining the level of economic activity. If the central bank expands the reserves in a voluntary manner, trying to get economic results by expanding the money supply, it can only generate excess reserves by commercial banks pushing interest rates down. No increase in money supply is effectively produced.

By contrast, fiscal policy obtains full importance.

Somehow, this is what has happened in the Eurozone and other economic zones with the central banks expanding the reserves of the banking system beyond all limits through "quantitative easing", without having been able, at least until now, to expand the demand for funds by the non-financial sector as necessary to significantly influence the level of aggregate demand, as would be their intention.

5. Concluding remarks

There is little left over to use regarding the "tool box" available by the ECB. And as regards what is left, only with a large degree of "elasticity" of interpretation will it fit within what the ECB is supposed to be able to do under the European Treaty and its own statutes.

An additional problem has to do with coordination of monetary policy with fiscal policy in the euro area. The former, increasingly oriented in an expansionary direction and the latter continually tied to a contractionary view, particularly with regard to the countries most affected by the crisis effects, more indebted and, therefore, more dramatically dependent on a stimulus demand to be able to get out of economic anaemia in which they find themselves.

There is, therefore, somewhat of a manifestation of an economic schizophrenia, which can be verified at the level of institutions with more responsibility in the conduct of international economic policies, particularly with regard to the ECB and the IMF.

In all its last most important interventions, Mario Draghi has urged governments to use fiscal policies that promote growth. We recall, in particular, the press conference, to present the decisions of ECB Governing Council Meeting of 10 March, that marked the beginning of the third phase of the so-called unconventional monetary policy, where he stated that "Fiscal policies should support economic recovery ...", at the same time as affirming that "... while remaining in compliance with the fiscal rules of the European Union", to add at the end "at the same time, all countries should strive for a more growth-friendly composition of fiscal policies", (Draghi, 2016a).

Discounting the aforementioned schizophrenia, evident in the contradictory statements between the call to use fiscal policy and the appeal for "compliance" with the rules of the Stability and Growth Pact, the ECB president's concern with the continued refusal of the use of fiscal policy in the euro area is clear, particularly by countries with economic surplus, with Germany at the head. But also, jointly by the EU and the euro area member states, as an instrument to streamline economic activity via aggregate demand stimulus. A situation that, if it continues, could accelerate even further the exhaustion process of monetary policy, both in its conventional and unconventional versions.

It is this awareness that justifies the growing concern of the ECB to build a theoretical and empirical justification for the need to promote public investment. There is a clear reorientation of economic studies in this direction, which also meet the need to provide institutional support to the Juncker Plan, "A new start for Europe", presented to the European Parliament on 15 July 2014, following his election as the new President of the European Commission.

In this regard the study published in the *ECB Economic Bulletin*, Issue 2/2016, "Public Investment in Europe" (ECB, 2016) should be mentioned, which recognizes the sharp drop in public investment in Europe, since the crisis, and states that "An Increase in public investment has positive demand effects and can contribute to the economy's potential output by increasing the stock of public capital" (ECB, 2016: p. 13). Considering the monetary policy followed by the ECB, the study recognizes that "... an increase in public investment will have the strongest short-term demand effects, including in terms of spill overs to other countries, with an anticipated accommodative monetary policy", and that " this finding strengthens the case for increasing public investment in the current low-inflation environment". Still following the study, it concludes that "... a debt or revenue financed increase in productive public investment implies significantly larger short-term output gains compared with an increase in investment financed by cutting other public expenditure". Conclusions which, however, do not seem to have been suitably taken into account regarding the general direction of economic policies pursued by the EU and the euro area, leading to the inconsistency and schizophrenia already mentioned.

Also at the level of the IMF, there is a recognition of the importance of relaunching public investment on a comprehensive and coordinated scale, although this had not been exempt from criticism of incoherence and schizophrenia as manifested with particular sharpness in assistance programs in which the IMF participated as a member of the Troikas. Even before the ECB, the IMF, through the statements of its leading figure, Christine Lagarde, and also through the statements of its most senior economists, such as Oliver Blanchard, drew attention to the effects of the austerity policies implemented across the board and without taking into account the specific situations of regions and countries, recognizing the negative impact on growth and employment and, more than that, for the persistence at the world economy level, of a general trend towards economic stagnation. In this regard, it is important to mention the *World Economic Outlook*, April 2016 (IMF, 2016), significantly entitled "Too slow for too long", where growth-oriented policies receive clear support from the analysis made of the general economic conditions and the factors that led to them. And, finally, the work published on the IMF Journal, *Finance & Development*, by Ostry et al. (2016), where the authors clearly conclude, after a cross-countries analysis of the policies adopted in response to the crisis, that instead of delivering growth, some neo-liberal policies have increased inequality, in turn jeopardizing durable expansion.

This re-orientation of IMF concerns began to become evident in the *WEO* of October 2014 where, in the 3rd chapter it significantly raises the issue, "Is it time for an infrastructure push?

The macroeconomic effects of public investment.", to give the answer "This chapter finds that increased public infrastructure investment raises output in both the short and long term, particularly during periods of economic slack and when investment effectiveness is high. This suggests that in countries with infrastructure needs, the time is right for an infrastructure push: borrowing costs are low and demand is weak in advanced economies, and there are infrastructure bottlenecks in many emerging market and developing economies. Debt-financed projects could have large output effects without increasing the debt-to-GDP ratio, if clearly identified infrastructure needs are met through efficient investment."

The OECD seems going in a similar direction when emphasising, in its *Interim Economic Outlook*, of February 16, 2016, following the recognition of the weak economic growth, that "A strong collective policy response is urgent. Global macroeconomic policy, comprising monetary, fiscal and structural actions, must become more supportive of demand and resource allocation. Experience to date suggests that reliance on monetary policy alone has been insufficient to deliver satisfactory growth, so that greater use of fiscal and structural levers is required".

Seen retrospectively, the monetary policy response of the ECB to the development of the crisis seems to have been more a reaction to events than an effective response to the economic problems. Although all the improvements, compared to the times of the former President Jean-Claude Trichet, the reality is that the current leaders failed to act in advance, intervening mainly in extreme situations to prevent disaster.

However, if this intervention has proved crucial, it has also contributed to the accumulation of tensions that cyclically threaten to explode pushing the economy to limit situations. It is precisely this tensions accumulation dynamics that has driven ECB intervention toward increasingly unconventional measures.

However, these unconventional measures have not found, until now, the necessary support in terms of fiscal and budgetary policies, which continue to manifest a resistance to meet the real needs of the economy. Instead, as these policies continue to focus on issues of fiscal balance and public debt, they have acted in the opposite way, demanding more and more from monetary policy that, by its very nature, is limited in its ability to deal with all the problems that affect the economy.

It is, precisely, this contradiction between the stances of fiscal and monetary policies that has boosted the effect of exhaustion of monetary policy, discussed in this essay.

When called upon to use less and less conventional instruments, monetary policy that is supposed to be followed by the ECB reveals its weak institutional architecture and its

inconsistent theoretical framework. While not being completely negative, in that it has enabled pragmatism in response to the crisis, the use of increasingly unconventional measures pushed monetary policy towards a boundary zone where it has begun to deny itself, when it accepted within its toolbox the use of negative interest rates.

To conclude, we will say that what is at stake in how Europe and the Eurozone in particular have reacted to the crisis, is the euro system itself.

Designed to provide a joint response of the monetary zone to the problems of international adjustment it has not internally found a suitable complement to the correction of asymmetries between countries that, as opposed to the starting assumptions, have ended up accentuating these, denying the verification of the optimistic endogeneity hypothesis for the monetary area. Within this perspective, ideas that point to a solution of a "more Europe" kind to address the problems do not seem realistic. This view runs the risk of accentuating the removal of decisions from the concrete realities of countries, strengthening theoretical approaches to the detriment of reality analyses and the power of distant bureaucracies to the detriment of agents subject to the direct scrutiny of citizens. This, ultimately, can lead to the denial of the very concept of economic and monetary integration applied to the reality of Europe and the Eurozone.

A general review of the euro system is therefore, justified in order to adjust it to the current dynamics of the different European economies and to their joint participation in the global economy. Furthermore, the immediate recovery of all rights of citizenship for fiscal policy is also justified in order to curb the monetary policy exhaustion process and enable it to bring back the economy to a sustained area reversing the stagnation tendencies that affect it.

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