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Scientific Annals
of the "Alexandru Ioan Cuza" University of Iași
Economic Sciences
61 (1), 2014, 17-30
DOI 10.2478/aicue-2014-0002



THE LIQUIDITY TRAP, DEMOCRACY AND CENTRAL BANK INDEPENDENCE¹

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Abstract

In the wake of the financial crisis, central banks in developed countries performed unconventional operations that are fiscal in nature. On one hand, we support the view that such operations, which are not fully democratic, might lead to loss of central bank operational independence and discuss some difficulties that central banks might face when reversing quantitative easing. On the other hand, we show that, in the middle of a financial crisis, such operations are best performed by central banks. To avoid this potential conflict, the society needs to identify the best means by which the responsibility for quasi-fiscal operations implemented by the central bank is transferred to a democratic structure.

Keywords: central bank, liquidity trap, quasi-fiscal operations, operational independence, quantitative easing, democracy

JEL classification: E58, E02, E42, E52, E61, E63.

1. INTRODUCTION

The current crisis has placed central banks in some developed countries in a particular position. They buy financial assets from the public and private sectors, i.e. they enable quantitative easing². In other words, the monetary basis is expanded. Some economists perceive this process as a premise for central banks to set the bases of terribly high future inflation. However, other economists, whose opinion I share, realize that central banks have no other option in their efforts to prevent all countries from getting caught in the liquidity trap. If they had an alternative, central banks in developed economies would never follow a direction likely to endanger their hard-fought independence.

2. FINANCIAL INSTRUMENTS - TEMPORARILY LOST

Quantitative easing is inevitable because conventional instruments for stimulating demand have reached an end. Monetary policy interest rates, whose reduction stimulates demand, have approached or even reached zero. Beyond this level, nominal interest rates can no longer be reduced. In other words, developed economies are caught in the liquidity

trap. This means that the real interest rate, i.e. the difference between the nominal interest rate (zero) and anticipated inflation, only depends on the anticipated inflation.

This is where the problem occurs: in the absence of further demand stimulation, the public anticipates that prices might enter a decreasing phase, in which case the real interest rate would increase, thus pushing the economy into depression. For example, in the US, if prices fell by 2.07 percent, as they did on average in the 1929-1939 period, the real interest rate would be equal to approximately +2.07 percent: $0 - (-2.07) = 2.07$ - a very high level (which would stifle demand) compared to a real interest rate of minus 2.47 percent, as in the 2009-2011 period, which stimulated demand.

Theoretically, in this case, when interest rates equal zero, the budget deficit should be increased in order to stimulate demand³ and avoid a decrease in prices. Unfortunately, this is no longer possible. Being highly indebted, developed countries have had little room for deficit increases. When the crisis hit, this fiscal space had been pretty much exhausted without succeeding in placing demand on a firm upward slope.

Moreover, in some Eurozone states, the market demonstrated it no longer tolerated the high public debt levels. It is precisely the case of the countries which lost in terms of competitiveness as compared to the ones which reduced costs and promoted essential reforms. In the absence of the currency depreciation option, the former increased, in time, public spending and budget deficits. Recently, investors have shown no desire to finance those deficits.

Considering the depletion of the two instruments – the short term nominal interest rate and budget deficits – the need for new ones arises. Practically, there are two options left: (i) spending and tax restructuring (including for the governments which are still financed by the market), so as to enable public budgets to stimulate aggregate demand and consequently find a way out of recession without increasing deficits, if not even reducing them⁴; and (ii) the purchase of financial assets by the central bank from the public as well as from the private sectors.

Given the political and social balances, on the short term, the first option is a purely theoretical one. Practically, deficit reduction⁵ or public budget review at a pace meant to restore investors' confidence is a mere illusion. Under these circumstances, central banks in developed countries have to buy, indirectly, government debt (bonds) and financial assets from the private sector. Starting in 2007, central banks have flooded the financial system with more than 11 trillion dollars (Hilsenrath and Blackstone, 2012).

The central bank's balance sheet turned from an element which passively reflected its operations into an economic policy instrument. Before the crisis, it reflected, on the one hand, the central bank's response to the public need for banknotes and coins, as well as the monetary market interaction and, on the other hand, the setting of minimum required reserves. However, during the crisis, the expansion of central banks' balance sheet (in developed countries) by purchasing public and private sector assets was the solution used to diminish the contractionary effects of the private sector balance sheet shrinkage.

3. "IRRESPONSIBILITY" OF LAST RESORT

Through these purchases, on the one hand, central banks aim to increase anticipated inflation, which would lead real interest rates to lower levels, thus stimulating aggregate demand. On the other hand, quantitative easing programmes bring long- and medium-term interest rates to low levels by reducing the risk premium of the purchased financial assets.

With low interest rates, investors move more money into the capital market and firms finance their businesses at lower prices, which increase their potential to produce incomes in the future and leads to their share price increase⁶.

Technically speaking, central banks make a swap of assets in the public and private sectors. The central bank pays for government bonds, as well as for the financial assets of the private sector, thus bringing commercial banks' deposits with the central bank at a higher level than the one necessary to keep the nominal interest rate at zero (Isărescu, 2012).

In the case of government bond purchases, this may mean, under certain circumstances, funding the deficits of some governments that are no longer funded by markets. In the case of private sector financial asset purchases, it simply means that the central bank grants credits to certain economic sectors. For example, in recent years, the Fed has bought mortgage-backed securities from private institutions or government agency debts. Most recently, in December 2012, the Fed decided to continue the acquisition of government bonds and mortgage-backed securities (MBS) of 85 billion dollars a month in 2013. The MBS purchases represent, in their nature, fiscal operations since they directly affect resource allocation at the microeconomic level, just like fiscal policy does⁷.

This philosophy is fundamentally different from the one which appeared at the end of the 1990s, when inflation was targeted. The framework within which monetary policy functions at present occurred as a result of long years when central banks' single focus was on one objective: price stabilization. After 1995, indirect instruments were used almost exclusively in order to modify money quantity. The interest rate was a target as much as an operational instrument.

Inflation targeting enabled the clear separation between monetary and quasi-fiscal operations. This has led to central bank operational independence. Since the early 1990s, monetary policy has no longer targeted monetary aggregates and this translated into a narrower share of monetary operations in financial market transactions. Under the strategy of inflation targeting, which does not seem to have survived the crisis, the central bank would reach the inflation target if it promised, in a credible manner, a certain interest rates path. In other words, the target would have been reached if the central bank had promised to act responsibly.

Today, on the contrary, the above mentioned asset exchange has the chance to be forwarded into inflation provided it is repeated under a credible promise of money offer increase (Bernanke and Reinhart, 2004). Krugman (1998, p. 139) stated that monetary policy will reach its purpose through quantitative easing "if the central bank can credibly promise to be irresponsible, to seek a higher future price level." In other words, central banks must take the full responsibility of acting as the "irresponsible" of last resort.

If the countries which are currently caught within the liquidity trap do not manage to be efficient in terms of increasing future inflation expectations, other economies might as well fall in the liquidity trap⁸. Given the high integration of trade and financial markets, the aggregate demand fall in developed countries may lead to real interest rates falling below zero in all countries, thus setting the bases of a global liquidity trap (Cook and Devereux, 2011). Escape from such a complicated situation would depend on some difficult to promote and implement cooperation policies⁹.

In order to avoid such a situation, quantitative easing in developed countries will be continued. Until now, unconventional measures have managed to maintain interest rates in these countries at negative real levels. However, they did not succeed in decreasing these levels enough so as to bring economic growth at potential. The new quantitative easing will

have to be sufficient so as to ensure that real interest rates will continue to fall in order to stimulate aggregate demand in these countries. In the future, even after the deflationary shock extinction, monetary policy will have to continue to stimulate the economy, irrespective of the price levels (Eggertson and Woodford, 2003).

4. QUANTITATIVE EASING, LOSSES AND CENTRAL BANK INDEPENDENCE

Although it helps restore demand, quantitative easing can lead to the limitation (or even loss) of a central bank's operational independence. This would mean that the central bank could no longer set the interest rate (or any other operational instrument) independently in order to reach its inflation target.

It is hard to imagine that, once constrained in the developed countries, central bank independence could survive in the emerging economies. Therefore, what today appears to be a concern specific to developed countries turns into an alarm for all economies. Independence limitation may occur via two means: a purely economic one and a political one. "There are two important dimensions to fiscal risk for central bank operational independence. One may be termed the purely economic—would central bank losses interfere with the attainment of the monetary authority's policy objectives owing to the need to generate seigniorage beyond what would be consistent with target inflation? [...]. The second important dimension of fiscal risk is political." (Stella, 2010, pp. 9, 13). In this section, we are discussing the economic dimension, the political one being dealt with in the next section.

On the economic route, financial losses which may occur in central banks' balance sheets are the consequence of bond purchases and/or quasi-fiscal operations. Irrespective of their source, big losses interfere with the monetary policy purpose (price stability). If losses are very important, the bank loses its credibility. In this case, as John Nugée shows, "once the general population loses confidence in their central bank, it is extremely difficult to build a workable Plan B". For this reason, the central bank can no longer anchor inflation expectations. Independence is gradually lost because the central bank becomes dependent on the government to rebuild capital.

Stella (2010, pp. 9-13) has shown that central banks' possible losses in developed countries would not constitute a problem. The central bank's seigniorage are high enough to limit the possible losses which may occur from quasi-fiscal operations. Indeed, in developed countries, central banks are net creditors and produce incomes from seigniorage, as well as from the ordinary transactions with commercial banks.

Moreover, at present, government bond holdings produce potential profits that are historically abnormally high. This happens because the normal yield curve had a pretty sharp path at the beginning of the crisis. Long-term maturity bonds were financed with excess reserves, whose costs are close to zero. The materialization of some of these profits will "feed" central banks' own funds, thus increasing the capacity to absorb possible future losses. As quantitative easing will flatten the yield curve, potential profit from such operations will decrease, remaining positive as long as the cost of excess reserves remains low.

However, banks' preference for liquidity, brought by the crisis at historically abnormal high levels, will decrease. Then, banks will start to use their excess reserves, which are at present deposited with the central bank, in order to extend credits to the real sector and to

fund various financial operations. When this will be happening, central banks will have to increase the short-term interest rate. For this purpose, they will have to sell their securities now available in unprecedented quantities in order to keep inflation at relatively low levels.

Massive selling of bonds will lead to a fall in their value and could generate losses in central banks' balance sheets, as well as for other bond owners¹⁰. The more abrupt, on the one hand, the fall in commercial banks' preference for liquidity (Croitoru, 2013) – which could temporarily reverse the yield curve – and the larger the long-term bond volume, on the other, the bigger the losses. Still, even before the preference for liquidity drops and interest rates increase, adjustments will be performed in security ownership. If the maturity of the purchased securities is relatively short, many of these will have reached maturity even before the preference for liquidity drops, without causing any losses¹¹. Moreover, the bond ownership volume may be temporarily modified through reverse repo transactions.

Losses will occur only if the rapid fall in liquidity preference coexists for a while with a high share of relatively long-term securities. From this perspective, the maturity of financial instrument is not analyzed relative to other instruments, but to the length of the period in which liquidity preference will drop rapidly. The faster the drop in this preference the bigger the share of relatively long-term securities as compared to short-term securities. In this case, as the policy interest rate increases (which will be reflected in the increase of minimum reserve rates), long-term bond holdings, with low yields, will be financed with more expensive short-term maturity securities.

Central bankers are confident that they will easily manage to reverse government security purchases, although there is a risk that the injected money might not be withdrawn rapidly enough (Smaghi, 2012). However, there have been no similar episodes in history regarding the reversal of huge bond purchases, and some studies (Park, 2012) show that this approach might be too optimistic. For now, all we can say is that we do not know how rapid the fall in banks' liquidity preference will be. If it is not rapid, central bank' bonds holdings might not produce losses impossible to be recovered from seignorage, own funds and other sources. Thus, bond purchases might not lead necessarily to central bank independence limitation on the economic route.

Neither quasi-fiscal operations have intrinsically the power to lead to central bank operational independence loss on the economic route. Quasi-fiscal operations might produce losses able to be recovered through the *seignorage* incomes, as Stella (2010, p. 10) suggests. Moreover, they might turn out quite profitable from an accounting point of view. However, recent studies (Park, 2012) show that the possibility for such asset purchases by central bank to result in unintentionally high inflation has a serious chance to materialize.

4.1 Quasi-fiscal operations and central bank operational independence

On the political route, however, quasi-fiscal operations have a greater potential to limit central bank operational independence. Even though the central bank's quasi-fiscal operations do not produce losses, they raise two problems. The first, which I only mention, is that the central bank, just like the government (parliament), is in no position to replace the market in choosing the winners. Or, as Cecchetti (2012a) clearly stated, "central banks can not solve the structural problems in economy". When it decides to lend a certain sector to the detriment of another, or to save a financial institution to the detriment of another, the central bank substitutes the market, thus distorting allocative efficiency. This is not a direct concern for politicians.

The second problem has to do with democracy: unlike the parliament, which has the democratic - though not the economic - ground to choose the winners, the central bank does not. Blejer (2013) writes that “Central-bank independence is a peculiar institutional innovation. Seemingly irrefutable theoretical models underlie a paradigm that has changed in significant ways, and that, if preserved, is bound to cause serious political problems.”¹²

Operations that are fiscal in nature, just like the central bank’s credits to various economic sectors, must be democratically approved. Bringing these operations under a governing structure similar to that of pure fiscal operations would be a legitimate concern for politicians and society alike. But if, in this process, the central bank’s operational independence were unintentionally lost, the cost would be enormous for the society.

The fact that the central bank is an autonomous bureaucracy, with its own balance sheet, is not random. In general, autonomous bureaucracies, not chosen by vote, are the society’s response to the acute need to insulate certain activities from political influence. The central bank’s autonomy is a response to the need to insulate monetary operations from political influence. It is well known that, before the central bank was granted operational autonomy, inflation had been a constant and painful phenomenon.

“Politicians representing, in theory, the public will, often make populist choices at odds with long-term public interest. This is why executive branches have to be shielded from day-to-day legislative oversight. The need for bureaucratic autonomy is why we don’t turn monetary policy or military strategy over to our elected representatives for management.” (Fukuyama, 2012).

The central bank was granted autonomy over a balance sheet which is controlled by using indirect instruments (monetary operations in nature) at the market price in order to reach implicit or explicit inflation targets. The theoretical support for operational independence was sourced by the contribution of some famous economists. They proved that, in order to maintain price stability, monetary policy needs: (i) a governing structure with no other function¹³ (Lucas, 1972,), (ii) rules (Kydland and Prescott, 1977) and (iii) instrument independence (Rogoff, 1985, and Walsh, 1995).

However, as Stella accurately stresses (2010, p. 3), the central bank has been identified with the agent who exercises monetary authority, which has led to its identification with monetary policy. Thus, most central banks in the world have been granted the independence to use their balance sheet both for monetary policy and for other functions, including financial stability.

But when the central bank performs quasi-fiscal operations to ensure financial stability, it leaves the logic and area for which its autonomy was granted. By so doing, it enters an area – the fiscal one – for which democracy does not allow the independent control of the balance sheet. In democracy, the government’s budget is controlled by the parliament. The government can lend if this action is explicitly approved by the parliament. But if the central bank also performs fiscal operations, the question which arises is: why would the same type of operations be governed by two different structures?

Since there is no convincing answer to this question, the legislative power will tend to bring central bank operations under parliament control due to the fact that the latter governs fiscal policy. “Given that central banks are likely to continue to pursue multiple objectives for a long time, their independence will continue to erode” (Blejer, 2013). As Stella states (2010), this can lead to the unintentional and unwanted limitation of the central bank’s operational independence. It is true that, in the inner circles in developed countries, as Stella says, it is the reform of central bank’s governance structure which is discussed rather than

the operational independence limitation. But there are quite a few cases when reason was defeated by populism.

Moreover, quasi-fiscal operations take place in a period when pressure on central banks is higher and higher. The demand for a more careful political supervision and for new transparency and responsibility standards is more intense, the tension being remarkable not only in the case of the Fed, the Bank of Japan, the European Central Bank and the Bank of England, but also for other central banks in developed countries, as well as in emerging ones (according to EYGM Limited and OMFIF Limited, 2012, p. 12).

4.2 The debate regarding the central bank's governance structure

The possibility that the central bank might lose its independence due to its quasi-fiscal operations (financial interventions) is just a facet of a more complex problem: (i) on the one hand, as the current crisis has already shown, ensuring low level price stability does not guarantee financial stability; (ii) on the other hand, the central bank's interventions to ensure financial stability may lead to the limitation of operational independence, thus restricting its capacity to ensure price stability.

In order to solve the former issue, some economists propose that financial stability should be a new prominent objective of the central bank, as it was initially, when most central banks were established. But this solution has a major drawback: there are two objectives (price stability and financial stability) and a single instrument (interest rate). This is why the two objectives may clash: an interest rate increase, necessary to maintain inflation within the desired limits, could strain private accounts, thus financially disturbing the economy. For these reasons, some economists suggested that the monetary policy rate should be established by the government (Goodhart, 2010).

Blejer is also concerned with a new cooperation method between the central bank and governments since the former will probably continue to achieve multiple objectives. "To ensure a positive outcome, policymakers should develop a fully transparent framework with well-defined 'rules of engagement'. A strict framework for allowing, and at the same time limiting, government's involvement in central-bank decision-making is particularly crucial in emerging markets, given that, in most of them, central-bank independence has contributed not only to the eradication of inflation, but also to institution-building" (Blejer, 2013).

Other economists (Stella, 2010, and Goodhart, 2010) proposed that financial stability should be allocated to a new governance structure, separated from the one associated to monetary policy. Thus, there would be two new structures: a monetary authority with a relatively small balance sheet and an intervention authority, with a relatively big one. According to Stella (2010), this solution would allow for the clear distinction between monetary policy, fiscal policy and financial market intervention policy.

The monetary authority would conduct the monetary policy. To Stella (2010), this means leading the process by which a target regarding the operational interest rate is established and the liquidity necessary to create a correspondence between the market rate and the target one is administered so as to reach the inflation objective.

The financial market intervention authority would implement the intervention policy on the market or on institutions in financial distress in order to modify relative prices or to provide liquidity. In other words, this authority would issue government-guaranteed debt and would serve as lender of last resort, within the limits imposed by the government budget. In Goodhart's case (2010), things are simpler. He does not exclude the possibility

that the interest rate might be established by the government, all the other operations being under the auspices of the central bank. This actually means that the central bank is the intervention authority.

4.3 Are two governance structures desirable?

The separation of the present governance structure of the central bank into two different structures is questionable from various points of view, some of these widely discussed in the literature. First of all, the connection between the interest rate and financial stability does not change in its nature. Irrespective of who sets the interest rate, if the inflation rate reduction is targeted, a significant increase in interest rates can cause strain on the balance sheets, which may consequently entail an increase in the unemployment rate. If we assume that the establishment by the government of the interest rate is a solution, then we actually agree that the government would accept higher inflation than the central bank would. Governments have bigger incentives to avoid balance sheet strains and hence higher unemployment, even though it is widely known that there is no tradeoff between inflation and long-term unemployment rate.

Secondly, liquidity management would be two-pronged. In normal times, the monetary authority would properly manage the liquidity so that the monetary policy rate would reach levels consistent with the inflation target. Instead, in times of crisis, it is the intervention authority that would have an important role in managing liquidity. The latter case refers to, relatively special and rare contexts, when the intervention authority – and not the central bank - would function as a lender of last resort.

Two problems derive from this. First of all, the intervention agency would rarely have anything to work on, which would ultimately result in wasting the expertise in the field. When, after the capital control period (until the 1970s), banking crises occurred in various countries, the responsibility of solving them fell on the shoulders of a few experts. Nowadays, this would be inconceivable (Goodhart, 2010). The advantage of a central bank with the present governance structure in leading unconventional policies consists in the much faster response time given the already developed instruments and professional capacity as compared to a government agency.

The second problem refers to changing actors during the performance, which would be a major issue for banks. In times of maximum stress, the central bank should temporarily yield its central place within the banking system to a government authority. In this case, the manner in which the liquid assets' quality and volume should be defined is unclear. Normally, within the current structure of the central bank, the liquidity definition should meet both the financial policy objective (their acceptance in times of crisis) and the monetary policy one (their acceptance for indirect operations), as Flandreau (2010) shows. But with a two-pronged liquidity structure, meeting this demand might turn out a difficult task.

The third reason for which the present governance structure is better revolves around the exchange rate (Gregorio, 2010). The exchange rate influences the economy through its effects on inflation and financial stability. When capitals are mobile, in order for the established interest rate to reach the inflation target, the exchange rate must be flexible. Still, in boom or crisis periods, the exchange rate may diverge from balance (reflecting, for example, capital movement), thus possibly leading to a currency crisis which could turn into a banking crisis. If currency reserves are managed by the intervention authority (politically

dependent), there is no guarantee that the exchange rate management will be led according to the inflation target. On the contrary, under political pressure, the exchange rate might be permanently overvalued. This would erode the credibility of the inflation anchor and would increase the probability of wider external imbalances.

The fourth reason for which an intervention authority would be problematic is given by the moral hazard resulted from the intervention guarantee (Gregorio, 2010; De Grauwe, 2011). The intervention authority essentially functions as an option. In the case of an extremely negative event, it has the *ex-ante* approval to rapidly expand its balance sheet through government-guaranteed debt issuance. In good times, it remains “silent”. But are we interested in issuing such an implicit guarantee? The answer is “no” because, according to Gregorio (2010), such a free of charge insurance is equivalent to eliminating intervention uncertainty, thus reducing the cost of risk at the private entities level. A low cost of risk stimulates private agents to take greater risks. The moral hazard would extend relatively quickly to regulators, supervisors, and other managers of the financial system. The costs of moral hazard could be higher than the benefits occurring from a rapid intervention and, therefore, a certain degree of uncertainty, associated to the present governance structure, could be preferable (Gregorio, 2010).

Last but not least, a new governance structure would be created in parallel with new regulations. The recent US and European experiences demonstrate it. In turn, the new regulations will trigger innovations at the microeconomic level in order to reduce the regulation associated cost. An authority in charge of crisis resolution will always be behind market innovations because, otherwise, crises would no longer emerge. This is why solving crises will always require innovation and creativity in order to find viable solutions rapidly.

Confronted with these needs, intervention authorities will by no means be better prepared than central banks, which enjoy “a clear comparative advantage in dealing with monetary issues, and can therefore be trusted to pursue their targets independently.” (Blejer, 2013). During a crisis, the central bank holds the best position in ensuring financial stability. However, as shown in the EYGM Limited and OMFIF (2012, p. 14) report, “with the world of politics growing increasingly restive at the encroachment of central banking power, that is a minority view.”

5. A DIFFERENT SOLUTION

The fourth section arguments, related to the lack of a democratic basis of quasi-fiscal operations, as well as the ones in the previous section, related to the disadvantages of an intervention authority, seem to create a dilemma. On the one hand, it might be concluded that the central bank should restrain from performing quasi-fiscal operations since they raise the risk of endangering its operational independence and are undemocratic. On the other hand, during a crisis, the current structure of the central bank is a lot more appropriate to deal with the crisis as compared to an intervention authority.

Seemingly, the dilemma we are dealing with is the following: should we choose quasi-fiscal operations to be performed by the central bank (in its current form), thus prioritizing the operations’ efficiency to the detriment of democracy? Or should we choose democracy (by modifying the present structure of the central bank) to the detriment of the efficiency of financial stability operations? Nevertheless, this dilemma is not genuine. It is simply a consequence of the proposal for two separate governance structures, as a solution for the democratization of central banks’ quasi-fiscal operations.

Actually, the proposal for the creation of an intervention authority conceals two proposals for two distinct major changes. The first, and the most important proposal for change, is to assign the responsibility for fiscal operations to bodies which reflect democratic will. The second is to change the central bank's governance structure, which is the equivalent of the intervention authority creation. The first change is strictly necessary, while the second one is not only unnecessary, but also inefficient, as shown at the beginning of the fourth section.

Since it is useless to produce an unnecessary change, which would also turn out to be inefficient, the dilemma is gone. We only need to identify the best means by which the responsibility for quasi-fiscal operations implemented by the central bank is transferred to a democratic structure. Or as the former Governor of the Bank of Japan (Shirakawa, 2009, p. 3) put it, "the policymakers need to face up to the issue of who should be responsible for such [economic – *our note*] policy actions in a democratic society?" If the responsibility is to be borne by the fiscal authority, then, as the Governor of the Central Bank of Cyprus (Gregorio, 2010) suggested, the issue of "how to finance the losses" and "the form to do it should be determined *ex-ante*."

In order to be complete, the solution should comprise the *ex-ante* establishment of the limit up to which the fiscal authority takes responsibility for these losses. Park (2012) has shown that the full support of the fiscal authority given to the quasi-fiscal operations of the monetary authority represents a prerequisite for an efficient monetary policy. This would be an elegant solution to democratize quasi-fiscal operations led by the central bank. It would, however, be difficult to apply it in a monetary union that does not rely on a fiscal union. But the absence of a fiscal union is not an argument in favor of an intervention authority, but rather of speeding up the creation of a fiscal union.

It would be a pity that, once they have saved the developed economies from the current crisis, central banks be "thanked" by having their governance structure modified. Dividing the governance structure of central banks would be the unproductive validation of a well-known proverb: "*A good deed never goes unpunished*".

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Notes

¹This study was first published in Romanian in the author’s book “Sfârșitul reglementării și ultimul reglementator” (The End of Regulation and The Last Man), Curtea Veche Publishing, 2013.

²Besides new monetary policy instruments, such as quantitative easing, central banks also used broadened limits in granting liquidity in the banking system, as well as changes in the standards regarding the collateral accepted from commercial banks for refinancing operations.

³Normally, when capital is fully mobile, the exchange rate is flexible and the monetary policy strategy is inflation targeting, fiscal expansion cannot lead to an increase in demand. This happens due to the fact that the central bank compensates for the fiscal policy easing by raising the policy interest rate necessary to keep production at the potential level, which secure the inflation rate stability. The financial market participants’ anticipation of this response leads to an increase in the anticipated interest rates on the short term and, thus, of those on the long term. The increase in long-term interest rates reduces the value of assets and strengthens the currency. With a reduced asset value, households will finance fewer expenses and firms will reduce investments. Currency appreciation will lead to a reduction in exports. These decisions of the private sector will finally compensate for the initial production and employment increase determined by fiscal expansion. In return, when, due to a shock in demand, the economy falls into the liquidity trap (the monetary policy rate is zero), fiscal policy may be efficient. Particularly, the central bank will have fewer opportunities to compensate for the contractionary effects of fiscal consolidation (Christiano et al., 2011). With the impossibility of nominal interest rate to go below zero, the production gap will be deflationary and inflation will be lower than desired. The Great Depression as well as the Japan experience in the last two decades supports the anticipation of the fact that this may last for a good while. Economic agents will accurately anticipate that the central bank will no longer counter fiscal policy easing and will set the monetary policy rate close to zero for a relatively long period of time. Therefore, fiscal easing might not lead to a significant interest rate increase on the long term, which would mitigate the effects on lowering asset prices and currency appreciation as compared to normal periods. The increased budget deficit should be reflected in the public debt increase, which could lead to an increase in inflationary expectations (Calvo, 1991), thus reducing the real interest rate, which would stimulate economic growth. Also, fiscal multipliers could grow. See Kohn (2009), DeLong and Summers (2012) for fiscal multipliers estimations in the US; see Eggertson and Krugman (2012), Auerbach and Gorodnichenko (2012), Blanchard and Leigh (2013) for the idea that, in difficult times, fiscal multipliers are relatively high.

⁴Mertens and Ravn (2012) have shown that supply stimulating policies are more indicated than those fostering demand. In contrast to a series of recent works, they have described „equilibria in which demand stimulating policies become less effective in a liquidity trap than in normal circumstances. In contrast, supply side policies, such as cuts in labor income taxes, become more powerful”.

⁵DeLong and Summers (2012) suggested the need for considerable caution in the fiscal consolidation process in depressed economies, where interest rates are close to or even zero.

⁶There are also significant side effects of quantitative easing. The artificial maintenance of some narrow spreads is reflected in the income decline in the case of those relying on the coupon (pension funds, banking, and other owners) as well as in the government’s adjournment of difficult political

decisions necessary to reduce relatively high budget deficits. But these are costs which cannot be avoided if a shorter period for economy growth below potential is desired. Part of the pension funds loss may be avoided by reducing the burden of regulations which govern these funds.

⁷ Although all central banks which perform quantitative easing generally aim at stimulating household consumption and corporate investment, the transmission channels are specific. The quantitative easing of the European Central Bank has as main purpose the reduction of the cost at which some Eurozone states borrow, but the ECB has also bought asset-covered bonds. The Bank of Japan fights deflation by buying government bonds, debt and corporate shares. The Bank of England stimulates credit expansion towards households and business sector not as much through debt acquisition from the private sector as through acquisition of significant quantities of government bonds.

⁸ There are two technical perspectives from which the issue of quantitative easing magnitude can be regarded. One of these is *correct vs. incorrect*. From this perspective, if central banks are right in promoting these policies, as I believe, they avoid repeating the mistakes made in the 1930s and thus help global economy bypass a prolonged depression. If quantitative easing policies are wrong, they will probably fuel inflation, set the bases of a new financial crisis and offer reasons for future limitation of central bank independence. There are many economists who criticize the resort to quantitative easing. Among them, we may mention Stiglitz and Balcerowicz (Kaminski, 2012). The second perspective is *sufficient vs. insufficient*, this being applied only if policies are considered correct. From this point of view, which I also adopt in the text, on the one hand, central banks might not have made enough efforts to stimulate demand. On the other hand, quantitative easing policies might not be as efficient as expected, thus inducing fewer businesses and less consumer spending. The two perspectives overlap. Therefore, provided they are *correct* and *efficient*, the desired results have not yet occurred because not *enough* has been done. This opinion was shared by Janet Yellen, presently the: Chair of the Board of Governors of the Fed], William Dudley, President of the New York Fed, and Adam Posen, a former member of the Monetary Policy Committee of the Bank of England. Alternatively, although correct and efficient, if continued for too long, as Jaime Caruana, General Manager of the BIS, stated, these emergency measures might have unwanted effects. However, if they are *correct but with a decreasing efficiency*, they might also start to produce negative effects at a point. Among those who believe in this idea, we may mention Mervyn King, Governor of the Bank of England, and Athanasios Orphanides, the former Governor of the Central Bank of Cyprus, and also Masaaki Shirakawa, the former Governor of the Bank of Japan (see EYGM Limited and OMFIF reports). For the opinions of the above mentioned, in case the source is not quoted immediately after their names, see Hilsenrath and Blackstone, 2012. A recent survey carried out by *The Wall Street Journal* shows that, among economists, there is a tight majority in favor of ending quantitative easing in the US. But, of course, the vote is not a criterion for the truth.

⁹ Cook and Devereux (2011, p. 3) found that optimum cooperation implies wide fiscal expansion in the country which generated the shock (the fall of demand in the host country) and a positive interest rate for the foreign country. The latter (less affected) should engage in a minimum fiscal expansion, but should place the monetary policy rate above the real level of its natural interest rate in order to diminish the appreciation - which would amplify the shock - of trade terms in the host country. In my opinion, signing an agreement for such coordination of fiscal and monetary policies is extremely difficult.

¹⁰ This shows that large scale central bank purchases of long-term government bonds have strong redistributive effects, thus lacking in sustainability. Large scale acquisitions reduce coupon incomes and increase bond incomes. On the contrary, when large scale acquisitions are stopped or reversed, coupon incomes will increase and price reduction incomes will decrease.

¹¹ Relatively long-term security ownership is hardly unusual practice for central banks in developed countries. For example, before the 2008 crisis, the Fed owned over 150 billion dollars in over-five-year term securities. No later than 2009, the Fed planned to buy up to 1.75 trillion dollars in treasury bonds, bonds, government agency debt and agencies' mortgage-backed securities, all with long term maturity (Kohn, 2009). The maturity breakdown as at December 12, 2012 shows that 51.6% of the US state securities had a 5 to 10 year-maturity left, and 25% of these had over 10 years. 99.8% of the

mortgage-backed securities had terms of over ten years. On December 12, 2012, in the Fed balance, out of total treasury bonds, government agency debt and mortgage-backed securities (MBS), the first category held 62.2%, the second 3% and MBS approximately 34.8% (source: author's calculation based on data found on central bank websites). Valiante (2011) showed that, in 2011, the share of government securities within the total assets held by the ECB, the Fed and the Bank of England was 22.9%, 56.3% and 87.3% respectively. Those central banks owned 5.5%, 11.3% and 17.7% of total government debt (De Grauwe, 2011, pp. 8-9).

¹² Blejer shows there are two reasons for which central bank independence tends to create a democracy deficit when the central bank has multiple objectives (price stability, employment, and financial stability). He points to the fact that one of the arguments which form the basis of central bank independence referred to the protection of the central bank from politicians seeking to use expansionist monetary policies in election years. This argument is no longer available, since price stability is not the only objective of the central bank. The second argument in favor of central bank independence is its comparative advantage in dealing with monetary problems. However, Blejer points out that this advantage does not extend to other policies (those which ensure employment or financial stability, in which case the central bank would no longer hold an advantage).

¹³ Recently, Stephen Cecchetti (2012b), Economic Adviser and Head of the Monetary and Economic Department of the Bank for International Settlements (BIS), said that the major problem that central banks are faced with is that "as they are given more responsibility they may end up with less independence" (EYGM Limited and OMFIF reports, 2012).