Current and Future Regulatory Role of the ECB

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Abstract

This paper examines the operations of the European Central Bank (ECB) with respect to monetary policy, along with its effects on inflation, exchange rate and financial stability. It also discusses how the regulatory role of the ECB should be improved in the future. In this way, the paper discusses the involvement of the ECB in regulatory policy towards the financial sector, and the responses of the ECB to the financial crisis, instability and banks' illiquidity and insolvency, as well as to sovereign insolvency. It begins with the current set up of the European Monetary Union (EMU) along with the theoretical principles of the EMU model, and the extent to which it conforms with the theoretical framework of the New Consensus Macroeconomics and its policy implications, namely inflation targeting. Problems with the current EMU arrangements are then discussed, followed by changes in view of the August 2007 financial crisis and the 'great recession'. Required ECB changes, and of course changes in monetary policies are discussed before we finally summarize and conclude.

Keywords: European Central Bank, Monetary Policy, European Monetary Union, Current and Future Developments

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1. Introduction¹

1. Introduction

The purpose of this paper is to examine the operations of the European Central Bank (ECB) with respect to monetary policy and its effects on inflation, exchange rate and financial stability. We also propose to discuss how the regulatory role of the ECB should be improved in the future.

We discuss the involvement of the ECB in regulatory policy towards the financial sector, and the responses of the ECB to the financial crisis, instability and banks' illiquidity and insolvency. This will be undertaken with the further objective to recommend potential future policies of the ECB.

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We begin with the current set up of the European Monetary Union (EMU) along with the theoretical principles of the EMU model. This is followed by considering the consistency of the ECB model with the New Consensus Macroeconomics (NCM) theoretical framework (see, for example, Arestis, 2007, 2009, for an exposition of the NCM theoretical framework along with a comprehensive critique of it).² Problems with the current EMU arrangements are then discussed, followed by changes in view of the August 2007 financial crisis and the 'great recession'. Required ECB changes, and of course changes in monetary policies are discussed before we finally summarize and conclude.

2. Current Theoretical Underpinnings of the EMU Model

This section comprises of three sub-sections. We discuss in sub-section 2.1 general theoretical principles that underpin the EMU model and the ECB monetary policy, with section 2.2 concentrating more closely on the ECB model; and sub-section 2.3 examines the consistency of the ECB Model with NCM.

2.1 Theoretical Principles of the EMU Model

The theoretical framework and economic policy implications of the EMU should be viewed as embedded in the NCM paradigm. The approach can be viewed as NCM through its emphasis on the supply-side determined equilibrium level of unemployment (the 'natural rate' or the non-accelerating inflation rate of unemployment, the NAIRU), its neglect of aggregate or effective demand (essentially in the long run), and of the use of active fiscal policy, and the elevation of monetary policy at the expense of fiscal policy. We argue that the EMU approach is indeed of the New Consensus Macroeconomics (NCM) variety, although differences exist (see, for example, Arestis and Sawyer, 2008; also Arestis and Sawyer, 2013). As such, its key elements are as follows.

The market economy is viewed as essentially stable, and that macroeconomic policy (particularly discretionary fiscal policy) may well destabilise the market economy. Markets, and particularly the financial markets, make well-informed judgements on the sustainability of economic policies, especially so in the current environment of open, globalised, capital and financial markets. The transversality condition, which means in effect that all economic agents with their rational expectations are perfectly credit worthy, so that all debts are ultimately paid in full, implies that all credit risks and defaults are removed; no agent would ever default. All IOUs in the economy can, and would, be accepted in exchange. There is, thus, no need for a specific monetary asset. All fixed-interest financial assets are identical so that there is a single rate of interest in any period. Over time the single rate of interest may change as borrowing and savings propensities change. Under such circumstance no individual economic agent or firm is liquidity constrained at all. There is, thus, no need for financial banks or other non-bank financial intermediaries) and even

² The NCM has emerged over the past couple of decades or so, which has become highly influential in terms of current macroeconomics thinking and of macroeconomic policy, especially monetary policy. The NCM is now firmly established amongst both academia and economic policy circles. It draws heavily on the so-called new Keynesian economics (see Meyer, 2001, and the Bank of England, 2005). The birth of NCM was made possible after the collapse of the Grand Neoclassical Synthesis in the 1970s (see Galí and Gertler, 2007, for a summary of the reasons for the collapse of neoclassical Economics.

money (see, also, Goodhart, 2007, 2008). The ECB, nonetheless, emphasises a long-run role for money as we discuss below.

The major economic policy implication of the NCM is that monetary policy has been upgraded in the form of interest rate policy, where a major objective of policy is "maintaining" price stability" (King, 2005, p. 2). The ECB (2008) puts it as follows: "price stability is the best – and, ultimately, the only – contribution that a credible monetary policy can make to economic growth, job creation and social cohesion. This reflects the fact that a policy-maker who controls only one instrument cannot meet, and be held accountable for the fulfilment of, more than one objective. The pursuit of additional objectives would risk overburdening monetary policy, and would ultimately result in higher inflation and higher unemployment. Over the longer term, monetary policy can only influence the price level in the economy; it cannot exert a lasting impact on economic activity. This general principle is referred to as the 'long-run neutrality of money'" (p. 34). It is the case that monetary policy has emerged as one of the most critical government responsibilities. It is a most flexible instrument for achieving medium-term stabilisation objectives: it can be adjusted quickly in response to macroeconomic developments. Indeed, monetary policy is the most direct determinant of inflation, so much so that in the long run the inflation rate is the only macroeconomic variable that monetary policy can affect (ECB, 2008, p. 34). And to quote ECB (2008), there is the "the fundamental economic principle that, over the longer term, inflation is a monetary phenomenon" (p. 37).

This type of monetary policy is undertaken through inflation targeting (IT), which requires Central Banks to look at inflation as an indicator of when to expand or contract monetary policy; this policy should be operated by independent Central Banks, whose decisions and actions should not be affected by politicians and the treasury. The ECB (2008) puts it as follows: "Economic theory and historical examples from previous decades represent strong evidence that central bank independence is a precondition for achieving and maintaining price stability. Against this background, the multi-dimensional independence of the ECB is stipulated in the Treaty, which legitimises its independence" (ECB, 2008, p. 22).³ Independence of a Central Bank is defined "as *institutional independence*, implying a set of legal provisions that guarantee that the central bank carries out its tasks and duties without political, and more generally, external interference" (Issing, 2006, p. 67; italics included in the original). The distinction between goal independence and instrument independence is made. It is recognised that in a democratic society goal setting cannot be left to unelected officials, so that central banks should not be goal independent. However, full independence should be given in the setting of monetary policy to achieve the goal(s) set by the elected representatives. A number of quid pro quo requirements for Central Bank Independence are important: credibility of the central bank, accountability and transparency in the conduct of monetary policy. The independent central bank should explain and justify its decision to the public and its elected representatives with a high degree of transparency and credibility so that the actions of the central bank can be closely monitored and judged to be performed according to expectations. The ECB is, however, both goal and instrument independent, which makes it unique in this sense around the world: it is the most 'independent' Central

³ See, however, Angeriz et al. (2008) for a different view.

Bank in the world when judged in terms of immunity to political and democratic control (though in terms of commitment to a neo-liberal ideology the least independent).

Fiscal policy is no longer viewed as a powerful macroeconomic instrument. Fiscal policy should only rely on automatic stabilisers; more importantly, though, it should be concerned with broadly balancing government expenditure and taxation, effectively downgrading its importance as an active instrument of economic policy. This is a conclusion based on the usual assumption of crowding out of government deficits and the Ricardian Equivalence hypothesis and thus the ineffectiveness of fiscal policy as a stabilisation instrument (see, however, Arestis and Sawyer, 2003, 2004, for a critique and a different view).

Monetary policy has, thus, been upgraded and fiscal policy has been downgraded. Fiscal policy can only serve to achieve a balanced budget. Monetary policy can be used to meet the objective of low rates of inflation (which are always desirable in this view, since low, and stable, rates of inflation are conducive to healthy growth rates). However, monetary policy should not be operated by politicians but by experts (whether banks, economists or others) in the form of an 'independent' Central Bank. Such a bank would also have greater credibility in the financial markets and be seen to have a stronger commitment to low inflation than politicians do. Credibility is recognised as paramount in the conduct of monetary policy to avoid problems associated with time-inconsistency.

The EMU theoretical framework entails the view that inflation is best tamed through interest rate manipulation without at the same time forgetting money supply: there is, thus, the 'close to 2 per cent from below' and the reference value of 4.5 percent for M3 money supply in place. This, it is hoped, improves communication between the public and policy-makers and provides discipline, accountability, transparency and flexibility in monetary policy. The EMU model contains two features: an economic analysis and a monetary analysis.

The ECB economic analysis is an assessment of price developments and the risks to price stability over the short to medium term. The range of indicators includes: "developments in overall output; aggregate demand and its components; fiscal policy; capital and labor market conditions; a broad range of price and cost indicators; developments in the exchange rate; the global economy and the balance of payments; financial markets; and the balance sheet positions of euro area sectors" (ECB, 2004, p. 55).

The ECB monetary approach analyzes monetary developments for the information they contain about future price developments over the medium and long term, exploiting the long-run link between money and prices. A 4.5 percent reference value for the M3 monetary growth has been imposed. Deviations from the reference value would 'signal risks to price stability'. Monetary analysis is utilized by the ECB as a 'cross check' for consistency between the short-term perspective of economic analysis with the more long-term perspective.

The rationale of the 'two-pillar' approach is based on the theoretical premise that there are different time perspectives in the conduct of monetary policy that require a different focus in each case. There is the short to medium term focus on price movements that requires economic analysis. There is also the focus on long-term price trends that requires monetary analysis. In this analysis, there is the strong belief by the ECB in the long-term link between

money (M3 in this case) and inflation. This focus, of course, reflects the notion that inflation is a monetary phenomenon to be tackled by both manipulating the rate of interest and watching movements in M3. Short-term volatility of inflation is allowed but not in the long run, reflecting the view that monetary policy affects prices with a long lag.

The level of economic activity fluctuates around the NAIRU, and unemployment below (above) the NAIRU would lead to higher (lower) rates of inflation. The NAIRU is a supplyside phenomenon closely related to the workings of the labour market. In the long run there is no trade-off between inflation and unemployment, and the economy has to operate (on average) at the NAIRU if accelerating inflation is to be avoided. In the long run, inflation is viewed as a monetary phenomenon in that the pace of inflation is aligned with the rate of interest and the money stock.

The essence of Say's Law holds, namely that the level of effective demand does not play an independent role in the (long run) determination of the level of economic activity, and adjusts to underpin the supply-side determined level of economic activity (which itself corresponds to the NAIRU). Shocks to the level of demand can be met by variations in the rate of interest to ensure that inflation does not develop (if unemployment falls below the NAIRU).

These general principles can be formalised as shown in sub-section 2.2 below.

2.2 The ECB Macroeconomic Model

We may summarise the ECB macroeconomic model, which is based essentially on Arestis and Sawyer (2008, 2013). The model is based on the following seventeen equations:

(1)
$$Y = C + I + G + X - Q$$

(2)
$$C = C(Y^d, NW)$$

- (3) $Y^{d} = Y T$
- (4) $X = X(rer, Y_w)$
- (5) Q = Q(rer, Y)
- (6) $rer = [(er)(P_w)]/P$
- (7) NW = K + PD + NFA
- (8) $Y^g = Y Y^p$
- (9) $Y^{p} = (1-a)K + aL^{s} + PT$

(10)
$$K = (1 - \delta)K_{t-1} + I$$

(11) I = I[(R-p), Y]



(17)
$$R = R[(R-p)^*, (p-p^d), Y^g]$$

where the symbols are Y is income and Y_W is world income, C is consumption, I is investment, G is government expenditure, X is exports and Q imports, T is taxes, NW is net wealth, which is composed of K, capital, PD public debt, and NFA net foreign assets. Y8 is output gap, YP is potential output, w is the wage rate, U is unemployment, p is rate of inflation, p^e is expected inflation, L is labour, L^s is labour supply, PT is productivity trend, R is nominal rate of interest, so that (R - p) would be the real rate of interest), $(R - p)^*$ is the long-run equilibrium real rate of interest, p^d is inflation rate target, rer stands for the real exchange rate, and er for the nominal exchange rate, defined as in equation (5) and expressed as foreign currency units per domestic currency unit, P and P_W are domestic and world price levels respectively, M is money (M3 definition in the case of the ECB). It should also be noted that G, Y_W , P_W , p^d , L^s , PD, PT and NFA are treated here as exogenous for convenience.

Equations 1-7 capture the demand side of the economy, with equation (6) defining the real exchange rate, and equation (7) net wealth. The latter is defined as all the resources that are available for expenditure at the start of a period. Financial assets include money, the domestic currency value of foreign bonds, corporate bonds, government bonds, and shares, plus the interest returns and dividends arising from holding these instruments over from the previous period. Non-financial assets include human wealth, transfer wealth, and the value of dwellings. In equation (7) net wealth summarises financial and non-financial assets into capital, public debt and NFA.

We may summarise the key features of the first seven equations succinctly: in terms of the consumption relationship it should be noted that consumption is explicitly derived from forward-looking optimising behaviour, and it is based on disposable income, the rate of interest and wealth. Economic agents maximise lifetime utility subject to their expected lifetime resources. Furthermore, goods markets are monopolistically competitive, with firms being in a position to charge non-competitive sticky prices. The latter help to clear domestic production to satisfy aggregate demand; that is demand for consumption, investment, including changes in inventories, government spending and exports, all net of imports. In

view of the assumption of sluggish price and wage adjustments, actual output is determined by aggregate demand in the short run, with the standard equations for its main components: consumption, exports and imports, with government expenditure treated as exogenous and investment determined in the supply-side block. Equation (6) defines the real exchange rate, and equation (7) as defined above.

Equations (8) to (15) refer to the supply side, with equation (8) defining the output gap. The supply side of the model depends on an aggregate Cobb Douglas production function, equation (9), whereby output depends on capital stock, effective labour supply and productivity. With equation (10) defining capital stock, investment (equation 11) and employment (equation 15) are determined by profit maximisation and inverting the production function, respectively. Equations (12) and (13) represent the Phillips' curve, and equations (14) and (15) define unemployment and labour supply respectively; the latter is related to the output gap and capital. Equation (13) is the Phillips' curve itself (vertical in the long run), and equation (12) should be read as price as a mark-up on unit labour cost. The labour market is not perfectly competitive. Firms and unions bargain over wage levels, which generate unemployment, given private sector and public sector labour demand, labour supply and wage curves. Unions bargain on workers' behalf. In any given period, a proportion of (randomly chosen) unions engage with firms in a bargain over the nominal wages of the workers they represent. This fraction is constant, so that we have Calvo (1983) nominal wage setting, rather than contracts for fixed terms as in Taylor (1980). Unions aim to maximise the welfare of an average worker, so the value of the 'outside' earnings that could be received if employed by the government or unemployed has a role to play. The private sector wage is determined as the Nash equilibrium in which the firms' and unions' strategies are both optimal. The wages of government employees are set according to a simple rule linking government and private sector wages.

Equations (16) and (17) represent the monetary side of the model. Equation (16) is the demand for the M3 definition of the money stock. Money is treated as a recursive variable in that it has no feedback on the rest of the model. As we will elaborate in the section that follows, this equation is prominent in the ECB model. Equation (17) is the monetary rule relationship, of the Taylor rule variety. The variable $(p - p^d)$ is by far the more important variable in policy decisions than Y8. $(R - p)^*$ is very important but highly problematic (see, for example, Weber et al., 2008). Clearly this is the long-run equilibrium real rate of interest. It is, in other words, the real rate that is associated with output being at its potential level. The nominal rate of interest in the hands of the central bank should be anchored to $(R - p)^*$ and to the target inflation as set by the central bank targets the wrong $(R - p)^*$ then it may drive the economy on a wrong path. Econometric evidence on the extent to which central banks can obtain the information necessary for a good knowledge of $(R - p)^*$ is by no means encouraging (Weber et al., 2008).

There is a great deal of uncertainty in view of its imprecise empirical value. Weber et al. (op. cit.) provide a wide-ranging discussion on the vagueness of the empirical results of the estimation of this rate. When we account for bank credit as the main source of financing for firms, loan rates are of course important. Under such circumstances where the rate of interest

on bank loans differs from the policy rate of interest, RR* may not be a useful indicator for monetary policy. De Fiore and Tristani (2008) show that under such circumstances, and on the assumption of asymmetric information and of credit treated in nominal terms in an otherwise NCM model, RR* is heavily model dependent (see, also, Keynes, 1936). It reacts differently to aggregate shocks depending on the underlying model assumptions. The crucial distinguishing assumption in this context is whether markets are frictionless or not. De Fiore and Tristani (op. cit.) conclude that "it might be difficult for a central bank that is uncertain about the true model of the economy to identify its movements and to use it as regular indicator for the conduct of monetary policy" (De Fiore and Tristani, 2008, p. 33). Furthermore, the financial imbalances associated with the policy of manipulating the rate of interest to achieve an inflation target are overlooked by the NCM. These imbalances, which tantamount to investment and saving ones, are ruled out of the treat equilibrium rate of interest. But these imbalances do exist!

2.3 Consistency of the ECB Model with NCM

It is clear from the analysis of section 2 that the ECB macroeconomic model is consistent with the NCM. But there are differences as alluded to in section 2. We elaborate further on the differences and consider the possible consistency between the two approaches in the rest of this sub-section.

The main objective of the ECB is to maintain inflation 'below, but close to, 2 per cent', an approach thought to be "sufficient to hedge against the risks of both very low inflation and deflation" (ECB, 2008, p. 35). Achievement of this target is expected to take place in the medium term in view of the impact of monetary policy, which is expected to materialise with significant and variable time lags. Consequently, short-term volatility in inflation rates is accepted to be inevitable. Indeed, the main hypothesis adopted by the ECB is that in the long run inflation is strictly a monetary phenomenon. This hypothesis leads to the policy implication that only monetary instruments, and more precisely the rate of interest, can control inflation, without ignoring the money supply at the same time. In this sense two types of approaches are adopted by the ECB, comprises of an economic analysis and a monetary analysis.

The ECB economic analysis attempts to assess price developments and the risks to price stability over the short to medium term. This broad range of indicators includes: "developments in overall output; aggregate demand and its components; fiscal policy; capital and labour market conditions; a broad range of price and cost indicators; developments in the exchange rate; the global economy and the balance of payments; financial markets; and the balance sheet positions of euro area sectors" (ECB, 2004, p. 55). It is, thus, a broad outlook of price developments and the risks to price stability over the short to medium term. These factors and the analysis that accompanies them "help to assess the dynamics of real activity and the likely development of prices from the perspective of the interplay between supply and demand in the goods, services and factor markets at shorter horizons" (ECB, 2008, pp.35-36).

The 'second pillar' is a commitment to analyze monetary developments for the information they contain about future price developments over the medium and long term. It focuses "on a longer-term horizon, exploiting the long-run link between money and prices" (ECB, 2004, p. 55). This is a quantitative reference value for monetary growth, where a target of 4.5 per cent of M3 has been imposed. Being a reference level, there is no mechanistic commitment to correct deviations in the short term, although it is stated that deviations from the reference value would, under normal circumstances, 'signal risks to price stability'. Monetary analysis is utilized by the ECB as a 'cross check' for consistency between the short-term perspective of economic analysis with the more long-term perspective that emanates from the monetary analysis itself, essentially concern with the M3 definition of the money supply and its reference value, as described above (see, also, Issing, 2003).

The rationale of the 'two-pillar' approach is based on the theoretical premise that there are different time perspectives in the conduct of monetary policy that require a different focus in each case. There is the short to medium term focus on price movements that requires economic analysis. There is also the focus on long-term price trends that requires monetary analysis. In this analysis, there is the strong belief by the ECB in the long-term link between money (M3 in this case) and inflation. This focus, of course, reflects the notion that inflation is a monetary phenomenon. Short-term volatility of inflation is allowed but not in the long run, reflecting the view that monetary policy affects prices with a long lag.

It is important to note that the ECB Governing Council decided in 2007 to further enhance the monetary analysis along the following lines: "First, money demand models are being refined and extended in order to improve the understanding of the behaviour of monetary aggregates over time and across sectors. Second, the robustness of money-based inflation risk indicators is being improved so as to develop further their use as a guide to policy decisions aimed at the maintenance of price stability. Third, structural models that embody an active role for money and credit in the determination of inflation dynamics are being developed and refined in support of the assessment of monetary developments. Finally, it is important to deepen further the analytical framework to support the cross-checking of information and analysis stemming from the monetary and economic analyses" (ECB, 2008, p. 38).

It is clear from this discussion that although the ECB analysis is embedded within the NCM framework, there is still one important difference that relates to the treatment of monetary aggregates as elaborated above. This makes the policy implications of the ECB monetary policy analysis different from those of the NCM. In other words, ECB monetary policy is not strictly speaking of the inflation targeting type. Especially so in view of the 'two-pillar' approach, which is clearly very different from that of the NCM, which pays very little, if any at all, attention to monetary aggregates.

There are, finally, a few problems in the case of the ECB macroeconomic model worth elaborating upon. The ECB's M3 growth, and over the period January 1999 to May 2009, has been consistently above the 4.5 per cent reference value for most of this period (since June 2009 and due to the 'great recession' M3 has been consistently well below the 4.5 per cent reference value);⁴ and yet not much inflation was produced over that period nor much deflation either since May 2009. It would appear that over the period 1999-2009 the ECB was

⁴ The relevant data for the M3 growth rates and over the period since January 1999 to currently is available at: <u>http://www.ecb.europa.eu/press/pdf/md/md0304.pdf</u>

caught between the economic analysis that suggested low or unchanged interest rates and the monetary analysis that implied higher interest rates for the entire period. In other words, while the euro area inflation rate was hovering just above the 2 per cent mark over the period 1999-2009, the euro area M3 was growing at rates well above the reference value of 4.5 per cent. The period since 2009 has been very different in view of the 'great recession' and the euro crisis, and we discuss the relevant changes in section 4. The two-pillar approach sends different and contradictory signals more frequently than might be acceptable. The credibility of the strategy is obviously at stake (see CEPS, 2005, p. 29, which reaches a similar conclusion). It is also true to say that the ECB's special emphasis on the importance of monetary aggregates has been subjected to further criticism. Woodford (2006) offers a rigorous critique of this approach from the NCM perspective, suggesting that there is total lack of a theoretical foundation of the ECB monetary analysis. There is also the argument that money is an unreliable indicator of inflation in view of frequent shifts in velocity (see, for example, Estrella and Mishkin, 1997; Begg et al., 2002; De Grauwe and Polan, 2005).⁵

It would also appear to be the case that the economic and monetary analyses are not always consistent in the sense that they may point in different directions with regard to the prospects for inflation and the appropriate monetary policy response (Arestis and Chortareas, 2006). There has been great reluctance to reduce interest rates even in obvious circumstances such as the financial crisis at its most intense in late 2008. The ECB reluctance to change interest rates as frequently as the rather reluctant BoE, and most certainly as the Fed in the US, can be explained by the chosen 'two-pillar' strategy. It is interesting to look at the period since January 1999 in terms of the conduct of monetary policy by the ECB. We may distinguish six periods. The first is the period early 1999 to mid-2001. That was a period of increasing rate of interest, which peaked at 4.75 per cent in October 2000 and remained at that level until May 2001. The period mid-2001 to mid-2003 was one of interest rate reductions. The period mid-2003 to end-2005 was one during which the official ECB interest rate remained unchanged. The period end-2005 to mid-2007 is one of interest rate increases, and the period of mid-2007 to mid-2008 of an unchanged rate of interest at 4 per cent. In the period from late 2008 onwards the ECB, along with other major central banks, has reduced the rate of interest to a low level of 0.25 per cent, although there was a short period in the mid-2011 when the rate of interest was increased.

The sole emphasis on price stability cannot be justified. History is replete with examples of relevant episodes when price stability had been achieved only to witness macroeconomic instability subsequently. These examples (see Angeriz and Arestis, 2007, for example) clearly demonstrate that price stability was followed by unsatisfactory economic performance. The price stability of the 2000s (even though inflation was not completely within the 2 per cent target) and the 'great moderation' or the NICE (Non-inflationary Consistently Expansionary) period, which was claimed for that period, contained within it the seeds of a financial crisis which became apparent from August 2007 onwards.

⁵ Hofman (2008) offers evidence for the period 1999(1Q) to 2006(3Q) to suggest that although in the early years of the ECB the predictive ability of money-based forecasts was high, it has, nonetheless, deteriorated substantially since then. Still, the predictive ability of M3 improves when the ECB's internal M3 series, corrected for the effects of portfolio shifts, are utilized.

Finally in this section, we note that the proposition that "Over the longer term, monetary policy can only influence the price level in the economy; it cannot exert a lasting impact on economic activity" (ECB, 2008, p. 34). In a separate study (Arestis and Sawyer, 2004; see, also, 2008), we have argued that even the own macro-econometric model of the ECB does not seem to support this proposition. Empirical evidence drawn from the relevant ECB macro-econometric model, and reported in Arestis and Sawyer (2004, 2008) suggests a relatively weak effect of interest rate changes on inflation. We also show in the same studies, on the basis of the evidence adduced, that monetary policy can have long-run effects on real magnitudes. This particular result does not fit comfortably with the theoretical basis of current thinking on monetary policy by the ECB.

3. Problems with Current EMU Arrangements

It is true to suggest that much of the academic literature on currency and monetary unions has been dominated by the optimal currency area (OCA) literature. It is doubtful, though, whether that literature and the associated considerations had much impact on the formation of the EMU. This is so in view of the criteria for the formation of a single currency appear not to have been applied when decisions were made on the formation of the single euro currency and on who would be a member. The political imperative for most, though not all, national governments and the EU itself was the formation of the EMU as the next stage of European economic integration. Be that as it may, we begin with the conditions for 'Optimal Currency Area' (OCA). These are as follows (Mundell, 1961): factor mobility and openness of markets; relative price flexibility across countries and thus similar inflationary tendencies amongst them; fiscal transfers within the monetary union. OCA considerations played little role in the formation of the euro area and since then they do not seem to have been met; the euro area then does not appear to be an OCA. However, there is always the possibility that OCA contains an endogenous element in the sense of the EMU being more justifiable in the ex post sense. Vieira and Vieira (2012) in an ex post analysis of the EMU's first decade in existence (including the initial group of eleven countries as members of the EMU plus Greece) conclude that the hypothesis does not hold for some countries. Utilizing the OCA index, first proposed by Bayoumi and Eichengreen (1998), and comparing individual countries' compliance with selected OCA conditions before and after the adoption of the euro, they conclude that "The distance separating peripheral and core economies before the introduction of the euro remains practically unchanged after 10 years of adopting the common currency" (p. 78). Vieira and Vieira (op. cit.) go further and suggest that "the OCA index could have been a better indicator of countries' readiness to join the single currency than were the Maastricht criteria, as the latter were not able to identify the ill-prepared countries. The recent troubles of some euro area members make this clear" (p. 90).

We proceed to discuss at some length more problems from the point of view of monetary policy.

ECB monetary policy was initially assigned a quantitative definition of price stability in the form of a 0-2 per cent target for the annual increase in the Harmonised Index of Consumer Prices (HICP) for the euro area. As discussed in sub-section 2.1, the 'two-pillar' monetary strategy was adopted from the beginning of the ECB's existence. The 'first pillar' was the monetary analysis, which stipulated a 4.5 per cent 'reference value' for M3. As such there

was no mechanistic commitment to correct deviations in the short term, although deviations from the reference value would indicate 'signal risks to price stability'. The 'second pillar', the economic analysis, was a broadly based assessment of the outlook of price developments and the risks to price stability. In May 2003 two important changes were introduced: the definition of inflation is now near to 2 percent but from below (thought to be around 1.9 percent) and the two pillars have been reversed (the first now is the economic analysis pillar and the second is the monetary analysis pillar). The management, operation, communication and potential efficacy of monetary policy within these institutional arrangements by the ECB have entailed many problems. In terms of the management aspect, the timing of monetary policy decisions has been very slow. The ECB's methods of operation and communication have been confusing to the financial markets. In the 'two-pillar' strategy, there is uncertainty as to the value attached to the M3 reference value. The target has rarely been met, and yet this does not seem to impact on official strategy. This may well have undermined the ECB's credibility, rather than added to it. There is, indeed, the question of whether the 2 per cent inflation target is not too restrictive, and it suffers from not being symmetrical. It becomes more and more obvious that this target is by far too low. The problem with the ECB's methods of operation and communication is partly the bank's secretiveness, for it does not publish minutes of its meetings. Also the ECB personnel have not always learned to communicate its methods of operation: the speeches of different ECB officials often give different signals regarding ECB policy. The press conference after each meeting of the ratesetting Governing Council takes place too soon without any indication of the debate that has taken place during the meeting. There is the impression that markets should be steered at all times; words such as 'vigilant' to signal a policy shift was used in the past but when abandoned unnecessary confusion prevailed.

A number of reservations may be raised in terms of the efficacy of this monetary policy.

First, considerable doubt may be cast on the effectiveness of monetary policy in terms of responding to recession and as a means of controlling inflation: the ECB has failed to meet its inflation target of 2 per cent; has presided over widely differing inflation rates within the euro area; and has been reluctant to cut interest rates promptly in the face of the 'great recession'.

Second, changes in interest rates have only a limited impact on aggregate demand. We have surveyed elsewhere the results of simulations of the effects of monetary policy using a number of central banks', including that of the ECB, macroeconometric models (Arestis and Sawyer, 2004). The conclusion of that survey is that the effects of interest rate changes on inflation tend to be rather small – typically a 1 percentage point change in interest rates may dampen inflation by 0.2 to 0.3 per cent after two years. Consequently, there are questions in terms of the impact of interest rates on expenditure and questions relating to the magnitude of the impact, timing and variability of the time lags involved.

Third, it is the case that monetary policy is of the 'one policy fits all' approach; but there are differences in inflationary experience across the euro area countries. Still another problem with the ECB approach is that the two-pillar approach sends different and contradictory signals.

Fourth, if inflation is of the cost or supply shock variety, then there are problems; current arrangements are meant to tackle demand inflation. Consequently, cost or supply shock variety of inflationary pressures cannot be tackled via targeting inflation of the ECB type.

Fifth, since interest rate policy has a range of effects, such as on aggregate demand, on the exchange rate, distributional effects etc.; the objectives of monetary policy should reflect that, and should, thus, be recast to include growth and high levels of employment alongside inflation.

A relevant discussion is concerned with labour market reforms. It is often stated by the ECB Presidents that "In order to support the potential economic growth of the euro area, to foster macroeconomic flexibility and dynamism, and to safeguard the future standard of living of our citizens, labour and product market reforms are urgently needed" (Trichet, 2006, p. 3). This advocacy of labour market 'reforms' is consistent with the NCM theoretical framework in which demand has no long lasting effects on output, and the supply-side of the economy is thought to determine the level of economic activity, especially in those cases where markets are flexible, especially labour markets. As a result, relevant changes in the labour market will lead to changes in the level of unemployment (see, for example, ECB, 2004). Evidence suggests that these reforms are not important in creating jobs and promoting growth: inflexible labour markets do not appear to be as important as the notion of insufficient aggregate demand in explaining the euro area's inability to increase income and employment; if at all important, they are so in the long run. Let us look at the 'labour market reforms' argument at some length.

The relevant hypothesis under this case is the ECB-handicap hypothesis. This hypothesis suggests that monetary policy in the euro area is ineffective in influencing output since its effect is transmitted quickly and completely into prices. This is explained by the existence of labour-market rigidities, which, in the words of the ECB (2004), "limit the pace at which an economy can grow without fuelling inflationary pressures" (p. 21). Thus, if the ECB lowered the rate of interest in an attempt to expand economic activity in the euro area economy, this would merely be translated into higher prices with only limited effects on real economic activity. By contrast, in view of the US being less rigid, the Fed can actually stimulate the economy without causing inflation. In fact, an ECB study (Angeloni et al., 2003) concludes that a one-percentage point increase in the short-term interest rate tends to have a substantially significant stronger output effect in the US than in the euro area. Their explanation rests on the view that the US monetary policy has a stronger impact on consumption than the ECB monetary policy has on the euro area consumption. This latter conclusion concerning the ECB monetary policy has been labelled as the ECB-handicap hypothesis (De Grauwe and Costa Sorti, 2005).

The study by De Grauwe and Costa Sorti (op. cit.) investigates further the ECB-handicap hypothesis and reaches different conclusions. The authors of this study utilise a 'metaanalysis', widely used in medical sciences but not so frequently in economics. The way metaanalysis is employed by the study is "first to statistically analyse the estimated effects of monetary policy shocks on output and prices, and second to identify the factors that can explain the differences in these estimated effects" (p. 4). They employ 83 studies, which report on the impact of interest rates on inflation and output. Four different parameters that measure the effect of monetary policy are examined: short-term effects on prices and output; and long-term effects on prices and output (effect after one year measures the short term; effect after five years measures the long term). Since many of the 83 studies employed report results for more than just one country, 278 parameters that measure the short-term and long-term effects on output are obtained, while only 185 parameters are possible to obtain for the short-term and long-term effects on the price level. An econometric equation explaining these different parameters is employed. The purpose is to control for a number of variables that can affect the size of the estimated coefficients (different estimation methods, different time periods, etc.). It is concluded that the euro area and US coefficients are of the same order of magnitude, that the short-term effect on the price level is very small, while the long-term effect on prices is significant. Short-term and long-term effects on output are significant. The ECB-handicap hypothesis is, thus, not upheld. It is, thus, simply not true that the ECB cannot affect output because of the existence of rigidities especially in the labour markets. There may be good reasons why monetary policy might not be an effective means of affecting output. But rigidity in the labour markets is not one of them.

Related issues are concerned with the exchange rate policy. It may be that the poor performance of some of the EMU countries since its formation can be attributed to an inappropriate exchange rate. The euro has become the second major currency in the world after the dollar; thereby the exchange rate between the euro and the dollar has become particularly important for a large proportion of international trade. The volatility of the euro:dollar exchange rate becomes significant not only for the euro area and the USA, but also for those countries who have linked their currency to either the euro or the dollar. These problems strongly point towards the development of mechanisms, which could help to stabilise the euro exchange rate.

4. Changes in View of the Great Recession

A number of changes have been taken or proposed as a result of the financial crisis of August 2007 and the 'great recession' that are worth discussing. The most important ones are the following.

The ECB pumped limited liquidity into commercial banks in 2007 after the August of the same year emergence of the crisis. Nonetheless, the ECB raised its rate of interest twice before it started reducing it from 4.25 percent in September 2008 (after the Lehman Brothers collapse on 15 September 2008) to an all-time low of 0.25 per cent in November 2013. In May 2009 the ECB enhanced credit support to euro area banks at very low interest rates through the introduction of the Long-Term Refinancing Operations (LTROs). Sovereign debt is used through this scheme as collateral on the loans provided. LTRO is designed to provide longer-term liquidity than the standard Main Refinancing Operations (MROs), whose maturity is one week – liquidity could also be accessed through the Emergency Liquidity Assistance (ELA) scheme, which is a very temporary measure designed to help banks during periods of crisis. Initially LTROs were offered monthly and typically repaid in three months, six months or one year. In December 2011, however, the ECB offered a three-year type of LTROs, which had a significantly immediate higher demand than previous operations. From December 2011 to February 2012 the ECB provided €1 trillion to the euro area banks.

The European Union (EU) summit meeting, 28/29 June 2012, took a number of decisions: banking licence for the European Stability Mechanism (ESM)⁶ that would give access to the ECB funding and thus greatly increase its firepower; banking supervision by the ECB; a 'growth pact', which would involve issuing project bonds to finance infrastructure; two long-term solutions are proposed: one is a move towards a banking union and a single euro area bank deposit guarantee scheme; another is the introduction of eurobonds and eurobills. Germany has resisted the latter, arguing that it would only contemplate such action only under a full-blown fiscal union.

A more recent proposal is the EU Bank Resolution agreed by the EU finance ministers at their meeting on the 18th of December 2013 – the Single Resolution Mechanism (SRM) as it is called. This agreement proposes a new system that will centralise control of failing euro area lenders. It will be responsible for restructuring the 130 biggest euro area banks if and when they are faced with problems, as well as 200 or so cross-border banks. It is also given the right to intervene in any of the 6000 euro area lenders if necessary. An important development on this score is the ECB President's promise to 'clean' the euro area banks, made on the 9th of January 2014 after the relevant rate setting of the ECB governing council. This is under the Comprehensive Assessment of 130 euro area banks across the 18 member states. This will cover 85 per cent of the region's bank assets. A regulatory check of the banks' key risks and vulnerabilities followed by an in-depth asset quality review of their loans and bad debts, collateral valuations and trading book exposures. In 2014 a stress test will be undertaken by the European Banking Authority, which will establish banks' resilience to possible shocks. The aim of the whole exercise will be to instil health into the 130 euro area banks and will finally be a clean-up of their balance sheets as necessary.

The SRM will be a single resolution board, made up of representatives from euro area governments plus five permanent officials, and will be responsible for any decisions reached. However, relevant recommendations will have to be approved by the EU finance ministers. This procedure, however, could hold up controversial decisions. National governments will form national resolution funds by imposing levies on banks, which over 10 years will be merged into a single European pot, estimated to be around €5 billion. All this intends to stop expensive banking crises from ruining the finances of the relevant countries. It would bring to an end the use of the European taxpayer's money as a last resort, thereby ending the era of massive bailouts. But there are problems. The proposal may be too complex and its financial buffer is too small to safeguard against a major crisis. Furthermore, the SRM could face further problems, even a legal challenge, at the European Court of Justice (ECJ). The European Parliament and the European Commission have already expressed concerns that the SRM agreement does not follow the 'community method'.

Further proposed changes are as follows. The ECB announced in July 2012 that it would do 'whatever it takes' to save the euro, as the President of the ECB promised then. This is considered as a turning point in the euro area sovereign debt crisis. This was confirmed by the ECB President after the ECB's first meeting in 2014 (Thursday 9th of January) of its rate-setting governing council: the ECB is willing and able to act quickly and decisively if

⁶ See below for further details on the 'European Stability Mechanism' (ESM).

inflation or money market rates got out of line. Indeed the President reiterated that monetary policy would remain ultra loose and accommodative 'for as long as necessary', with the key ECB interest rates to be kept as at present or even lower levels for an extended period of time. The key ECB lending rate was left unchanged at the meeting of its Governing Council on the 9th of January 2014, even though euro-zone inflation rate was well below the ECB's 2% target, at just 0.8%, and unemployment was near record highs at 12.1 per cent (November 2013; source is Eurostat as in footnote 6). The key ECB lending rate was also left unchanged at the ECB's meeting of the 6th of February 2014. The implication of those decisions could be that the EMU area might fall into outright deflation in view of the inflation rate across the 18country euro area slowing to a 0.7 per cent in January 2014, from 0.8 per cent in November 2013.⁷ Deflation is a particular worry for the euro area in view of the high debt, both private and public, in its most vulnerable economies. This eventuality implies of course that deflation raises its debt burden in real terms, thereby stifling spending by business and households. It could also stymie the current feeble EMU recovery as economic agents delay purchases in view of expected further price falls. The ECB is expected to take further action in response to this possibility. The expected ECB action is reduction in the ECB interest rate, rather than quantitative easing, in view of the President's statement at the 2014 Davos gathering, as mentioned below in the text. However, the Governing Council of the ECB at its 6th of February 2014 meeting decided that no action on this score was needed since deflation was not a threat to the euro area economy. The ECB President in answering a relevant question at the press conference after the meeting of the Governing Council declared that "There is certainly going to be subdued inflation, low inflation for an extended, protracted period of time, but no deflation".⁸

Unlike the Federal Reserve and Bank of England, the ECB does not provide 'forward guidance' in the same way. It has its own version of 'forward guidance' (adopted in July 2012), which is the promise to keep interest rates at their current levels for an extended period, with the adamant statement that the ECB stands ready to maintain the high degree of monetary accommodation and even undertake more decisive action if conditions worsen. This, however, needs reinforcing along the lines of the Federal Reserve and the Bank of England, which pledge to explicit 'forward guidance'.⁹ However, the ECB developed the 'Outright Monetary Transactions' (OMT) bond-buying tool, only in secondary markets though, to back up that pledge, which was unveiled in September 2012. The OMT has not been tested yet. There is also the problem of unknown finer details of the programme. In addition, there is the condition that under OMT the ECB could buy unlimited amounts of short-maturity bonds in the secondary market of any country that signed up to fiscal

⁷ The relevant data derived from the European Union statistical office, the Eurostat, and available at: <u>http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/</u>).

⁸ See the relevant introductory statement of the President of the ECB, and his response to questions, after the meeting of the Governing Council on the 6th of February, 20014, which is available at: <u>http://www.ecb.europa.eu/press/tvservices/webcast/html/webcast_140206.en.html</u>. In response to relevant questions the President reiterated his statement at Davos in January 2014 that the ECB would consider the possibility of buying packages of bank loans to enhance lending to the euro area business and households.

⁹ The Federal Reserve and the Bank of England in their explicit 'forward guidance' pledge not to increase the rate of interest under their control before the unemployment rate falls to 6.5 per cent and 7.0 per cent respectively, unless the inflation rate exceeds their implicit and explicit targets respectively. The unemployment targets, however, are not to be treated as 'automatic triggers'.

conditions; it is also conditional on a government signing up for austerity-and-reform programme. $^{10}\,$

The European Stability Mechanism (ESM), the euro area's permanent bailout fund, was established in September 2012 as a permanent firewall for the euro area. It is designed to safeguard and provide instant access to financial assistance programs for member states of the euro area in financial difficulty, with a maximum lending capacity of €500 billion. The existing European Financial Stability Facility (EFSF) and the European Financial Stabilisation Mechanism (EFSM) remained active until mid-2013. The EFSF and EFSM continued until then to handle money transfers and program monitoring for the previously approved bailout loans to the relevant euro are countries.

Since September 2012, further details have emerged: the programme that might help those countries that were regaining market access shifted into a strict condition that they do have complete market access, so that a relevant candidate could be allowed access; instead of publishing OMT's legal documentation 'soon' after September 2012, the ECB has shifted stance to 'only publish when a country applies'. The Bundesbank opposes OMT on the ground that it is close to monetary financing, namely direct borrowing by governments from their central banks, which is banned by the Maastricht treaty; although the treaty does permit the ECB to buy public debt in the secondary markets.

It is the case, though, that Germany's Central Bank, the Bundesbank, has never warmed to the OMT. In any case, the matter was referred to the German constitutional court, which in its turn referred the ECB OMT scheme to the European Court of Justice (ECJ), the highest legal court in the EU, on 7 February 2014. The view of the German constitutional court is still that the OMT programme is not covered by the mandate of the ECB; it is, therefore, 'incompatible with primary law' (as reported in the Financial Times, 8 February 2014), and it violates the German constitution. It would deprive the German government of its fiscal sovereignty for it would force it to accept any generated losses. The court considers OMT as 'monetary financing' or 'debt monetisation', whereby the Central Bank prints money to finance sovereign debt; this in this view is outlawed under European treaties. This incident raises questions over the OMT's legality thereby providing ammunition to the ECB's critics and prolonging legal uncertainty over the OMT. The German constitutional court seems to have concluded that only the EJC could decide on the matter. Be that as it may, whatever the outcome of the ECJ's decision, problems are inevitable. For if the ECJ's decision is to uphold the ECB's defence of bond buying, which would imply squarely that it is consistent with the ECB's monetary policy mandate, the EMU will then be in the awkward position: the highest court in the EU is not in agreement with the highest constitutional court's decision of one of the most powerful EMU countries. If the ECJ does not uphold the ECB's defence of bond buying, the ECB then will be in a very awkward position. It is clear, though, that both the Bundesbank and the Germany's constitutional court have registered their strong objection to monetary policies underpinning the euro. Whether another crisis is thereby in the offing, it is an interesting question.

¹⁰ A further problem with the euro area is its slow progress to deal with the banks that have poor asset quality. A review and stress tests will be carried out in 2014, but they are too long overdue. This delay has no doubt contributed to reduced provision of bank credit, which has hindered growth as a result.

'Asset-Backed Securities' (ABS), mortgage –backed securities (MBS), 'Collateralised Debt Obligations' (CDO), 'Collateralised Loan Obligations' (CLO), and other similar 'securitised' financial assets, but clearly with a lower credit rating, would be accepted as collateral in return for the liquidity provided by the ECB; and at a lower haircut (a write down of the asset's value to reflect its riskiness) than it had done previously. In fact that took effect in October 2013 in view of required legal changes.¹¹ This is only for banks from countries with difficult economic circumstances. The ECB is not willing to buy these assets directly – only as collateral. Indeed, and as reported in the Financial Times (28 January 2014) the President of the ECB criticised at a panel of the World Economic Forum, in the January 2014 Davos gathering, 'Quantitative Easing' as not being a 'magic tool' in view of the EU treaty that prohibits 'monetary easing'. The President argued for the ECB to buy instead a package of bank loans to the private sector if economic conditions worsened.

It is clear from the analysis in this section that the ECB intervenes in secondary markets only; it is subject to the conditionality of EFSF and ESM and acts as a Lender of Last Resort (LOLR) to banks and other financial institutions but not to the sate-members of the EMU.

5. Required ECB and Monetary Policy Changes

Reformulation of the objectives of the ECB to include high and sustainable levels of employment and economic growth, in addition to price stability (and indeed these objectives should also be firmly embedded in the European Constitution). The two-pillar strategy should be abandoned to avoid the serious problems discussed above, which can easily lead to loss of credibility, especially when the two pillars provide contradictory signals. The ECB must be made accountable to the European Parliament; the ECB statutes should be changed so that it can clearly be involved in the co-ordination of fiscal and monetary policies. Ultimately ECB should be ready to take instructions from other European bodies, such as the ECOFIN. It is very important that the minutes of its rate-setting Governing Council are regularly published like the other major Central Banks, like for example the Bank of England. Furthermore, and perhaps most importantly, the ECB should undertake explicitly and fully the role of lender of last resort, and should be made responsible for all deposit insurance.

Full co-ordination of monetary policy, especially with fiscal policy and financial stability, is important.¹² Monetary and fiscal policies both affect the level of aggregate demand, exchange rate and perhaps the rate of inflation, and this aspect points clearly towards coordination between monetary and fiscal policies. It is also important to note that the main operations of any Central Bank should be directed towards financial stability, so that prudential authorities take a system-wide perspective in regulation and supervision. The focus on the solvency of individual institutions as the case had been prior to August 2007 is simply not enough. The

¹¹ This is an interesting development in view of the fact that EMU banks are loaded with these assets and using them as collateral clearly helps the provision of more liquidity and credit (very important in the EMU to fuel economic growth) by the ECB. Securitised assets, of course, had proved problematic to the pre-financial crisis period but more recently they "have been made prohibitively difficult to recreate" (The Economist, 11 January, 2014, p. 10), thereby securitisation is making a safer recovery. The use of collateralised assets helps banks to slim their balance-sheets and at the same time improve their capital ratios.

¹² See, for example, Arestis (2012) where the case for policy co-ordination is put forward.

events leading to the 'great recession' testify to this important requirement; financial stability has not been addressed properly, and as such it requires further investigation and proper policy initiatives to account for it.¹³ The focus of financial stability should be on proper control of the financial sector so that it becomes socially and economically useful to the economy as a whole and to the productive economy in particular. Banks should serve the needs of their customers rather than provide short-term gains for shareholders and huge profits for themselves. In this attempt by Central banks, co-ordination of financial stability with monetary and fiscal policies becomes paramount.

But for the ECB to be able to manage what we have just suggested, important changes should be initiated, most important of which is the objectives of the ECB. Such changes should include that of the external value of the currency, and interest rates would have to be set with regard to their effects on the exchange value of the euro. The target exchange rate would be set by the Council of Ministers of the Eurogroup, and the ECB would be required to support that policy (through its interest rate policy and through interventions in the foreign exchange markets). Under such circumstances the ECB rate of interest would have to be set with regard to its effect on the exchange value of the euro. It is very important for the EMU to formulate an official exchange rate policy and abide by it.

Finally, the achievement of full employment without inflationary pressures should be the ultimate objective. This does require an appropriate high level of aggregate demand, and the creation of sufficient capacity to support full employment, and the substantial reduction of regional disparities. The enhancement of the functions of the European Investment Bank (EIB), or a similar institution, to ensure high rates of capital formation, across the EMU becomes relevant. This suggestion is further enhanced when proper consideration is given to the present disparities in regional unemployment levels (and also in labour market participation rates) within the EU. These disparities would suggest that even if full employment were achieved in some regions, there would still be substantial levels of unemployment in many others. There is, thus, a need for regional economic policies; a revamped EIB would be very important on this score.

5. Summary and Conclusions

We have discussed and assessed monetary and related policies of the ECB. In this way we have elaborated on the current economic policies in the EMU. A number of changes have

¹³ In terms of financial stability proposals, the Committee commissioned by the European Commission and headed by the Governor of the Finnish Central Bank, Erkki Liikanen, has concluded in favour of a trading ring-fence proposal. The suggestion is for ring-fencing banks' trading business. In the report's view, "the specific objectives of separation are to limit a banking group's incentives and ability to take excessive risks with insured deposits" and to "prevent the coverage of losses incurred in the trading entity by the funds of the deposit bank, and hence limit the liability of taxpayer and the deposit insurance system" (the report is available at: http://ec.europa.eu/internal_market/bank/docs/high-level_expert_group/report_en.pdf). This report has been criticised on two grounds: there is no predefined 'resolution regime', which can wind banks up in the case of a disaster scenario; banks, even ring-fenced ones, may still be bailed out by governments in a crisis. And such a reform could disrupt the flow of corporate funding; companies may very well turn away from bank loans to capital markets for bond funding.

been suggested, which require proper co-ordination of them. Without these significant changes the future of the EMU and the euro is not bright at all. Most important of it all is for the ECB to adopt fully the lender-of-last-resort function and move towards a banking union along with political integration as we have argued in another recent publication (Arestis and Sawyer, 2013).

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