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NO EURO PLEASE, WE'RE BRITISH!

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Abstract

Comparing the economic performances between UK and Euroland, the appropriate and obvious question should be: why does not Euroland replace its euro with the British pound? However, economy does not represent all the interests of the human beings. They believe in values beyond the economy. Right! It may well be that Euroland citizens, once with the euro, feel much more confidence in themselves, as part of a larger world, as they trust the monetary and political decision makers of the EU Institutions. If that was the truth, the European integration process should proceed just like a ball thrown against standing skittle-pins waiting to be got down! Unfortunately, that is not the case. The authors try to point out some reasons to understand those British people who love to look at the euro experience, sitting in their armchairs and, above all, without losing their national pound.

1. Introduction

From January 1st, 1973, UK is in every respect a country member of the European Union (EU) and consequently is one of the addressees of its huge legislation and effects deriving from it. On February 27th, 1992 the *Treaty on European Union* (thereafter Treaty) is signed in Maastricht and represents the beginning of the European Economic and Monetary Union (EMU) creation to be achieved through three stages. On October 1997, British government, by means of his Chancellor of the Exchequer Mr Gordon Brown, using the Treaty *opting-out* clause, announces the intention of non-participating to the third stage, the one that would have led the twelve country members of the EU to adopt one European currency, the euro. Hence, UK maintains its own autonomy in the fields of *monetary policy* and *exchange rate policy*. UK maintains its British pound as national currency unless a popular referendum, to be shortly held, will indicate the will of replacing the British pound for the euro. UK, however, participates to the European System of Central Banks (Esbc) where EU monetary policy is decided through the Governor Council and the Executive Committee. In other words the presence of the UK in the EMU testimonies the non-necessary coincidence between a monetary union and one single currency¹. Nevertheless, the passage towards a monetary union with a single currency makes complete and mature an incomplete union². The British choice comes from a number of criticisms either on the EU economic policies, the monetary policy and the rate of exchange policy, to be accepted by accepting the euro, or on the negative result of a number of economic tests, which will be explained in the next sections. In this paper we point out that the British opting-out choice might be explained not only by economic worrying views, but more important, by political concerns. We shall start however with the former, leaving the latter to be discussed later.

¹ AAVV *Dal Piano Delors all'unione economica e monetaria* Cedam, Padova, 1991, p.85.

² Delors Report.

2. On The Renounce of the Exchange Rate Policy

Building a single currency implies, as known, the disappearance of the exchange rate policy for a country within a union. A country will be keen to accept a new currency if it is convinced that the advantages of having it will prevail over the disadvantages. Therefore, is the UK convinced that the loss of the exchange rate policy implies more advantages than disadvantages? Though this point should not be the most important one when compared with the others, still it concurs to understand the British view on the euro.

As Mundell (1961) showed³, the evaluation of costs and benefits of building up a monetary union with a single currency takes place through the *theory of the optimal currency area (Oca)*⁴. An Oca will be justified if advantages will exceed disadvantages.

According to that theory, in the presence of fixed rates of exchange, an eventual negative asymmetric shock that hit the economy of a country A will cause, at the same time, a worsening in its balance of payments and an improvement in that of a country B.

³ MUNDELL, R. *A theory of optimal currency areas* in American Economic Review, 1961, pp.657-665. Mundell analysis is the first exposition of the subject and is preceded by works of Meade (Nobel 1977) such as MEADE, J. *The balance of payment problems of a European free trade area* in Economic Journal, 1957, pp.379-396. and SCITOVSKY, T such as *L'integrazione economica dell'Europa occidentale dal puntodi vista della teoria* Feltrinelli, Milano, 1961.

⁴ *The concept of Oca, the traditional one, is linked to the debate on the choice of a fixed or flexible rates of exchange regime to achieve a re-equilibrium of the balance of payment, debate developed in consequence of the crisis of the fixed rates of exchange international monetary system built up in 1944 at Bretton Woods and of the establishment, of a flexible rates of exchange regime.* (SPAGNOLO, L.V. *L'equilibrio in un'economia aperta* Editoriale Scientifica, Napoli, 2002, p.160). More exactly, once cleared the inability of both the regimes to assure an international stability, the Oca was an alternative model represented by a monetary union within which there had to be one currency. In the Mundell view, as not all countries take advantage from a flexible rates of exchange regime, it was better that i) a number n of countries be grouped in a number m of monetary areas, ii) inside each monetary area it was appropriate a fixed rate of exchange, iii) between the m monetary areas there ought to be flexible rates of exchanges iv) the flexible rates of exchanges between monetary areas would be optimal if internal mobility and external immobility of factors, labour and capital, (ricardian) hypotheses were respected (SPAGNOLO, L.V. *op. cit.* p.161).

Because of the presence of a fixed rate of exchange, the re-equilibrium in the balance of payments of the two countries will take place if, and only if, at least two conditions are met: a perfect flexibility of wages and a high mobility in the labour market. In fact, country A, because of a lack of demand will experience lower prices, higher unemployment, a weakening of trade unions, and consequently lower wages. Country B will experience exactly the opposite effect: an excess of demand, higher prices, higher employment, a strengthening of trade unions, and consequently, higher wages. Thus, country A, because of the lower wages, will increase the demand of labour, employment and output. Country B, because of the higher wages, will decrease employment and output. Prices and wages will increase in country A and decrease in country B, re-establishing the external equilibrium in both the countries.

In the presence of flexible rates of exchange, an eventual negative asymmetric shock on country A will cause a worsening of its balance of payments, deriving from a worsening either in its current account balance, due to a decrease in the exports, or in the short run capital flows, due to an increase in the short run capital outflows. The domestic currency will depreciate and, at the same time, the currency of a country B will appreciate. Such depreciation and appreciation will increase exports and capital inflows in country A and decrease exports and increase capital outflows in country B. The balance of payments of country A will improve, while the one of country B will worsen, re-establishing the external equilibrium in both the countries.

On one side flexible rates of exchange reflect the up and down of the markets, and the only danger with them might be due to high exchange rates volatility and inflation without the possibility for it to be exported to the rest of the world. On the other side fixed rates of exchange need the fulfilment of the two above conditions (i.e. perfect flexibility of prices and wages and high mobility in the labour market), conditions that the UK believes do not exist, or, at least, do not *yet* exist within Euroland. Evidently, apart from the above mentioned advantages of having flexible rates of exchange, the UK believes that the danger linked to the flexible rates of exchange is preferable to the

non existence of the flexibility of wages and labour mobility within the EU member countries.

Thus, the EU area might not be an Oca and consequently the disadvantages of abandoning the exchange rate policy is not at all balanced by the advantages of replacing the British pound with the euro.

In fact the exchange rate policy, if successful, may only temporary help an economy to draw a sigh of relief, but cannot be thought as the right one for pursuing stability and growth.

On one hand it is true that for an exchange rate policy to be successful we need i) the fulfilment of the Bickerdicke-Robinson condition, according to which the balance of the current account improves, when the national currency depreciates, if, and only if, it will result $(p_X X / p_M M) \epsilon_X + \epsilon_M > 1$, where X and M are the quantities of exports and imports, p_X and p_M their prices, and ϵ_X and ϵ_M their elasticities to a devaluations of the rate of exchange⁵, and ii) that the other countries with which the country devaluating has more exchanges will not devalue too their own currencies. On the other hand it is also true that, in the absence of prices and wages perfect flexibility and high labour mobility, yet there will not be a convincing reason to participate to a union.

However, examples of success in using appropriately the exchange rate policy to help the national economy come from the government decisions in France during the years '82-'83, when the devaluations of the French franc helped the domestic economy to recover from years of stagnation. Denmark during 1982, and above all Belgium, whose devaluation of 8,5% improved the percentage of current accounts from -3,5% in 1981 to +2,0% in 1986, and of employment, in the same period, from -2% to +1,0% when the average within the Union was +0,8%.

If, as we mentioned above, under certain condition fixed exchange rates might be appropriate, why should the UK believe that those conditions (i.e. perfect flexibility of wages and high mobility in the labour market) are not met in Euroland? The answer passes through

⁵ See, among others, SPAGNOLO, L.V. *op. cit.*

two basic points: the institutional differences in the labour market in the countries participating to the union *and* the political attitude of the governments of those countries towards unemployment and inflation.

About the first point, countries may be different according to the degree of concentration of their trade unions: the higher that degree, the higher the proportion of workers represented by the same institution, the stronger the pressures put on employers to obtain higher wages⁶. Within the Union, the UK is characterised by a low degree of concentration of the trade unions, compared with that of other countries⁷, and it might be difficult to achieve one homogeneous degree within the Union.

About the second point, countries assign different weights to the *trade off* between the rate of increase of wages and the level of unemployment. Some of them are more prone than others to accept a lower employment rate, due to higher wages; others will advocate the idea that the rate of unemployment must not go beyond a maximum level which, if exceeded, will imply the use of expansionary fiscal and monetary policies. That is to say each country has its own utility function satisfied at the point where the government utility function (the demand of labour of the whole community) meets the trade union's utility function (the level of real wages claimed by trade unions)⁸.

Traditionally, on one hand the UK has always considered economic liberalism as an unquestionable priority to help growth and development and, on the other one⁹, has never forgotten to support families, schools, researches, and social services in the light of the Beveridge philosophy¹⁰. Any complete union, obviously, entails an agreement about the two points above, and the UK might be

⁶ DE GRAUWE, P. *The economics of Monetary Union* Oxford, Oxford University Press, 2000.

⁷ SACHS, J. D. and BRUNO, M. *Economics and worldwide stagflation* Harvard University, 1995.

⁸ SOLOW, R. *La moderna teoria macroeconomica* Laterza, 1998; SOLOW, R. *Inflazione, disoccupazione e politica monetaria* Etas, 1998, §4.1.

⁹ Apart from the *Thatcher government*.

¹⁰ BEVERIDGE, J. *Il piano Beveridge. La relazione di sir W. Beveridge al governo britannico sulla protezione sociale*. Rapporto ufficiale, 1943.

convinced that the compromise for accepting the euro would weaken and worsen its freedom of decisions.

As mentioned above, the second point for building an Oca is the existence of a high labour mobility¹¹. From this point of view it is evident the lack of such mobility in the EU area. Lack due to a number of important reasons such as, differences in the language¹², culture, law, uses, traditions etc... Therefore, it might be possible that one currency, the euro, will not fill all the gaps involved by such differences or, at least, will not be a substitute for them, unless a higher degree of social feeling and cultural harmonization between EU countries is achieved. Until then, the abandon of the pound, and exchange rate policy, might be an unreasonable cost to pay.

3. On The Diversity of Monetary Policy in the UK and Euroland

Once accepted the euro as the national currency, the UK will cease deciding its own monetary policy. However, while exchange rates policies will become a non-sense within Euroland, still the UK, once belonging to Euroland, has to share decisions, and management, on Euroland monetary policy. Such a policy can be only one, and precisely the one representing the expression of the emerging will of all the countries belonging to Euroland.

In principle, national monetary authorities may have, and generally have, their own view about objectives to pursue and the means to achieve them. The diversity derives from different economic realities, perspectives and evaluations of such objectives and means. However, in the end, those authorities have to reach only one decision. Inevitable adjustments will be accepted, in the end, in the name of belonging to a union and, inevitably, part of the power of deciding their own monetary policy will be given to the new authority. As often happens in many fields of economics, social and political environment, and also in our case, there could be an interval of many (infinite) diversities, varying from the most insignificant to the

¹¹ See, in particular, JOHNSON, C. *In with the euro, out with the pound. The single currency for Britain* Penguin Books, 1996.

¹² See, among many others, BINI SMAGHI, L. *L'euro* Il Mulino, 1998.

deepest of them. No matter about the former, but what will happen in case the latter prevails?

Firstly, therefore, there is an urgent need to find out an acceptable way of making the smallest countries count when important decisions are taken. Secondly, should the (new) monetary policy institution have only one objective, for example, assuring price stability, or more objectives, say, price stability, growth, external equilibrium, etc...? Furthermore, should the monetary institution be absolutely independent of political power, transparent in its decisions, and accountant towards other institutional powers? What kind of intermediate targets should it firstly achieve, before achieving the final goal? The above are only some of the disquieting, or at least unease, questions which may arise when trying to tackle the delicate problem for a country to cease part of its monetary sovereignty to a new institution in the name of belonging to a union.

3.1 On Diversities in the Objectives

In principle, price stability (that is controlling the rate of inflation) is the final goal of any monetary policy. In order to achieve that goal monetary authorities, generally, use three means, that is, fixing the rate of interest, using open market operations and fixing the rate of the bank reserve-ratio. In the absence of diversities in the objectives to be achieved and considering the three means mentioned above, why should not the UK accept the euro? Rather, an acceptance of the euro would lead to more price stability in the advantage of both, the UK and Euroland. The reason might be that any monetary policy spreads its effects over the financial market, only if monetary policy actions are synchronised with financial markets. That happens if, and only if, the latter trusts the former. Financial markets are in synchrony with monetary policies only when, traditionally, monetary policy announcements have been proved to be true for a long time, which implies monetary policy credibility. It might well be that the UK is concerned about maintaining such a credibility once monetary policy decisions are to be shared with other culturally different oriented decision makers.

The reason lies in the definition of the different task of the British monetary authority, in comparison with that of the Ecb (European central bank), when dealing with inflation. The main goal of the Ecb, in terms of controlling inflation, is achieved when the rate of increase in the *Harmonised Index of Consumer Prices (HICP)* is, within the euro area, somewhere between 0% and 2%, however less than 2%¹³. To On the other hand the Bank of England fulfils that goal at a *Retail Prices Index excluding mortgage interest payments (RPIX)* increasing at a maximum of 2,5%. However, due to a different method of calculating the rate of inflation in the UK and Euroland, *it may happen*, in the long term, that the two values might be coincident. What if they won't? What if the value measured by the Ecb were lower than the other one? Will an EU deflationary process involve, in the UK too, a fall in employment and output?

This is the reason why the Ecb, at the beginning of its activity, stated precisely that the above rate of 2% has to be referred to as a *medium term rate*. However, the definition of medium term itself, given by the Ecb, is still rather unclear.

Further, how can one accept a 2% rate of increase in the HICP, as referring to the whole euro area when it is clear that the euro area is not yet a homogeneous area? In fact, prices for the same good vary not only between countries belonging to the euro area, but also between adjacent areas belonging to the same country or even to adjacent areas of the same town. It would be very unlikely that we will ever achieve price homogeneity across the different countries participating to the EU.

¹³ To be precise: "Although it clearly establishes the maintenance of price stability as the primary objective of the Ecb, the Treaty does not give a precise definition of what is meant by price stability. In order to specify this objective more precisely, the Governing Council of the Ecb announced the following quantitative definition on October 13th, 1998: "Price stability shall be defined as a year-on-year increase in the HICP for the euro area of below 2%" in Ecb *The monetary policy of Ecb* Ecb, Frankfurt am Main, 2001, p.38. Further, p.39, "First, neither prolonged inflation nor prolonged deflation is consistent with the definition. The phrase "below 2%" clearly delineates the upper boundary for the rate of measured HICP inflation that is consistent with price stability. At the same time, the use of the word "increase" in the definition shows that deflation, i.e., declines in the level of the HICP covers a wide range of consumer expenditure".

In other words, one monetary policy for one (euro) area needs one common market, a market that, as already stated by the Treaty of Rome (1957), assures perfect mobility of persons, goods and capitals. Though undeniable progress in this respect has been made during the past half a century, yet there is a lack of flexibility in the adjustment of real and monetary variables that prevents the euro area from being a perfect competitive one.

The uncertainties over a number of points involved by too many unanswered questions represent a threat to the above mentioned crucial requirement of any respectable monetary authority, that is the credibility of the latter with financial markets. In this respect one may well believe that UK, being aware of the long time British authority took to build up that credibility, might be concerned about maintaining it alive once accepted the euro.

However, neither the Bank of England, nor the Ecb have as only task that of assuring price stability. In fact, for example, the Bank of England has to help government to make effective its economic policy. The stability of prices appears to have the same importance as other government objectives. The Ecb has also a number of objectives belonging to the real economy such as employment, output, and so on. Therefore, apparently there is no difference between the two. But, in fact, the meaning is not the same; the former, through the monetary policy, is asked to co-operate with the government in implementing its economic policy¹⁴; the latter has, first of all, the task of assuring price stability, and only after having achieved that, looks at the real economy. The difference will appear clear in the next section.

3.2 On the Diversities of the Means

In the previous section we pointed out that the main objective of a monetary authority is price stability. However, is the path any monetary policy has to follow to achieve price stability unique? That is, is there any choice between a number of intermediate targets to be

¹⁴ Other objectives of the Bank of England are the maintaining of the stability of the financial system both at home and assure the efficiency of UK financial services.

achieved before achieving the final goal, or rather there is only one path. If there are different paths and therefore different intermediate targets, how should one choose between them?

With respect to the first and secondary tasks, the Ecb monetary policy is based upon two pillars, a monetary pillar and a second one made up of a set of variables of the real economy. The first one, the so-called *money targeting*, that allows achieving price stability, is the Ecb's main choice. It comes from the Ecb conviction that inflation is essentially a monetary phenomenon, and consequently it does depend on the quantity of money in the economy. Thus, once fixed, let us say, at a maximum of 2% the increase of the rate of inflation, supposing an increase of GDP by 1% and an increase of the money circulation velocity by 0,2%, the amount of money supply has to increase by 2,8%¹⁵. The second pillar sweetens the strong and true first one, as it shows an Ecb keeping also into account the real economy. Final decisions however are taken essentially on the basis of the first pillar, although not automatically: in such case expectations would lead to obvious speculative activity.

The *direct inflation targeting* is the British authority's choice according to which the rate of inflation represents both the intermediate target *and* the final goal. In other words, British monetary policy deals with the elimination of the gap between the *expected* and *planned* rate of inflation. That is pursued by monitoring and using any variables able to reduce that gap, not only the quantity of money supplied. At the same time, the whole of its action is extremely *transparent* towards public and, broadly speaking, the financial markets. Therefore, it is implicit in our example that, by accepting the euro the UK has to replace its direct inflation targeting with the money targeting. That might carry on a high cost indeed for the UK because of a number of reasons.

¹⁵ According to the *quantitative theory of money*, $\Delta m = \Delta p + \Delta y - \Delta v$, where m is the quantity of money, y is the real GDP, v is the circulation velocity of money. Thus $2,8\% = 2\% + 1\% - 0,2\%$.

The first reason is linked to the concept of the *neutrality of the money*¹⁶, which appears to belong to the Ecb, and does not belong to Bank of England. Consequently, the Bank of England has to help government in implementing its policy, while pursuing its duty of price stability; the Ecb only addresses a yearly report on its activity to the European Parliament, the Commission and the Council of Europe. On the other hand, since in the British view the money is *non neutral* then the Bank of England is *accountant* towards the government.

The second reason is a consequence of the first one. In fact, the multi-purpose Bank of England task (to assure the stability of prices *and* help government in realizing its economic policy) implies a co-operative action with government. Monetary policy and fiscal policy are to co-operate to achieve price stability and growth. There are two objectives and two means. Co-operation does not mean the presence of a leader and follower. On the contrary, since there are two objectives and two independent means to be used to achieve them, it is respected the well known *Tinbergen principle*, according to which a model with predetermined objectives (i.e. with n independent objectives) must have n independent means and all of them have to co-operate altogether to the achievements of the objectives¹⁷. The Ecb philosophy of the two pillars yields to the inevitable consequence of giving priority to monetary variables when compared with the real ones: the Tinbergen principle is not satisfied¹⁸. For example suppose that, in the absence of coordination, the rate of interest is increased in order to reduce inflation and that, at the same time, government

¹⁶ Money is considered neutral if her variations do not affect variations in the real variables, but only in the level of prices.

¹⁷ TINBERGEN, J. *Economic policy: principles and design* North Holland Publishing Co., Amsterdam, 1956.

¹⁸ It might be argued that the Tinbergen principle is not only respected by the Ecb, but even stated by the Treaty (of the European Union): the Ecb has to act in harmony with the Ecofin Council and the Economic and Financial Committee. However, the Ecb co-operative activity cannot be interpreted and put in practice as the Tinbergen principle would suggest, because of the simple reason that, once again by statute, the Ecb takes, primarily, responsibility for the stability of prices. That comes from the conviction according to which, without assuring the stability of prices, any economic policy is destined to fail.

decides an expansionary fiscal policy to reduce the rate of unemployment. Monetary policy will fade away fiscal policy expectations, contributing to lead the economy towards undesired effects. It would not appear hazardous to imagine the British not willing to weaken their co-ordination philosophy and respect of the Tinbergen principle.

4. The Independence of the Ecb

The creation of the Ecb proved to be a revival of the ancient debate about whether a central bank should, or should not, be independent of the political power¹⁹. As to the Ecb, the principle of independence from the political power is stated by the art. 107 of the Treaty: “*When exercising the powers and carrying out the tasks and duties conferred upon them by this Treaty and the Statute of the ESCB, neither the ECB, nor a national central bank, nor any member of their decision-making bodies shall seek or take instructions from Community institutions or bodies, from any government of a Member State or from any other body....*” The passive defence of such a principle is *institutional*, being exerted from external interferences when Ecb is pursuing statutory objectives, *personal*²⁰, through the process of nomination and the length of the charges²¹ and *functional*, since the Ecb is given a number of financial and accountant tools and the responsibility of drawing up the Escb (European System of Central Bank) consolidated balance sheet²². The active defence of that principle takes the form of the prohibition, stated by the art. 104 of the Treaty “*Overdraft facilities or any other type of credit facility with the Ecb or*

¹⁹See, among many others, HABIB, M.M. *Saggio sull'indipendenza della banca centrale* in Studi economici, n.70, 2000/1; SPAGNOLO L.V. *The Role of the European System of Central Banks in the European Integration Process* in Building the New Europe, Vol. I: The Single Market and Monetary Unification, edited by Baldassarri M. and Mundell R. The Macmillan Press, London and New York, 1993.

²⁰ The same art. 107 “*The Community institutions and bodies and the government of the Member States undertake to respect this principle and not to seek to influence the members of the decision-making bodies of the Ecb or of the national central banks in the performance of their tasks.*”

²¹ The art.11 of the Protocol (of the Treaty) statues the length of the charge of the members of the Executive Board in eight years.

²² See Protocol, Chapter V, art. 25-27.

with the central banks of the Member States (hereinafter referred to as “national central banks”) in favour of Community institutions or bodies governed by public law, or public undertakings of Member States shall be prohibited, as shall the purchase directly from them by the ECB or national central banks of debt instruments.” and the art. 104 A “Any measure, not based on prudential considerations, establishing privileged access by Community institutions or bodies, central governments, regional, local or other public authorities, other bodies governed by public law, or public undertakings of Member States to financial institutions shall be prohibited.” In fact, the independence of the Ecb from the political power is a *condition sine qua non* of the existence of the Ecb herself. Moreover, a number of economic models, as the *representative agent* model by Rogoff²³, have been developed to advocate the thesis according to which the Ecb should have had to minimize the function of the loss

$$L=(p-p^*)^2 + b(u-u^*)^2$$

where L is the loss, $p-p^*$ is the difference between *current* and *planned* rate of inflation, $u-u^*$ is the difference between *current* and *planned* rate of unemployment and b is the value the minimizer assigns to the relative importance between inflation and unemployment²⁴. According to the model, the lower the value assigned by the central banker (the agent) to b, the more conservative she is. Her credibility is higher, the lower the value assigned to b since a low value means more control on the rate of inflation. Consequently, at the beginning of the Ecb activity, it was essential for the Ecb to show that it was

²³ BARRO, R. and GORDON, D. *Rules, discretion and reputation in a model of monetary policy* in Journal of Monetary Economics, 12, 1983, pp.101-120; KYDLAND, F.E. and PRESCOTT, E.E. *Rules rather than discretion, the time inconsistency of optimal plans* in Journal of Political Economy, 1977.

²⁴In the Rogoff model, the *agent* (the conservative central banker), optimizes the *trade off* between inflation and unemployment minimizing the Loss function. In fact, she cannot reach such objective because of the simple reason that she has no autonomy in deciding both the rate of inflation and unemployment. She can only fix the former as objective, and not the latter. In any case a central banker is said to be conservative if she assigns more importance to the rate of inflation than to unemployment.

conservative, above all, that it was even more conservative than most conservative existing central banks. However, is the priority given to the rate of inflation over unemployment justified?²⁵, is it true that the degree of credibility of a central banker increases with the degree of conservativeness?, is it true that more conservativeness means more credibility?, is it true that more independence means more credibility and, hence, more conservativeness? Most important, who should the minimizer be: the representative agent (the central banker) or, rather, the society, that is to say, the government chosen by the society? Further, once accepted the idea of a rate of inflation mainly linked to the quantity supplied of money, would not the Ecb, with its monetary policy, make dependent the fiscal policies of the governments of the member countries? These are only some of the questions needing a satisfactory answer.

The British model of central bank, though is left independent in the accomplishment of the main task, on the other hand, it is essentially considered, as explained above, an institution helping government in reaching the goals set by the government itself. That comes from the fundamental UK conception of the *non-neutrality* of the money.

However, the principle of independence might be also seen in a slightly different way. In fact, is really the Ecb an institution independent, *super-partes*, above the will of the member States expressed by their Governors? And how many activities are, still now, maintained by the national central banks and how many delegated to the Ecb²⁶? Finally, is the monetary policy really conceived by the Ecb

²⁵ SPAGNOLO, L.V. *La convergenza di Maastricht: una misura della divergenza* Giappichelli, Torino, 1997.

²⁶ Graziani A. thinks of the Escb chosen as a hybrid one. Apparently, it looks like a highly centralized system in which every decision is made by the Ecb, which finances directly national banks of the member countries. That can be seen by the Ecb balance sheet, where the assets include financements in favour of national banks of the member countries and do not those in favour of the national central banks. However, the system is deeply modified being the implementation of the monetary policy assigned to the single national central banks, to which has been left a set of large powers. GRAZIANI, A. *La politica monetaria della Banca Centrale Europea* in Rivista Italiana degli Economisti n. 2004/1 Supplement dedicated to the works of

or, rather, influenced by the national bankers views?²⁷ If the monetary is influenced by national bankers view then it would be a difficult task for the UK to see its view accepted! In all cases, the Ecb independence can only be *relative*: it cannot be *absolute*, since it depends on the international rate of exchange systems²⁸. Keeping into account the international rate of exchange context, there could be different views on what policy be advisable. At the same time all of them could probably be justifiable on the basis of different arguments. However, they will imply different consequences in different member countries.

5 A Pragmatic View

British Prime Minister Tony Blair described the decision on whether or not joining the euro as the most important decision of the Labour party and promised to call a referendum on the issue. As a consequence of the Labour pro-Euro policy, in 1997 the Treasury announced five economic tests on UK entry to the Euro. The tests are essentially based on assessing the convergence of the UK business cycle with the European business cycle; assessing the degree of flexibility of the UK economy to adapt and adjust to changes; considering the effect on investment in the UK; considering the

the 44th yearly scientific meeting, Salerno, October, 24th-25th, 2003, Il Mulino, Bologna, Italy.

²⁷The art.10 of the Protocol of the Treaty states "In accordance with Article 109a(1) of this Treaty, the Governing Council shall comprise the members of the Executive Board of the ECB and the Governors of the central banks." At present, the Executive Committee consists of six members (art. 11), consequently the Governor Council includes the six members of the Executive Committee and twelve national central banks Governors. Though the Executive Committee decisions are independent, those of the national central bank Governors might be not. In the case when Euroland were hit by symmetric shock, the Governing Council decisions might coincide with the Executive Committee ones. But what will happen in case of an asymmetric shock? See the interesting discussion of DE GRAUWE, P., DEWACHTER, P., and AKSOY, Y. *The European central bank decisions, rules and macroeconomic performance* in CEPR, Discussion Paper n. 2067.

²⁸ SPAGNOLO, L. V. *L'equilibrio...*, op.cit., pp.174-175; SPAGNOLO L.V. *European Economic Convergence and The International Monetary System* in De Pecunia, (number dedicated to the memory of Robert Triffin), Bruxelles,1993.

advantages for the financial services sector once joined the Euro; finally, considering employment and growth prospects.

Despite the five economic tests, for quite few people the decision to join the Euro will not be an easy one, and it will be based more on the “emotional facts” of having to scratch the pound than economic concerns.

The Treasury considers the test on convergence an important step towards a successful single currency. It says that, in order for the UK economy to fully be able to benefit from a single currency, it has to converge with Europe and show that the convergence is sustainable. With regard convergence, in the past the UK's economic cycle has been, most of the times, divergent and more volatile than others in Europe and more linked to the USA cycle. Today, Britain is experiencing a period of good economic growth and stability while most of the European countries (see for example France, Germany, and Italy amongst the others) on the other hand, experience a low growth with relatively high level of unemployment. The British cycle therefore seems to be still invariably out of phase with respect to most of the major European countries. Furthermore, the UK mortgage market historically depends on variable interest rates while the European market is mainly characterised by fixed interest rate. The boom in housing markets with the consequent increase in the value of properties across the country has increased the borrowing power of the UK residents. The consequent increase in disposable income has increased consumption. On the other hand as a consequence of the boom in housing market, house prices have seen a two-digit increase in various areas of the country. The different rate of borrowing between Euroland and UK, and the house price inflation might be more than a simple concern for Tony Blair in order to schedule a reasonable time for joining the Euro. In fact, this concern has been recently expressed clearly by Gordon Brown when he announced that the UK was not ready yet for the euro and the Prime Minister accepted the chancellor's view.

Another important test is about the flexibility or ability of the economy to adjust to changes. In fact as we stressed in the previous sections a single currency leads to a loss of domestic control over

monetary policy. Given the risk of future shocks, firms would need to be flexible in terms of pricing and margins in order to respond to asymmetric shocks, and employees would need to increase their skills in order to adapt to changes in the labour market.

With regard investment the treasury believes that a single currency, by creating an area of low inflation and high stability, and by removing currency changeover costs, would attract investment in Britain. However, perhaps the impact of the euro on the thousands of small business across the country might have been miss-calculated. In fact, the adoption of the euro will imply additional costs deriving from new accounting systems, price labels etc...Therefore, small business will not benefit from it and will pass on to customers the increase in costs by rounding up prices.

The City of London has always been one of the major financial centres in the world. According to the Treasury the euro will affect financial services immediately, therefore it is important to see if the City is prepared for it and if the introduction of the euro is advantageous for the sector. It is not difficult for anyone involved in the financial sector to see that the level of euro transactions on the UK stock exchange and secondary markets has been growing fast. Therefore, a part from operational costs and operational risk involved with the introduction of the euro, the City should be able to fully adapt in short time to the new currency.

The final test concerns employment and growth. The introduction of the euro should lead to low inflation and high stability for the whole Euro area (Britain included) and therefore a high growth and employment. However, as mentioned above, convergence and flexibility are two important factors in order to achieve these goals. Therefore a decision on whether or not this test has been satisfied is to be taken by the Treasury by looking at the “fundamental” structure of the UK economy and considering flexibility and convergence. However, it is unclear what convergence may imply in this context given that the UK GDP has been growing much faster than the GDP in most of the largest economies in Europe!

6. On the Political Reasons²⁹

According to Disraeli³⁰ *Great Britain is governed by its Parliament, not by its logic*³¹. That was to lay stress on the British undeniable and unquestionable principle of national sovereignty, which is the legal capability of the national decision maker institutions to make their choices without being subject to any external restrictions. Coherently, from the very beginning of the European integration process³², UK has been the advocate of the inter-government confederal model opposite to the supranational federalist one³³. As known, the main difference between those two models is that only in the former national sovereignty is assured. On the other hand, the latter keeps into account either the interests and needs of the members, regions or

²⁹The subject of this § needs, obviously, a width and depth well beyond the objective of this paper, which only represents an attempt to give an understandable and condensed synthesis of the reasons why the UK might not been keen to joint the euro.

³⁰DISRAELI, BENJAMIN (1804-81), 1st Earl of Beaconsfield, British Conservative prime minister (1868, 1874-80).

³¹BOGDANOR V. *The United Kingdom and the European Union: light on the relationship in Britain in Europe*, The London School of Economics and Political Science, p.28.

³²DUFF A. *Britain and Europe. The different relationship*, in WESTLAKE M. (editor) *The European Union beyond Amsterdam. New concepts of European integration*, Routledge, 1998. ZURCHER A.J. *La lotta per l'Europa unita 1940-1958*, in *Cultura e società* n. 29, Opere nuove, 1963.

³³As we know, the debate on federalism against confederalism comes out at from the *functionalism*, a doctrine according to which *the form of a thing should be determined by its use*. For a definition of the term *functionalism*, see COLLINS ENGLISH DICTIONARY, Glasgow, 1990, p.614. In the European integration process, the functionalist pragmatic view was applied to economic sectors of the economy through common policies to be managed by common supranational agencies, and led to the throwing down of the custom barriers to build a common way to political sectors. The functionalism adaptability to the member states needs was, at the same time, its strength and its weakness. The development of common economic policies was not followed by net abandon of the political sovereignty. On the contrary, the crude reality represented by the endless and still unsolved debate between federalism and confederalism re-emerged. PINDER J. *The building of the European Union* 3rd edition, Oxford University Press, 1998. WALLACE W. *Less than a Federation, more than a regime: the Community as a political system in ...Policy in the European Community*, John Wiley & Sons, 1990.

States, that it is part of, or those of the new entity, the federal State. The tasks of the members and of the new entity should have to be exactly defined. EU, though represents none of the two models, having elements of both, it is moving towards the direction of the latter. Therefore, Disraeli sentence is no longer a mirror of the current national sovereignty.

EU laws are based upon the *self-executing*, *supremacy* and *pre-emption* principles. The UK, with the European Act of 1972, accepted the self-executing, or direct applicability principle³⁴ and consequently its logical consequence, that is the supremacy principle, according to which community law prevails over national law, principle that is the same for all the member countries³⁵. The supremacy principle revolutionises member countries law system, by transferring part of the national sovereignty to the Union in the name of the principle that there cannot be a case of clashing interest between any of the member countries and the Union. However, since such a principle is more a perspective or a wish than a reality, it is understandable that all the member countries have difficulties in accepting it, as it is. Once accepted it, in the case of a clashing law, the UK would be judged by the European Court of Justice. Therefore, in order to accept that principle, the UK should be convinced that the democracy power is stronger and better represented in the community law system than at home, and that a democratic deficit no longer exists at the heart of the EU making law process. It is also because of this, that once accepted the euro, since the Ecb will be the EU monetary policy decision maker, the UK will have to accept the principles of the neutrality of the money and independence of the Ecb, which contrasts his traditional view.

Regarding the *pre-emption* principle³⁶, it is known that, under the pressures of a number of member States, including UK and Germany,

³⁴ KENT P. *Law of the European Union* 3^d Ed., Pearson Education, 2001, p.58. See also eurotreaties.com.

³⁵ CONSTANTINESCU L.J. *La spécificité du droit communautaire* in *Revue Trimestrielle de Droit Européen*, 1965.

³⁶ The *pre-emption* principle is *the purchase of or the right to purchase property in advance of or in preference to others*. See COLLINS, op. cit., u.v. *pre-emption*, p. 1208.

it became, with *The Treaty*, the *subsidiarity principle*. Such principle is based upon the presumption that, within the EU, the State has competence in making law unless not explicitly assigned to the Union³⁷. Generally, federalism needs this principle to be accepted and, as made in the case of the Legislative Scottish Assembly (i.e. the so-called *devolved matters*), clearly defined.

On the contrary, the subsidiarity principle in the EU seems to work in the opposite direction. That is it assigns the more and more making law competence to the Union and the less and less to the member States, in the view of building up a super State in which a dangerous hierarchy might appropriate the member States making law competence³⁸.

Participating to a Union, in itself, it needs one identity. A European Union needs its own identity, which means one feeling and one will to belong to the same Union well beyond belonging to the member country. Furthermore, a Federal Union needs the right interpretation of the subsidiarity principle, that is leaving the law making process to the member states in the respect of their diversities in any subject but those for which the “common feeling” delegates the Union.

At present, it is hard to recognize the existence of one feeling of belonging to the same economic, social, cultural and political reality. In other words it does not seem possible to believe in the existence of one voice for the European Union within itself and towards the rest of the world, before having built one identity for one European people.

³⁷ CENTRE FOR ECONOMIC POLICY RESEARCH *La distribuzione dei poteri nell'Unione Europea. Il principio di sussidiarietà nel processo d'integrazione europea* Il Mulino, 1995; BECK C. H. *European Union law: cases*. Frank Emmert, 1999; VANDAMME J. *European Federalism. Opportunity or Utopia?* In WESTLAKE M. (editor) *The European Union beyond Amsterdam. New concepts of European Integration* Routledge, 1998.

³⁸ FERRARI BRAVO L., MOAVERO MILANESI E. *Lezioni di Diritto Comunitario* 3rd Edition, Edizione Scientifica, 2000. Delors expects an 80% legislation coming from the EU against a 20% of member States competence. See DE LEONARDIS M. *L'integrazione europea e la Gran Bretagna* in Rainero R.H. (editor) *Storia dell'integrazione europea* vol.II *L'Europa dai Trattati di Roma alla caduta del muro di Berlino* Marzorati Editore, 1997; GOZI S. *Il governo dell'Europa* Il Mulino, Bologna, 2000.

Moreover, while the EU institutional persisting democratic deficit needs many efforts to be reduced, the increasing community making law process is steadily increasing. At the same time, such process is not at all balanced by an increasing accountability of the institutions representing it.

The UK might not be encouraged to replace the pound for the euro until a true EU identity will have emerged.

In our view, the UK reasons for not joining the euro should not be seen as steril, vanishing or disrespectful of the EU integration process. Rather, all the possible reasons mentioned above, ought to be seen as to contribute to the creation of a better Europe.

References

- AAVV *Dal Piano Delors all'unione economica e monetaria* Cedam, Padova, 1991.
- BARRO, R. AND GORDON, D. *Rules, discretion and reputation in a model of monetary policy* in *Journal of Monetary Economics*, 12, 1983.
- BECK, C.H. *European Union law: cases*. Frank Emmert, 1999.
- BEVERIDGE, W. *Il piano Beveridge. La relazione di sir W. Beveridge al governo britannico sulla protezione sociale*. Rapporto ufficiale, 1943.
- BINI SMAGHI, L. *L'euro* Il Mulino, 1998.
- BOGDANOR, V. *The United Kingdom and the European Union: light on the relationship in Britain in Europe*, The London School of Economics and Political Science.
- CENTRE FOR ECONOMIC POLICY RESEARCH *La distribuzione dei poteri nell'Unione Europea. Il principio di sussidiarietà nel processo d'integrazione europea* Il Mulino, 1995.
- CRAIG, P. *Costituzioni, costituzionalismo e Unione Europea* in *Rivista Italiana di Diritto Pubblico comunitario*, 2002.
- CUKIERMAN, A. *Central bank strategy, credibility and independence: theory and evidence* The MIT Press, 1995.
- DE GRAUWE, P. *The economics of Monetary Union* Oxford, Oxford University Press, 2000.
- DE GRAUWE, P., DEWACHTER, P., and AKSOY, Y. *The European central bank decisions, rules and macroeconomic performance* in CEPR, Discussion Paper n. 2067.
- DE LEONARDIS, M. *L'integrazione europea e la Gran Bretagna* in Rainero R.H. (editor) *Storia dell'integrazione europea vol.II L'Europa dai Trattati di Roma alla caduta del muro di Berlino* Marzorati Editore, 1997.
- DUFF, A. *Britain and Europe. The different relationship*, in WESTLAKE M. (editor) *The European Union beyond Amsterdam. New concepts of European integration*, Routledge, 1998.
- ECB *The monetary policy of ECB* ECB, Frankfurt am Main, 2001.
- FARNARARO, P. *Dalla Comunità all'Unione Europea* Centro Jean Monnet Editor, Salerno, 1999.

- FERRARI BRAVO, L. and MOAVERO MILANESI, E. *Lezioni di Diritto Comunitario* 3rd Edition, Edizione Scientifica, 2000.
- FORSTER, A. *Britain and the Maastricht negotiations* St. Anthony's Series College, Oxford, 1999.
- GRAZIANI, A. *La politica monetaria della Banca Centrale Europea* in Rivista Italiana degli Economisti n. 2004/1.
- GELBER, H.G. *Sovereignty through interdependence* Kluwer Law, 1997.
- GOZI, S. *Il governo dell'Europa* Il Mulino, Bologna, 2000.
- HABIB, M.M. *Saggio sull'indipendenza della banca centrale* in Studi economici, n.70, 2000/1.
- HURD, D. *Making Europe safer: foreign policy & defence in Britain in Europe* The London School of Economics and Political Science, Fraser Maurice Editor, 1998.
- JOHNSON, C. *In with the euro, out with the pound. The single currency for Britain* Penguin Books, 1996.
- KYDLAND, F.E. and PRESCOTT, E.E. *Rules rather than discretion, the time inconsistency of optimal plans* in Journal of Political Economy, 1977.
- LAMONT, N. *Sovereign Britain* Duckworth, 1995.
- MASSON, P. AND TURTELBOOM, B. *Characteristics of the euro: the demand for reserves and policy coordination under EMU* presented at the Foundation Camille Gutt, IMF Seminar on EMU and the International Monetary System, Washington, 1997, March 17-18.
- MUET, P.A. *Deficit de croissance et chômage: le cout de la non-cooperation* Etude n.1, Paris, Centre d'Etude Notre Europe, 1997.
- MAYHEW, J. *London: financial centre of Europe* in Britain in Europe, The London School of Economics and Political Science, Fraser Maurice Editor, 1998.
- MEADE, J. *The balance of payment problems of a European free trade area* in Economic Journal, 1957, pp.379-396.
- MUNDELL, R. *A theory of optimal currency areas* in American Economic Review, 1961, pp.657-665.
- PANIZZA, R. *Il declino del ruolo degli Stati nazionali nella definizione della politica economica* in Teoria Politica XVIII, n.1, 2002.

- PAESANI, P. *Will the Monetary Pillar Stay? A few lessons from Britain* ciclostilato, Università di Roma La Sapienza, 2003, february.
- SACHS, J.D. AND BRUNO, M. *Economics and worldwide stagflation* Harvard University, 1995.
- SCITOVSKY T. *L'integrazione economica dell'Europa occidentale dal punto di vista della teoria* Feltrinelli, Milano, 1961.
- SOLOW, R. *La moderna teoria macroeconomica* Laterza, 1998.
- SOLOW, R. *Inflazione, disoccupazione e politica monetaria* Etas, 1998.
- SPAGNOLO, L.V. *L'equilibrio in un'economia aperta* Editoriale Scientifica, Napoli, 2002, p. 160
- SPAGNOLO, L.V. *La convergenza di Maastricht: una misura della divergenza* Giappichelli, Torino, 1997.
- THYGESEN, N. *Relations among the IMF, the ECB and Fund/EMU members* paper presented at Foundation Camille Gut, IMF Seminar on EMU and the International Monetary System, Washington, 1997, March 17-18.
- TINBERGEN, J. *Economic policy: principles and design* North Holland Publishing Co., Amsterdam, 1956.
- VANDAMME, J. *European Federalism. Opportunity or Utopia?* in WESTLAKE M. (editor) *The European Union beyond Amsterdam. New concepts of European Integration* Routledge, 1998.
- WILLIAMSON, J. *Estimating equilibrium exchange rates* Washington D.C., Institute for International Economics, 1994, September.
- WOODARD, S., *Britain in Europe. History of a relationship.* In *Britain in Europe*, The London School of Economics and Political Science, Fraser Maurice Editor, 1998.
- ZURCHER, A.J. *La lotta per l'Europa unita 1940-1958*, in *Cultura e società* n. 29, Opere nuove, 1963.

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