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Single Monetary Policy and Economic Imbalances in the Euro Area

NOTE

Abstract

One-size-fits-all monetary policy in a euro area composed of heterogeneous Member States can create or increase existing inflation and current account imbalances by applying a single interest rate to Member States with different inflation and competitiveness differentials. Imbalances keep being high and growing.

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EXECUTIVE SUMMARY

The euro area had from the start some design failures well adverted by many economists much before the European Monetary System (EMS) and the European Economic and Monetary Union (EMU) were created. Large pieces of research did show that the euro area was not an optimum currency area (OCA) and needed not only a single monetary policy but a single fiscal policy or a very large European budget or, in the last instance, a large European fund to soften structural imbalances or asymmetric shocks. One-size-fits-all monetary policy in a euro area composed of heterogeneous Member States can create or increase existing inflation and current account imbalances by applying a single interest rate to members with different inflation and competitiveness differentials.

The first years of the euro area were very positive and financial markets believed fully in the experiment, but, in the period 2002-2005, when the ECB had to drop its main refinancing interest rates to help Germany and Italy out of recession and France out of a slow growth, because medium term inflation expectations were low and the three Member States represent two thirds of the euro area GDP, the single interest rate became too low for other catching up Member States growing faster and with higher rates of inflation. Higher rates of inflation and the same nominal interest rate made these Member States to have zero or negative real interest rates producing a large credit and asset price boom, increasing excessively their negative fiscal positions and their net international position in public, private and banking debt.

This situation became much worse when the imported financial crisis provoked in these highly indebted Member States an asset and credit bust and a large deterioration of their banking assets. As a consequence, financial markets increased their spreads to these Member States, rating agencies lowered their ratings and several of them had to be bailed out. Financial markets finally realised the existence of design failures in the euro area and the crisis management failures of "too little too late" and "behind the curve".

Imbalances among Member States keep being high and growing, given the increasing costs of their sovereign and private debt spreads. This is starting to create a feedback loop in which these peripheral Member States try to convince markets that they are doing the right things, that is, large fiscal consolidations and structural reforms. But in the short term they are lowering their growth rate or are worsening their recession, making it impossible to get out of the hole. In the meantime, after two years work to create a firewall, it is still not big enough to calm the markets and the euro area gets closer the precipice.

Most of what is needed to get out of this situation is well known by economic theory and policy but there seems to be no political will to deliver a rational exit to this increasingly dangerous situation. Only the ECB is capable of coming in as a "saver of first resort" or a "lender of last resort" to avoid the worst but it may not be enough. But the ECB can take some steps to avoid future asset bubbles and imbalances.

1. EURO AREA DESIGN FAILURES

Before the European Monetary System (EMS) and the European Economic and Monetary Union (EMU) were created, many academics, including myself, produced large amounts of research showing the necessary conditions to be fulfilled by EMU to be successful. The CEPR annual series of reports "Monitoring European Integration" (1990 to 2003)¹ or the CEPR book "The Monetary Future of Europe" (1993), Paul de Grauwe (1992) Michele Fratiani and Jürgen von Hagen (1992) or collected papers such as Francesco Giavazzi, Stefano Micossi and Marcus Miller (1988), Daniel Gros and Niels Thygesen (1992), Francisco Torres and Francesco Giavazzi (1993) and papers such as Tamin Bayoumi and Barry Eichengreen (1993) and (1996) or Guillermo de la Dehesa and Paul Krugman (1992) had already mentioned most of EMU prospective design failures and consequent problems and imbalances, which are affecting the euro area today.

The first issues on EMU started to be raised by Robert A. Mundell (1961) in his paper about Optimum Currency Areas (OCA) based on his experiences with monetary unions in Canada and the US, showing that Europe was not an OCA. Ronald McKinnon (1963), Peter Kenen (1969), Ronald McKinnon (2001) and Charles Wyplosz (2005) warned about the dangers of building a monetary union and applying a single monetary policy to areas not fulfilling the requisites of an OCA.

First, in Europe there was no free movement of capital and labour as it was the case in Canada or the United States.² In Europe, different languages and cultures made it more difficult for people to live and work in another European country. In Canada and the US, if a province or state or an industrial sector is in recession, people move to other provinces or states or to other productive sectors where there is no recession. The EMU member financial markets are less integrated than the US and Canadian financial and banking markets.

Second, prices and wages within an OCA need to be very flexible to adapt to negative shocks in the ensemble of the monetary union or to asymmetric shocks which affect only one or a few Member States. But in the euro area collective bargaining is not at the level of the firm but at different industrial, national, regional and provincial levels and labour contracts are very different in each Member State of the euro area. As a consequence, rates of inflation tend to differ much more among euro area Member States than in an OCA.

Third, a single monetary policy for Member States that does not fulfil the conditions of an OCA can produce different rates of inflation and therefore, different real interest rates, different real exchange rates and large booms and busts in different Member States that need to be dealt with to avoid serious breakdowns of the monetary union.

The Delors Committee Report³ and the Commission Report "One Market, One Money"⁴ did not take a very defensive and escapist attitude towards the OCA model. They thought that the model provided useful insights but not a comprehensive framework to assess the benefits and costs of EMU. Later, several studies demonstrated that the only requisite of the OCA model that EMU was fulfilling was trade openness, but not the rest: labour and capital mobility and price and wage flexibility (Decressin and Fatas (1995), Krugman (1993)).

¹ <http://www.cepr.org/pubs/books/mei/mei.asp>

² Stage one of EMU introduced complete freedom for capital transactions as of beginning July 1990.

³

http://ec.europa.eu/economy_finance/emu_history/documentation/chapter13/19890412en235repeconommetry_a.pdf

⁴ http://ec.europa.eu/economy_finance/publications/publication7454_en.pdf

Moreover, Baldwin and Wyplosz (2004) identified additional three OCA criteria which should be complied to: i) fiscal transfers to deal with asymmetric shocks - such large transfers can not exist with a central EU budget of currently only 1% of GDP; ii) homogeneous preferences regarding the use of monetary policy - which is very clear that this does not exist, otherwise the ECB would publish the minutes of its meetings, and iii) a broader political agenda for the future fiscal and political union - which at this moment is absent.

Therefore, the need for a fiscal union or a common fiscal policy in order to address common and asymmetric shocks in EMU was decisive. As the euro area did not fulfil these OCA requisites, a fiscal union was necessary or at least a very large central budget (20-25% of the euro area GDP) or, as a minimum, a very large European fund to deal with shocks arising in different Member States of the Union due to growing imbalances among Member States or shocks affecting to individual Member States.

For instance, today the Federal US Treasury collects federal taxes through its Internal Revenue service in an amount between 12% and 20% of each state GDP and the transfers from the Federal Budget to the states vary between 9% and 31% of GDP. By contrast, in the EU Member States contribute to the European Budget between 0.8% and 0.9% of their GDP and receive between 0.3% and 0.5% of GDP in transfers from the European budget.

Moreover, US States are obliged to fulfil fiscal rules that are tougher than those for euro area Member States. The fiscal "golden rule", established by Alexander Hamilton in 1790, obliged States to have fiscal deficits only if such a deficit had been fully invested and not for more than two years. This rule applies somehow differently among States: in 36 States the rule is tougher, in 10 States it is less rigorous and in 4 States it is soft.

Finally, this US golden fiscal rule is easier to understand and to control than the one recently applied by the new euro area Fiscal Compact and the Stability and Growth Pact (SGP), which use, at the same time, structural and nominal measures to control the Member States deficits and debts.

Moreover, in order to quantify the fiscal distribution between the US federal system and its States and that of the euro area and its Member States, in the US, state, county and municipal debt accounts for only 16% of the total GDP of the Union, while in the euro area they represent 99% of the GDP of the euro area.

This is one of the reasons why California, which is 16% of the total US GDP, has been delaying payments in its debt service for two years and nothing happened, either to California or to the US, while, in the euro area, Greece, which only represents 2% of the euro area GDP has produced the biggest crisis in the short life of the euro area which is still going on, after more than two years, due as well to an incompetent crisis management.

All these earlier academic concerns were mostly overlooked by the founders of EMU which thought that the euro area would avoid these structural problems mentioned by academics by:

- First, prohibiting, in the Treaty on the Functioning of the European Union (TFEU), any financing of a Member State by the ECB, by any financial entity or by any other Member State, included respectively in Articles 123, 124 and 125 TFEU.
- Second, introducing the Stability and Growth Pact (SGP) establishing deficit and debt ceilings of 3% and 60% of GDP respectively and by applying a tough Excessive Deficit Procedure (EDP) with sanctions to the Member States which did not meet them.

Unfortunately, these SGP rules were not met by Germany and France several times, during the period 2002, 2004, without being sanctioned, because both had achieved a majority of votes, which ended producing the same "moral hazard" situation that both Member States tried to avoid by forcing the SGP to the rest of the euro area members. Later, in 2005, the

solution proposed by the majority of the euro area Member States was to relax the SPG rules using structural deficits instead of nominal and if the recession reached 2% the Member State was exonerated from compliance. The main result of this decision was that, in 2007, when the financial crisis hit the euro area, the average fiscal deficit in the euro area was 6% of GDP and the average euro area debt was 85% of GDP.

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2. EURO AREA 'ONE-SIZE-FITS-ALL' MONETARY POLICY

At the beginning of EMU there was a heated academic debate about a single monetary policy being too tight for low growth Member States such as Germany and Italy and too loose for high growth Member States, such as Spain and Ireland. The issue was not only about growth differentials among Member States, but also inflation differentials, different rigidities in labour and product markets, labour mobility differentials, different industrial structures, productivity growth differentials and the lack of a centralised fiscal transfers system to soften them.

Therefore, in these situations, macroeconomic shocks, either general (to the whole euro area) or asymmetric (to one or several of its members), can end provoking divergent price developments. In this case, a single monetary policy implying a single common interest rate applied to Member States with diverse inflation differentials leads to different real interest rates across Member States.

The same official nominal interest rate applied to Member States with higher than average inflation rates makes them experience lower real interest rates which fuel domestic demand and inflation, while applied to Member States with lower than average inflation rates makes them experience higher real interest rates, which lead to lower domestic demand and inflation, so that divergence grows until monetary union may end breaking down unless they achieve a more uniform rate of growth and inflation.

Nevertheless, there are series of factors, which tend to qualify these arguments:

- *First*, part of this inflation dispersion is explained by the Balassa-Samuelson effect, according to which part of these differentials are the result of differences in the rate at which productivity increases in the various Member States between the tradable and non tradable goods sectors. This effect represents a normal sector equilibrium adjustment process that does not, in principle, require economic policy correction since it does not lead to a permanent worsening of their competitive positions.

Nevertheless, most recent empirical evidence tends to show that productivity shocks tend to have a much less benign effect on inflation differentials within the euro area than would be expected by the Balassa-Samuelson model. The reason might be that the GDP of the catching up Member States is only a small proportion of the euro area total and the one-size-fits-all monetary policy will fail to respond to their productivity shocks.

- *Second*, the real interest rate is computed by deflating interest rates ex post by the observed national inflation rate, when it may be deflated ex ante by the relevant inflation expectations rate over the medium term, because the real interest rate affects economic activity by changing the price of consumption and investment today relative to tomorrow.
- *Third*, it is difficult to know if those relevant inflation expectations for constructing real interest rates are Member State specific or euro area wide, depending on the degree of integration of goods and capital markets. If they are fully integrated euro area wide expectations are the key measure because it reduces the dispersion of real interest rates and vice-versa.
- *Fourth*, in a monetary union there are also two channels that can counteract the effect of potentially diverse real interest rates. The first is the competitive channel: lower inflation in the low real interest rate relative to the others would increase its competitiveness and the demand of goods and services by the rest of the Member States, reducing the negative effect of the lower real interest rate. The second is the risk sharing channel: economic agents can mitigate Member States specific shocks

through portfolio diversification in other Member States. Since the creation of EMU investment among Member States has increased fourfold.

- *Fifth*, according to research done by the ECB, the causes of inflation dispersion are, in nine out of ten Member States, internal factors, such as different wage dynamics not linked to productivity growth, excessive unit labour costs and gross operating surplus components were generally more important than labour productivity mainly due to rigidities affecting the price and wage formation in product and labour markets. The productive sector dimension is also important, because dispersion in service price inflation is higher than in the rest of the sectors.
- *Sixth*, trade and financial integration induce changes in the economic structure and performance of its Member States helping them to soften these supposed divergences and disparities. A common currency helps promoting trade and financial integration which tend to avoid such disparities. Intra euro area trade and intra euro direct investment are very high and growing.

The true fact is that during its first years, monetary union was successful in spite of living with a single monetary policy and a single interest rate and even more, inflation dispersion fell, spreads were extremely low and markets believed in the success of the euro. Nevertheless, the first increase in inflation and real interest rate dispersion came between 2001 and 2005 due to a single monetary policy shock provoked by a large drop in the main refinancing rate by the ECB in order to save Germany and Italy out of a recession and France out of low growth path. The second episode of clear divergence in inflation and real interest rates came from an imported shock, the burst of the great financial crisis in the US, which was transmitted to the euro area and that still continues to be active today.

3. FIRST EPISODE: A BOOM IN 'CATCHING UP' MEMBER STATES

ECB monetary policy sets its interest rate policy based on a euro area inflation rate which is measured by the Harmonized Index of Consumer Prices (HICP) of each individual Member State, weighted by its respective share of GDP of the total euro area GDP, so that monetary policy uses a weighted inflation rate.

In the combined period of 2002-2003, Germany had negative GDP growth (-0.4%) and negative domestic demand growth of (-1.4%), Italy very low GDP growth (0.25%) but higher domestic demand growth (1%) and France medium growth (0.9%) and even higher domestic demand growth (1.2%). At the same time, the combined relative weight of these three largest Member States was two thirds of the total euro area GDP. Moreover, the euro area inflation rate was just 2%, being inflation in Germany, 1.2%, in France, 1.0%, and in Italy, 2.8%.

As euro area weighted average growth was too low and euro area weighted average inflation was only 2%, the ECB reacted quickly by reducing its main refinancing interest rate from an average of 4.5% in 2001 to 2.50% in 2002 and to 2.0% in 2003 and kept this latter level for two more years until the end of 2005. Such a large downward interest rate move helped successfully these three large Member States to avoid a recession or lower growth. In 2006, German GDP reached at 3.7% and its domestic demand 2.7%, French GDP reached 2.1% and its domestic demand 2.4% and Italian GDP reached 2.2% and its domestic demand 2.1%.

But this drop in the ECB main refinancing rate produced a boom in other Member States which were growing faster and had higher rates of inflation. That was the case of Spain which, in 2002, was growing at 2.7% and its domestic demand at 3.2% with an inflation rate of 2.9% and ended in 2006 growing at 4.1% with domestic demand growing at 5.2% with an inflation rate of 3.6%. It was also the case of Greece, which was growing in 2002 at 3.4% with a domestic demand growing at 4.4% and inflation of 2.6% and ended in 2006 growing at 5.5%, its domestic demand at 6.9% and with inflation of 3.5%.

Ireland, which, in 2002, was already growing at 5%, with domestic demand growing at 4.1% and an inflation rate of 5.6%, in 2006, it grew at 5.3% and its domestic demand was growing at 6.3% but with a lower inflation of 2.5%. Portugal was an exception to this rule because started in 2002 with a lower growth rate, 0.7% and negative domestic demand with an inflation rate of 2.8% and in 2006 increased its growth to 1.4%, its domestic demand to 0.8% with an inflation of 3%. As a whole, the euro area domestic demand increased from 0.4% in 2001 to 3% in 2006.

This large and prolonged reduction by the ECB of its main refinancing interest rate raised two main issues with a single monetary policy and a single interest rate for the euro area:

- First, if the same interest rate is applied to Member States with different domestic demand growth rates, because they have different internal problems or different external shocks, macroeconomic imbalances are due to increase.
- Second, if the same interest rate is applied to Member States which have different inflation rates, the large drop of the ECB main refinancing rate takes time to improve the situation of low domestic demand growth and low inflation Member States, because its real interest rate fall less than expected, once inflation has been deducted, which happens to be the rate that is taken into account by households and firms to decide their consumption and investment decisions.

By contrast, the same interest rate produces a boom in those Member States which have higher domestic demand growth and higher inflation rates, because their real interest rate is much lower after discounting the inflation rate. As a matter of fact, in 2006, the real interest rate was negative both in Spain (-1.6%), Greece (-1.5%), Ireland (-0.5%) and Portugal (-1%).

This is the reason why the ECB, in order to help Germany, Italy and, in a lesser extent, France out of their low growth path or recession, because of their large relative weight in the total euro area GDP, produced a credit and consumption boom in Greece and another credit and investment boom in housing and real estate asset prices in Spain and Ireland.

These booms were provoked by their negative real interest rates. Irish and Spanish households found rational to take credit to buy a house given that their wages were growing with the inflation rate and the real cost of the credit was negative. The same can be said about firms from both Member States, which were facing a high domestic demand for goods and services and a good possibility to invest, at a low real interest rate cost, in enlarging production, improving equipment and expanding abroad.

At the same time, those Member States experiencing such a "boom" were buying massively equipment, goods and services from Germany, France, Italy and the Netherlands, helping these lower growth members to grow faster, but at the expense of increasing their own unit labour costs and their own current account deficits.

4. SECOND EPISODE: A BUST IN 'CATCHING UP' MEMBER STATES

Today, these booming domestic demand Member States are now suffering a "bust" because they have accumulated large amounts of debt and large fiscal deficits and they are now being considered, by the Member States in the opposite situation, as "sinners" and "profligates", while those Member States, which profited from the domestic demand boost of the "profligates" and have now large current account surpluses are being considered as "saints" and good "austere savers", which should punish their profligate euro area colleagues.

Who is to be blamed? Nobody is to be blamed, except maybe the "one-size-fits-all" monetary policy conducted by the ECB, which produced a boom in some Member States of the periphery and today is trying to help to soften their inevitable bust. But the ECB acted correctly in both episodes:

In the first one, by lowering its main refinancing rate when inflation expectations were within target and two thirds of the euro area was suffering from very low or negative domestic demand growth. In the second one, by being the lender of last liquidity resort, in order to avoid a disaster in the euro area banks and sovereign debt, given that the "firewall" has not been yet funded properly, two years after it has been created, and the EBA has given a big blow to sovereign debt by forcing euro area banks to provision for the first time in history the only "risk free" asset in existence and by forcing the euro area banks to raise capital to 9% of total assets in a very short period of time, forcing them to reduce credit and assets in their balance-sheets when it is most needed.

Nevertheless, it should be understood that all imbalances are supposed to be bad, not only the negative ones of Italy, Spain, Portugal Ireland and Greece, but also the positive ones of Germany and the Netherlands, because they are each others' "mirror". Even more in the case of the euro area, which is in balance as a whole against the rest of the world so that higher savings than expenditures in Germany and the Netherlands were matched by higher investment and consumption than savings in Spain, Ireland and Greece as well as, in a lesser extent, in Italy and Portugal.

Germany's domestic demand has been flat for more than a decade but it has been helped to grow by the booming domestic demand of the now called "profligate" Member States which were buying its goods and services.

Moreover, being the total euro area in balance versus the rest of the world, the combined addition of the balances of payments of its Member States must add zero. That is, their total current account balances positions plus their total capital balances positions must add zero by definition. The same can be said for the world's balance of payments (because we cannot export to Mars) and even for each individual balance of payments of its Member States.

That is, Germany's sum of its current account and its capital account must add zero as well. Therefore, if its current account has run a very high surplus, its capital account must run a very large deficit. Or, what is the same, its larger receipts from exports of goods and services over its lower payments from imports of goods and services plus its larger receipts from its public and private financial assets abroad over its costs of servicing its public and private foreign liabilities, that is a surplus in its total current account, must be exactly matched by larger public and private capital outflows than corresponding capital inflows in its capital account, in order for its total balance of payments adding to zero.

In sum, the surplus accumulated in its larger exports than imports in its current account has been financed by the capital outflows in its capital account, or what is the same, most

of its large exports bought by the now “profligate” Member States were financed by firms and banks located in Germany.

That means that all euro area Member States are in the same boat and need to understand and help each other if they want the euro area to survive. In order to reduce the present imbalances it must be first understood that: Germany can only receive net capital inflows if it is running a current account deficit and Spain can only support net capital outflows if it is running a current account surplus.

Unfortunately, the “bust” Member States now face two interconnected challenges. On the one side, they need to regain competitiveness so as to effect external adjustment and on the other, they need to correct their large public deficits and/or debts. Addressing these two twin imbalances within a monetary union confront a “Catch 22” because dealing with one imbalance is likely to exacerbate the other.

This is so because in a single currency system regaining competitiveness relies largely on running lower inflation than the euro area average to adjust the real exchange rate. But stronger nominal GDP growth is needed to address fiscal problems and put public debt on a sustainable path. The low inflation or even deflation required to regain competitiveness will reduce growth and exacerbate fiscal difficulties. Therefore, given the interconnection between external and fiscal adjustments in the euro area, it makes sense to consider the challenges of correcting the imbalances jointly. The only way to address both at the same time is through implementing strong structural reforms that will increase potential GDP in the medium term.

But the best way to achieve this joint aim sooner and better is to get some responsive cooperation by the other Member States which are in the opposite situation to them. For instance, it would be highly positive if Germany and the Netherlands, the surplus Member States, expand, at the same time, their domestic demand and their inflation while the deficit Member States reduce their domestic demand and their inflation in order to reduce jointly both imbalances. Germany has finally increased wages; this is great news. The same will happen with their need to achieve a fiscal consolidation to reduce their deficit and debt dynamics, it would help if, at the same time that they do a strong fiscal contraction, those Member States with fiscal surplus and lower debt levels would expand their public consumption and investment.

5. HOW TO IMPROVE 'ONE-SIZE-FITS-ALL' MONETARY POLICY?

A) First, in the euro area, potential **automatic stabilizers** must exist. One could be the price effect, that is, competitiveness. The other could be the income effect, that is, absorption. Persistent high inflation causes national price level to diverge from the average and its result is a loss of competitiveness. As this would reduce domestic demand and output, it is expected to put downward pressure on domestic inflation thereby acting to offset the higher inflation and correct part of the loss of competitiveness.⁵

A euro area Member State with strong domestic activity, caused by low real interest rates, which generate high inflation, may be expected to import from other Member States with weaker economic activity because they have high real interest rates. This effect would raise economic activity and inflationary pressures in the exporting members acting as another corrective effect.

If these two automatic stabilizers are not strong enough, then the internal stability of the euro area must rely, either on exogenous trade effects or on internal euro area income transfers, from high to low activity Member States. These could be exogenously determined by, for example, remittances from migrants from the low growth members living in high growth members, but more realistically, by fiscal policy. If these corrective actions do not take place, then, the sustainability of the euro needs a radical change.

B) Second, a radical change in the euro area only means something normal and common in most monetary unions with a single monetary policy. All those other countries in the world, as large as the euro area, which have become a federation of states, regions or provinces and which have a single monetary policy which needs to be applied to quite different states, regions or provinces, which may suffer from the same problems as the euro area, have also a **single fiscal policy**, which tries to compensate for the problems produced by a single monetary policy applied to heterogeneous Member States.

But in the euro area that decision would require an increase in the political control by the centre and hence a loss of national political sovereignty or, what is the same, of fiscal independence. Nevertheless, this is the only way to avoid political pressures to monetize debt and to avoid government defaults on euro-denominated debt which would raise risk premium in most euro area Member States because the present European budget is too small.

One easy solution to this problem could be to transfer all seigniorage receipts from issuing euro denominated bills to a special central fund or budget, which would be applied to make transfers among Member States when needed. To achieve, as soon as possible, a common euro area fiscal policy becomes crucial, because it can help cushioning the diverging effects of a single monetary policy applied to different Member States, as it has already happened in the period 2002-2005 and is happening again now after the recent big shock derived from the financial crisis.

In sum, the major problem of the euro area now (and hopefully not in the future) is that it does not have the two basic instruments for achieving a proper "macroeconomic policy" as they do have the rest of the large unions of federations in the world. Experience and empirical evidence show that macroeconomic policy is essential to soften cycles and to avoid deep recessions and big booms, and macro policy is composed of fiscal and monetary policies. But, unfortunately, the euro area has been designed only with one leg: monetary policy. If there is no change soon, the euro area will suffer from even more serious problems in the future, if the euro finally survives in its present form.

⁵ For this arguments see also Wickens (2007).

C) Third, the **monetary policy** of the ECB has been designed only to be based and conducted on a single target: inflation, unlike other countries like the UK, the US or Canada, which have also targets for growth, unemployment or domestic demand. This is a second design failure that needs to be taken into account. As this **double target** seems also as large a challenge as that of achieving common fiscal policy, it would make sense, in the meantime, to take back "money growth" to the front line as a target in order to intervene when these two measures start to grow faster than normal in order to avoid again provoking credit and asset booms and busts. This is very feasible, even more now, that inflation targeting is losing support due to its problems dealing with asset bubbles.

D) Fourth, it should be also very convenient to take into account in the euro area **HICP**, not only the traditional basket of goods and services, but also asset prices such as real estate or even financial assets. The US has a proxy in its basic goods basket index which is the Owner Equivalent Rent (OER), that is, a rent imputed to each consumer related to the size and cost of his or her home, which is an indirect way to guess what is happening to real estate asset prices. The same could be done with financial assets although information gathering becomes more difficult.

In the US, the CPI measures price changes of Owners' equivalent rent of primary residence (OER) and Rent of primary residence (RENT) which measure the shelter costs consumers receive from their primary residences. The cost of shelter for renter-occupied housing is RENT and for owner-occupied unit (OER) the cost of shelter is the implicit rent that owner occupants would have to pay if they were renting their homes. The UK is going to introduce this system in its CPI to be able to reflect the price of real estate assets (housing) in the CPI and help the Bank of England to take into account in its monetary policy the evolution of housing prices.

E) Fifth and finally, if nothing is achieved soon in this direction, euro area imbalances, which are, at this moment, very large, will become huge and then the future of the euro area would be at stake. Up to now, there is no agreement in the euro area on any of the needed solutions for the survival of the euro: the "Firewall" is finally in place (after two years!) but still not big enough and the "Eurobonds" are still rejected. If politicians are so blind and irresponsible that they are not able to agree on any kind of fiscal integration to save the euro area, then, there will be only one independent actor, the ECB, which could, in the last instance, try to avoid the end of the euro area.

As Willem Buiter (2012) has shown, the ECB, which has deep pockets, could act as lender of last resort (LOLR) for the euro area banks and euro area sovereigns as well, through three channels: First: through continuous outright purchases of euro area sovereign debt using its SMP program. Second, by continuous lending to euro area banks at subsidized rates with long maturity, together with the financial repression made by euro area banks investing in euro area sovereign debt. Third, by allowing national central banks (NCBs) to lend to the IMF which then would on-lend to the euro area sovereigns.

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