

(Monetary) Policy Options for the Euro Area: A Compendium to the Crisis

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Abstract

Eight years after Lehman, the euro area remains mired in stagnation which stands in stark contrast to the economic recovery in the US or the UK. This chapter takes a look at the macroeconomic policies that have led to this outcome within the particular institutional setup of the euro area and discusses feasible ways forward. It argues that procyclical fiscal tightening has exacerbated the crisis and, given constraints to monetary policy and limits to what structural reforms can deliver, increased the likelihood of becoming stuck in an equilibrium characterized by low growth and low inflation which has contributed to rising anti-European sentiment. Since the required change of direction does not seem imminent, the outright creation of broad money would provide an effective tool to salvage stable prices, growth, and employment. If done diligently, such a monetary policy operation would be squarely within the ECB's remit without compromising its independence or credibility.

Keywords: Euro Area, Fiscal Policy, Monetary Policy, Optimum Currency Area, EMU Governance, Helicopter Money

JEL: E02, E5, E6, F33, F45, F55

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1 Introduction

Eight years after Lehman, the euro area (EA) remains mired in stagnation and internal conflict: Real GDP has barely recovered to pre-crisis levels, double-digit unemployment rates put a strain on many countries' societies and social safety nets, and inflation is hovering dangerously close to negative terrain. The persistent shortfall in aggregate demand threatens to permanently lower potential output due to hysteresis effects as the impact of years of public and private underinvestment as well as long spells of unemployment become engrained in the economy. Disputes about the right monetary and fiscal policy stance, risk-sharing, and fiscal rules are increasing tensions between European countries with growing political backlash everywhere, although for different reasons.

The aim of this chapter is to provide a) a cursory review of the crisis through an assessment of the monetary and fiscal policy response with due regard to prevailing political constraints, and b) a discussion of the few remaining policy options within the institutional confines of the EA.

As I will argue, unconventional monetary policy measures have helped to curb the crisis but failed to reinvigorate growth and get inflation back to target. The ECB has been slower than other major central banks in reacting to the decline in prices and economic activity while subdued credit creation has hampered the effectiveness of unconventional measures at the zero lower bound (ZLB). On the fiscal side, procyclical fiscal tightening has compounded shortcomings in the institutional design of the EA. The broad-based fiscal contraction, which started after 2010, has not only brought the nascent recovery to a halt but failed to achieve its very purpose of reducing public debt ratios in the process. Countries with the greatest need for fiscal impulse have generally been the ones with the least room for maneuver within the stability and growth pact whereas other countries with ample fiscal space have been rejecting the very notion of employing fiscal policy as a macroeconomic stabilization tool to counteract cyclical downturns. Instead, European policymakers predominately pinned their hopes on structural reforms, many of which, however, tend to have small or even contractionary effects in such an environment.

Taken together, the EA is left with few economically and politically feasible policy options. At the current juncture, the most promising, and possibly only, way for the ECB to fulfill its primary objective of maintaining price stability - and to lift nominal demand in due course - may be the outright creation of broad money and purchasing power through direct lump-sum transfers of money to households.

Section 2 provides a brief narrative of the crisis and puts its magnitude

into perspective. Sections 3 and 4 will analyze the different monetary and fiscal policy responses to the crisis, in particular in comparison with the US and the UK. Section 5 will take a broader view on why there has been so much resistance in the EA against using fiscal policy in a more active manner to stabilize the economy and identify the major institutional shortcomings in the design of the EA that have prevented effective policy action. Section 6 outlines three different ways forward for the EA. Following this section's somewhat pessimistic assessment, section 7 presents a discussion of the features and feasibility of the outright creation of broad money as a way out. Section 8 concludes.

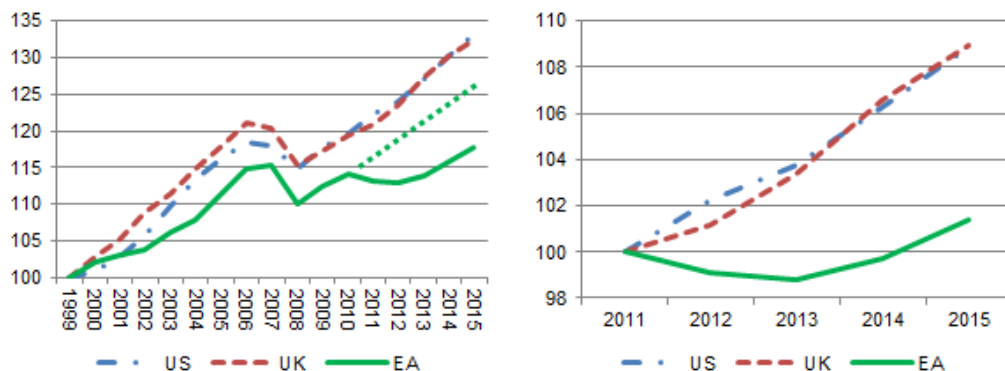
2 Causes and costs of the crisis

In the wake of the global financial crisis, output contracted substantially across the world. In response, central banks eased monetary policies and governments embarked on expansionary fiscal policies, as endorsed by the G20 in November 2008, to cushion the negative shock. In the three major Western advanced economies, the US, the UK, and the EA, economic growth recovered fairly quickly and by 2010 all three currency areas seemed to be well on their way to recovery. However, soon after, the paths of the three economies began to diverge (Fig. 1). Real GDP growth declined rapidly in the EA, accompanied by a conspicuous rise in unemployment (Fig. 2), and exerted negative spillovers on the global economy. If the EA's growth trajectory had resembled that of the US between 2011 and 2015, real GDP in 2015 would have been around 8 p.p. higher. Since nominal GDP in the EA in 2011 amounted to just below €10 trillion, the cumulative difference between 2011 and 2015 of about 22 p.p. translates into a hypothetical loss of €2.2 trillion by the end of 2015.¹ Instead of narrowing, the output gap in the EA actually widened in 2012 and 2013. The output gap is now decreasing in all three currency areas, even though for quite different reasons (cf. Heimberger and Kapeller (2016)).

The collapse of aggregate demand has not only been dramatic in cross-country comparison (Fig. 3) but also in comparison to previous crisis episodes (ECB, 2015). With the onset of the crisis, economic convergence processes between EA member countries have shifted into reverse gear. Differences in unemployment and GDP between several core and peripheral countries are greater now than they have been in 1999 (Estrada et al (2013), King and

¹Due to faster population growth in the US and the UK, the picture looks a bit more benign in per capita terms although the cumulative difference in population growth only amounts to 2.4 p.p. over the same time period.

Fig. 1 Real GDP growth (cumulative)



Source: IMF, Note: The dotted line indicates the extrapolated pre-2008 real GDP growth trend for the EA.

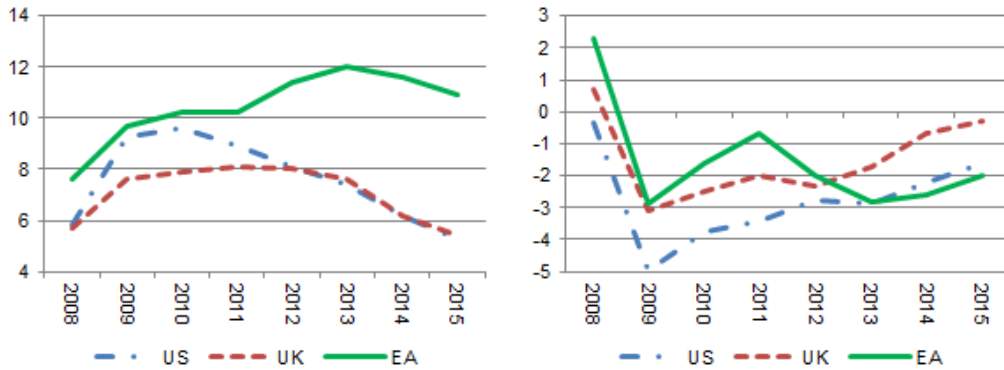
Henry (2014)).

It has been argued that the EA's severe downturn simply constituted the correction of previous excesses. Therefore, potential output may have been overestimated all along and output gaps are - if anything - much smaller. While this is certainly a theoretical possibility and may apply in some cases, such as the real estate market in Spain, it cannot fully explain the weak performance of the currency area as a whole. It does not square with the fall in capacity utilization rates, near negative inflation rates, high unemployment rates, and historically low levels of public and private investment. These observations rather indicate that the economy has not been operating at full potential over the past years.² Accordingly, there is no visible break in trend growth in the years leading up to the crisis or during the initial recovery years of 2009 and 2010. In 2011, however, there is a marked break in trend growth in the EA, while growth continued to trend upwards uninterrupted in the US as shown in Fig. 1.

In a widely shared assessment, Baldwin et al (2015) characterize the crisis as a "sudden-stop with monetary union characteristics" (p. 2) with uncertainty over the future of the monetary union and financial backstops weighing heavily on private investment. Contrary to common perception, public debt was not particularly high in most countries spare Italy and Greece in the

²Jarocinski and Lenza (2016) try to address the uncertainty surrounding different output gap estimation techniques by ranking various approaches according to their predictive qualities. For the best performing model they find an average output gap of around -6% in 2014 and 2015 which is much wider than institutional estimates for this period of between -2% and -3%.

Fig. 2 Unemployment (in % of total labor force, left panel) and the output gap (in % of potential GDP, right panel)



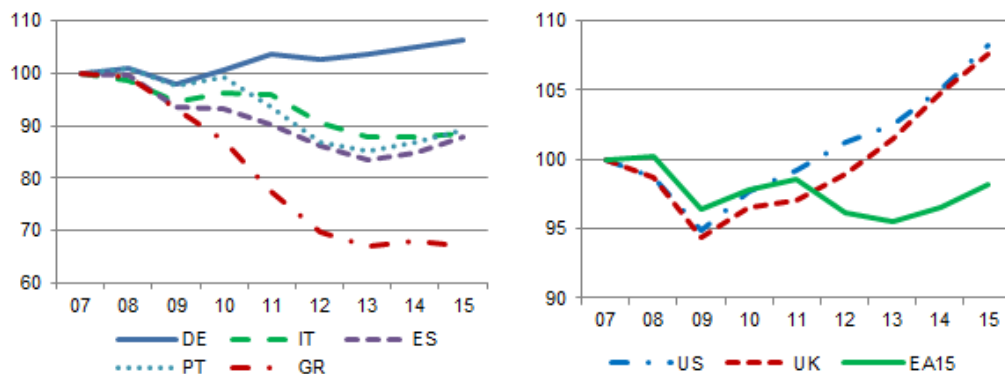
Source: IMF

years preceding the crisis. Public debt ratios rather went up as a result of large-scale bank recapitalizations and the collapse of nominal GDP.³

In the EA, private credit booms (Spain, Ireland) and prolific public spending (Greece) certainly constituted unsustainable developments but these were limited to selected countries and not broad-based across the currency area before the crisis (Illing et al (2012), Lane (2012)). With Greek GDP comprising less than 1/50 of the EA's aggregate GDP, the economic slowdown and persisting weakness of the entire currency area can hardly be attributed to unsustainable Greek public finances. At the same time, the effect of the Greek economic crisis on confidence and financial markets in the EA has laid bare severe shortcomings in its institutional design and the lack of effective crisis-response mechanisms to deal with problems in member countries that have been hit by asymmetric shocks (Mody (2015), see also Sect. 5).

³Therefore, the often used label sovereign debt crisis appears misleading and may even obscure the necessary remedial policy responses (see Sect. 4).

Fig. 3 Real domestic demand in the EA, US, and UK (2007=100)



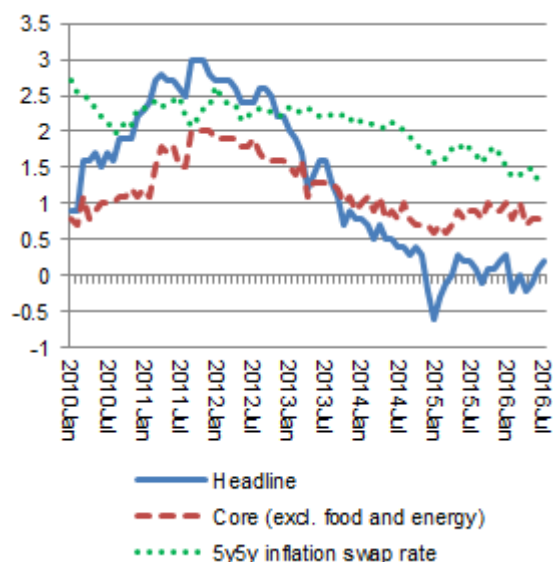
Source: OECD, Note: Real domestic demand is defined as the sum of final consumption, investment and stock building expenditures by the private and general government sectors.

3 Monetary policy during the crisis

The ECB finds itself in a position at the zero lower bound (ZLB) where its conventional and - so far implemented - unconventional monetary policy tools have become less and less effective, increasing the risk of a prolonged period of "lowflation". As inflation rates have been falling far below the ECB's medium-term target of below, but close to 2%, so have inflation expectations as measured by the 5-year, 5-year forward swap rate (see Fig. 4).

The low inflation environment reduces incentives to invest and consume while increasing real public and private debt. With low inflation across the currency area, countries are forced to cut nominal wages to gain competitiveness which is difficult to do. Moreover, it perpetuates debt-deflation processes and comes at the cost of social distress. Higher inflation rates in the economically strong core countries would ease the adjustment burden falling on the weaker economies and contribute to a reduction in macroeconomic imbalances in the EA, eventually benefiting each member country through lower real interest rates and higher overall growth.

Fig. 4 Inflation and inflation expectations in the EA (ann. avg., in %)

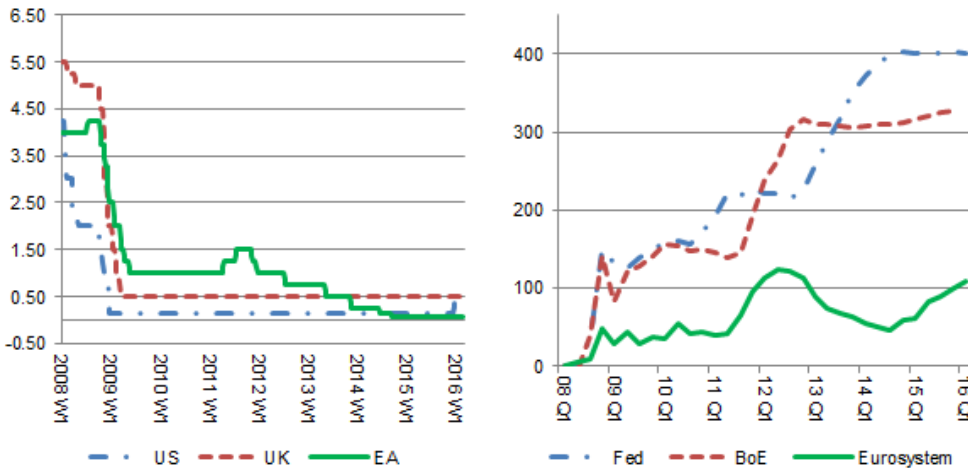


Source: ECB, Bloomberg, Note: Headline and core inflation are measured using the Harmonised Index of Consumer Prices (HICP).

In comparison with the Federal Reserve System (Fed) and the Bank of England, conventional and unconventional monetary policy measures in the EA have generally been implemented later and to a lesser extent, and even included two interest rates hikes in April and July 2011 (Fig. 5). While the Fed increased the size of its balance sheet fivefold between 2008 and 2016, the ECB only doubled the size of its balance sheet over the same period of time and even reduced it between 2012 and 2014. Naturally, an assessment of the different monetary policy stances is complicated by the different institutional features of the currency areas with the euro area comprising several sovereign nation-states that lack a central fiscal capacity and sufficiently high labor mobility. This exacerbates the problem that while a certain policy rate may be in line with a standard Taylor rule for the currency area on aggregate, it may be way too tight for some individual member countries but only mildly too loose for others as [Nechio \(2011\)](#) shows for the euro area. The resulting asymmetric costs and negative spillover effects thus call into question the appropriateness of a simple Taylor for a currency area of such characteristics.

At the height of the crisis in the summer of 2012, Mario Draghi's announcement to do *"whatever it takes to preserve the euro"* and the subsequent Outright Monetary Transactions (OMT) programme to preserve the *"singleness of monetary policy"* ([Draghi, 2012](#)) prevented sovereign bond spreads

Fig. 5 Too little too late? Central bank policy rates (in %, left panel), Central bank balance sheet growth since 2008 (in %, right panel)



Source: Haver, Note: The balance sheet size is measured as total assets of the respective central banks' consolidated balance sheets.

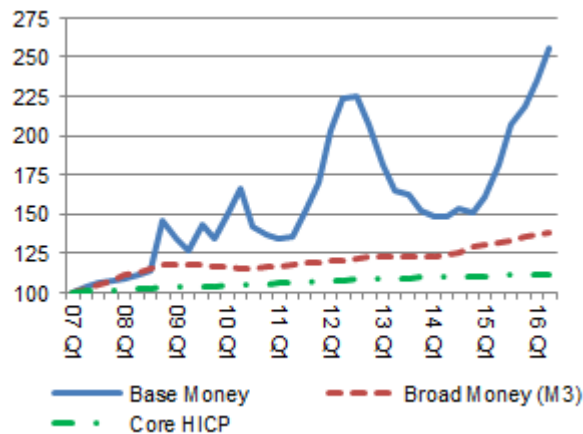
from spiraling out of control. Moreover, empirical evidence suggests that the OMT programme has been beneficial to growth, prices, and credit (Altavilla et al, 2014). Generally speaking, the crisis has shown that a lender of last resort for sovereigns is crucial in a currency area as fragmented as the EA where member countries have given up national monetary policy and face potentially severe fiscal and refinancing constraints (De Grauwe, 2011).

3.1 Quantitative easing and the (inexistent) money multiplier

In the early stages of the great financial crisis, the increased provision of liquidity has helped to prevent funding problems in the financial sector (see for example ECB (2012), Fawley and Neely (2013)). A further expansion of the ECB's balance sheet through quantitative easing (QE), which was eventually implemented with the extended asset purchase programme in January 2015, has been somewhat successful in stemming the downward drift of prices and supporting economic activity (Coenen and Schmidt, 2016). However, this has primarily been achieved through a depreciation of the euro vis-à-vis the EA's main trading partners, shifting global aggregate demand in a classic beggar-thy-neighbor fashion to an economy which already runs a sizable

trade surplus.⁴ Beyond this effect, QE in the EA is ill-suited to stimulate inflation and growth given already very low government bond yields, a corporate bond market which is comparatively small in size, and limited wealth effects due to low marginal propensities to consume of the asset-rich. Most importantly, increases in base money (also referred to as central bank money) have not translated into corresponding increases in broad money (M3) (Fig. 6). Given that bank lending in a fractional reserve banking system is only constrained by regulatory capital requirements (and potentially external financing constraints), the money multiplier hardly ever existed in the first place with the causality running the other way around.⁵ In practice deposits are created through loan origination with banks looking for the required reserves of central bank money after the fact (Kydlund and Prescott (1990), Constancio (2011), McLeay et al (2014)).

Fig. 6 Base money, broad money, and prices (2007 Q1=100)



Source: Haver

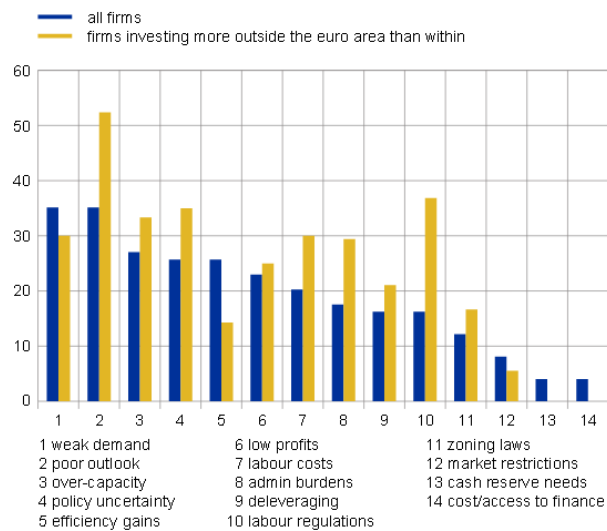
Consequently, commercial banks have in large parts re-deposited newly created base money at the ECB as excess reserves. EA investment and associated credit growth have barely picked up which appears predominately attributable to weak demand and an adverse and uncertain outlook as survey

⁴See Caballero et al (2015) for theoretical underpinnings and further implications.

⁵Borio and Disyatat (2009) point out that "a reserve requirement, depending on its remuneration, affects the cost of intermediation and that of loans, but does not constrain credit expansion quantitatively. (...) By the same token, (...) an expansion of reserves in excess of any requirement does not give banks more resources to expand lending. It only changes the composition of liquid assets of the banking system. Given the very high substitutability between bank reserves and other government assets held for liquidity purposes, the impact can be marginal at best" (p. 19).

data shows (Fig. 7). While broad money growth has accelerated somewhat with the onset of QE, this has been primarily attributable to the acquisition of securities from non-MFI EA residents without discernible effects on the real economy. This is in line with what one would expect of an economy in balance-sheet recession where "you can lead a horse to water but you can't make it drink". In an economic environment that is characterized by broad-based deleveraging by all agents, including the government, output, profits, and prices start to fall which in turn leads to the relative debt burden growing even bigger (Koo, 2011).

Fig. 7 Constraints on euro area investment (% of firms reporting)



Source: ECB (2015) (reprinted)

While the above described factors dispel concerns that QE and other central bank balance sheet expanding operations will lead to runaway inflation (Sheard, 2013), they also prevent QE from fulfilling its very purpose of lifting inflation and inflation expectations back to target (Tenreyro and Thwaites, 2015).

Besides "pushing on a string", QE also carries undesirable side effects: It entails significant redistributive consequences as it disproportionately benefits the asset-rich and can create risks to financial stability. Asset prices become increasingly detached from their fundamental values and depressed fixed income yields entice investors to search for yield through excessive risk-taking, which may precipitate disorderly adjustments further down the road.⁶

⁶That is not to say that the counterfactual, i.e. inactivity, would have been preferable.

3.2 Negative interest rates and end of cash considerations

Similar financial stability concerns apply to negative interest rates which put strains on banks' profit margins given that negative deposit rates are difficult to pass through to end customers (Jobst and Lin, 2016). Moreover, interest rates would have to be lowered substantially to have a tangible impact at the current juncture (Eggertsson and Krugman (2012), Koo (2016)).

The scope of negative interest rates is also limited by the possibility of withdrawing deposits and holding cash. While this could technically be addressed by abolishing large denomination banknotes (Rogoff, 2014) or taxing cash (Agarwal and Kimball, 2015) and be desirable for a number of reasons including the deterrence of crime (Sands, 2016), the recent debate in the EA has shown that it could be a hard sell to the people for the time being despite positive examples of near-cashless economies such as Denmark or Sweden.

3.3 Multiple equilibria and some Fiscal Theory of the Price Level implications

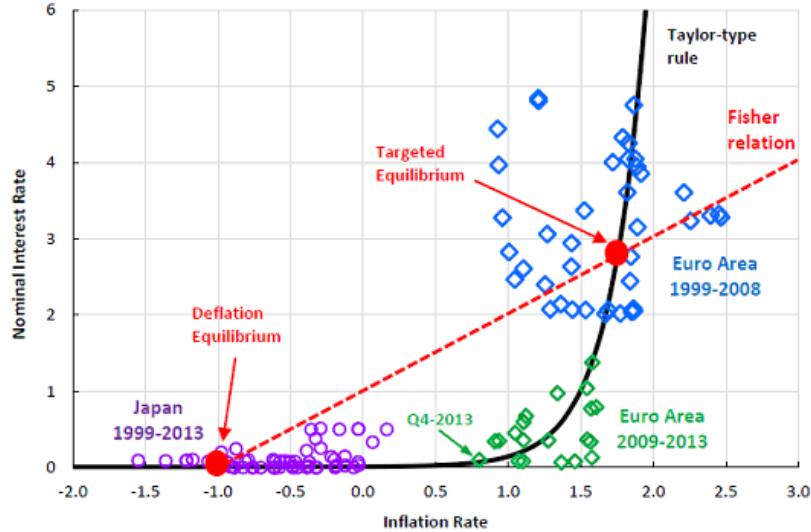
To sum up, in an economy at the ZLB, which is faced with private and public deleveraging, accommodative conventional and unconventional monetary policy measures have by-and-large become ineffective in decisively raising inflation and inflation expectations. If left untended, the EA might well find itself stuck in a fully stable equilibrium of depressed growth and low but steady deflation (Fig. 8).⁷

The Fiscal Theory of the Price Level (FTPL, see Sims (1994)) provides a theoretical framework for explaining this phenomenon. Within the FTPL framework, there is a strong case for fiscal and monetary cooperation at the ZLB, if only to help the central bank achieve its primary objective which is analogous to the need for fiscal restraint during normal times in order to prevent fiscal dominance. Sims (2016) suggests that in order to exit the ZLB the fiscal authorities should pursue an expansionary fiscal policy and commit to not raising taxes or cutting expenditures in the future by an equivalent amount.⁸ However, such cooperation - be it explicit or implicit - is anathema to many European policymakers. Section 7 will come back to this issue and offer a possible way out.

⁷See for example Bullard (2010), Antolin-Diaz (2014), OECD (2016a).

⁸Buiter (2014) formally shows that generally *"there always exists a combined monetary and fiscal policy action that boosts private demand - in principle without limit. Deflation, inflation below target, (...) and secular stagnation are therefore unnecessary. They are policy choices"* (p. 2).

Fig. 8 Multiple equilibria



Source: Antolin-Diaz (2014) (reprinted)

4 Fiscal policy during the crisis

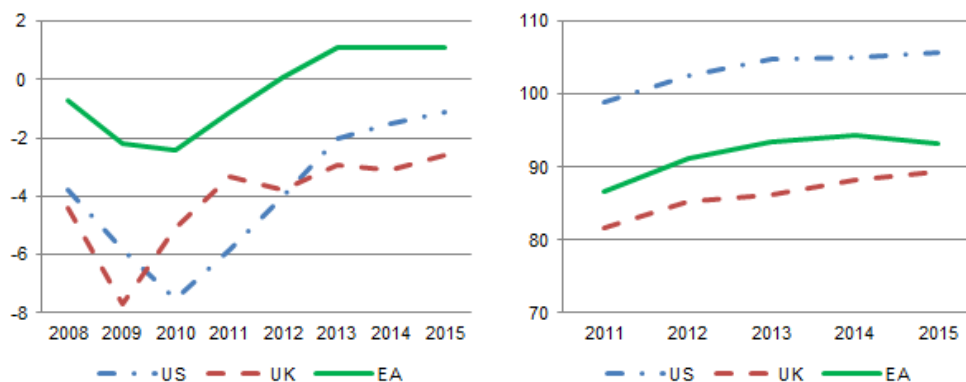
4.1 *Prima facie* evidence

Assessing the fiscal stance is fraught with difficulties due to time lags, endogeneity issues, and measurement problems surrounding unobserved variables (Carnot and de Castro, 2015). Nevertheless, a *prima facie* look at fiscal policy in the currency areas in the post-crisis years reveals conspicuous differences. While deficits were reduced in all three currency areas after 2010, the magnitude of the initial impulse, the cyclical stance as indicated by the cyclically adjusted primary balance, and the absolute size of the subsequent deficits differed. Overall fiscal support appears to have been much smaller in the EA than in the US and the UK. In the US and the UK private sector deleveraging was cushioned by a large increase in public deficits which absorbed and, in parts, reinvested excess savings. By contrast, the adverse macroeconomic impact of private deleveraging in the EA was compounded by fiscal adjustment efforts in an attempt to balance budgets and bring down debt. Yet, between 2011 and 2015 public debt as a percent of GDP in the EA has practically risen in lockstep with that of the US and the UK despite much smaller budget deficits (Fig. 9).⁹ This begs the question whether

⁹The aggregate fiscal contraction in the EA masks considerable cross-country differences. Consolidation efforts have generally been most pronounced in the countries which

higher growth in the EA could have been achieved at little or no more costs to public debt if it had pursued a policy similar to that of the US or the UK.

Fig. 9 Cyclically adjusted primary balance (% of potential GDP, left panel), General government debt (in % of GDP, right panel)



Source: IMF

4.2 Fiscal multipliers and hysteresis in the euro area

"All in all, there are good reasons to believe that the short-term negative demand effects of well-conceived fiscal consolidation are likely to be small if, indeed, they are negative at all. Moreover, it is quite conceivable that consolidation starting in 2010/11 will turn out much less pro-cyclical than suggested by real-time figures for 2010 and beyond" (Rother et al (2010), p. 22).

Unfortunately, the data suggests that this is not how things went. The last years have produced a large body of literature on fiscal multipliers which benefited from refined methodologies and an ever-increasing amount of data. Interestingly, these papers all tend to come to very similar conclusions that can be summarized by the following stylized facts: i) The size of the fiscal multiplier strongly depends on the cyclical position of the economy and may well exceed 1 during economic downturns (Auerbach and Gorodnichenko (2012), Riera-Crichton et al (2015)), ii) the fiscal multiplier is substantially bigger when monetary policy is constrained at the ZLB and households are credit constrained (Holland and Portes (2012), Rannenberg et al (2015)), iii) the type of fiscal expansion and retrenchment matter (Riera-Crichton et al,

displayed the largest output gaps and therefore also exhibited the highest fiscal multipliers (see Sect. 4.2).

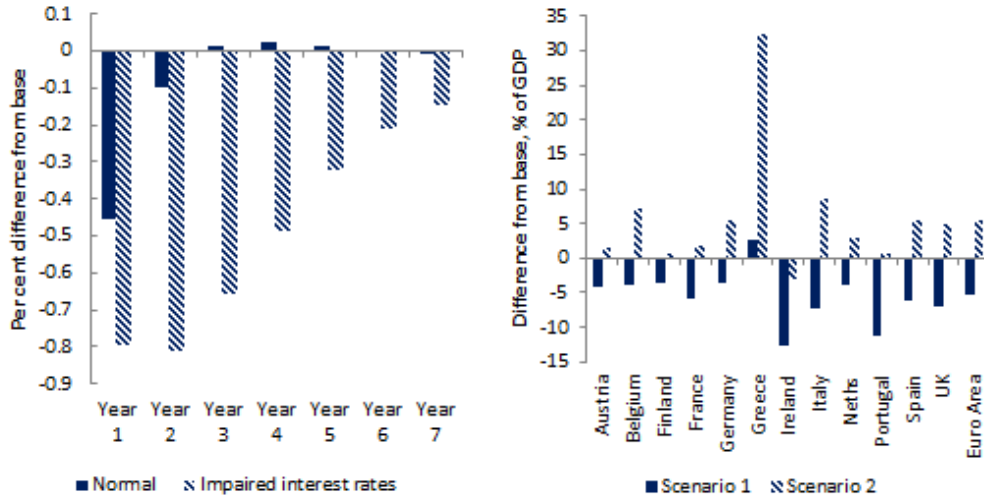
2015), and iv) the timing of fiscal consolidation is crucial in order to successfully reduce debt ratios over the medium term (Jorda and Taylor (2013), in 't Veld (2013)). Taken together, in the case of the EA, the contractionary effects of fiscal adjustment seem to have been significantly underestimated during the crisis years, which in turn may have contributed to ill-informed policy decisions (Blanchard and Leigh (2013), Mody and Mazzolini (2014), IMF (2015b)).

in 't Veld (2013) finds that the adverse growth effects of simultaneous fiscal consolidation in the EA have been mutually reinforcing and exacerbated the crisis with multipliers far above 1. Rannenberg et al (2015) come to similar conclusions, attributing up to 80% of the contraction between 2011 and 2013 to fiscal consolidation. If these fiscal adjustment efforts had been postponed until monetary policy was in a position to accommodate them, the contraction could have been avoided and the debt-to-GDP ratio brought down more rapidly (similarly Fatas and Summers (2015)). From a theoretical point of view, these results should have been little surprising. Holland and Portes (2012) modeled the effects of simultaneous fiscal consolidation in the EA on both growth and debt ratios (Fig. 10). Under the scenario in which liquidity constraints are heightened and the interest rate channel impaired, the negative impact on growth is much more pronounced and debt-to-GDP increases rather than falls.

By analogy, assuming a more expansionary fiscal stance during times of crisis may not only boost output but also turn out to be self-financing and strengthen public finances over the long run since the stimulus is not being offset by monetary policy or subject to supply-side constraints. Moreover, it would help to keep hysteresis effects at bay.¹⁰ A shortfall of aggregate demand, which is allowed to persist over a protracted period, has scarring supply-side effects over the long run (DeLong and Summers (2012), Blanchard et al (2015), IMF (2016b), OECD (2016b)). Long spells of unemployment cause a deterioration of human capital and productivity as skills and employability decline. Likewise, the capital stock is negatively affected by lower investments in upkeep and new equipment. Avoidable hysteresis effects therefore not only contribute to explain the slow pace of the recovery

¹⁰For instance, Krebs and Scheffel (2016) evaluate the return on investment from implementing structural reforms that involve expansionary fiscal policy in Germany and find that *"the reform package [comprising a reduction in the social security tax in the low-wage sector and a publicly financed expansion of full-day school / child care] generates a balanced budget after 7 years and produces a fiscal surplus of 0.11 percent of GDP after 10 years. For any real interest rate (...) lower than 9.37 percent, the proposed reform package is fiscally efficient in the sense that the present value of fiscal deficits and fiscal surpluses is positive."*

Fig. 10 The estimated state-dependent impact of fiscal consolidation on growth (left panel, UK only) and debt-to-GDP (right panel, 2013)



Source: [Holland and Portes \(2012\)](#) (reprinted and edited), Note: Scenario 1 reflects the expected impact of a permanent fiscal consolidation shock of 1% of GDP if the economies were operating near equilibrium with and without an interest rate response. Scenario 2 allows for heightened liquidity constraints and impaired interest rate adjustment.

but also predict lower potential output growth and a level-shift in structural unemployment that can already be seen in the data ([Galí, 2015](#)).

4.3 A grand bargain

As many commentators have stressed, the EA has the chance for a grand bargain that comprises making use of not only low but even negative nominal and real interest rates to fund productive investments. This would instill confidence, which is key in an economic environment afflicted by fear and uncertainty, resuscitate private consumption ([Galí et al, 2007](#)), crowd in private investment ([Hebous and Zimmermann, 2016](#)), and bring up real interest rates in due course. Thereby, it would also help in addressing the concerns of dissatisfied savers in European creditor countries, who have mistakenly been directing their criticism at the ECB.¹¹

¹¹As [Draghi \(2016\)](#) has pointed out, low interest rates are the "symptom of an underlying problem, which is insufficient investment demand" and that "those advocating a lesser role for monetary policy or a shorter period of monetary expansion necessarily imply a larger role for fiscal policy to raise demand and close the output gap faster". This notwithstanding, there is no convincing reason why savers should be entitled to non-

The case for an increase in public investment in infrastructure and education, if only for domestic reasons, is strong (Ch. 3 in IMF (2014), Ch. 2 in IMF (2016a), in 't Veld (2013)). Low long-term borrowing costs, that are hovering well below even the most pessimistic estimates of social rates of return of public investment, should be locked-in as the "Golden Rule" seldom looked so profitable (Ganelli and Tervala (2016), OECD (2016a)). The creation of the European Fund for Strategic Investment (EFSI) has been a step in the right direction although the envisaged multiplier of public funds of 15 seems highly optimistic and the additionality of projects questionable. A direct large-scale public investment program, e.g. financed through the EIB whose bonds could in turn be acquired by the ECB on the secondary market, would seem a lot more expedient to raise private and public investment in the EA (Wolff, 2014). As maintenance and repairs tend to offer the most advantageous cost-benefit profile (IMF, 2014), there are plenty of shovel-ready projects that could be undertaken straight away. Moreover, survey data indicate that such investments would fare extraordinarily well with voters, with roughly 60% of respondents in the EU and even 70% of respondents in Germany stating that they would agree with the statement that "public money should be used to stimulate private sector investment at EU level" (EC, 2015). Naturally, government spending on consumption, the public wage bill, subsidies, and pensions (usually by far the largest position in EA countries' budgets) should be kept strictly in check and brought down over the medium term for both efficiency, fiscal sustainability, and intergenerational equity considerations.¹²

4.4 Why the resistance?

The above mentioned findings beg the question why there has been so much reluctance to engage in greater fiscal support for a currency area that remains plagued by high unemployment, sizable output gaps, and low investment. Critics of a more active role of fiscal policy have pointed to the confidence raising effects of fiscal consolidation, the growth harming effects of high debt, and the difficulties associated with wanting to fine-tune fiscal policy to the state of the economy (Wolf (2012a), Schuknecht (2016)).¹³ However, as the

negative risk-free real interest rates or why the government should supply such an asset in the form of cash (see Sect. 3.2).

¹²Cournède et al (2014) provide a comprehensive quantitative assessment of the impact of various fiscal consolidation measures on growth and public finances which enables them to deduct a hierarchy of consolidation instruments.

¹³Helgadottir (2016) argues that this school of thought has played a significant role in shaping the European policy response to the crisis.

literature review in this section shows, such arguments hardly hold up in the context of the crisis in the EA.

The confidence that fiscal consolidation was supposed to instill in markets in times of crisis generally proved to be elusive in the EA. In anticipation of the contractionary effects of fiscal tightening, faith in a quick recovery dwindled, with investment and industrial production following suit. Indeed, empirical studies suggest that undertaking fiscal consolidation when an economy is undergoing a recession or fiscal stress may actually cause a deterioration in confidence and raise risk premia instead of lowering them (Bachmann and Sims (2012), in 't Veld (2013), Born et al (2015)).¹⁴ Jorda and Taylor (2013) show that once one accounts for different states of the economy, hysteresis effects, spillovers, and endogeneity problems, there is little empirical support left for the expansionary austerity hypothesis in the context of the euro crisis (similarly Guajardo et al (2014), Riera-Crichton et al (2015)). The frequently invoked "success stories" of fiscal consolidation during a recession suggest a very different story upon closer inspection (see for example Perotti (2012) for Ireland, Tilford (2011) for Spain, and Darvas (2011) for Latvia).

Critics of countercyclical fiscal policy in the EA have argued that in view of public debt already exceeding the 60% debt-to-GDP criterion in many member countries, there is no space to conduct such policies. Since elevated public debt endangers debt sustainability and has adverse growth effects, the priority should be to reduce it as fast as possible through front-loaded fiscal consolidation measures. In fact, the empirical evidence suggests that the causal link between public debt and economic growth is not strong and highly dependent on country-specific circumstances as well as debt trajectories (Egert (2015), Pescatori et al (2014), Chudik et al (2015), Panizza and Presbitero (2014)).

An assessment of debt sustainability likewise depends on a host of factors that differ widely across countries.¹⁵ For countries that do have fiscal space, Ostry et al (2015) demonstrate that the welfare maximizing strategy is not to consolidate at all but to simply let growth run its course in reducing debt to GDP.¹⁶ Naturally, if debt has become unsustainable the debt over-

¹⁴Holland and Portes (2012) describe the dynamics as a "death spiral" where falling output leads to rising debt which raises risk premia and, in turn, aggravates the situation even further.

¹⁵For an operationalisation and visualisation of fiscal space across countries see for instance Ghosh et al (2013) who show that while some EA countries are severely constrained (absent fiscal transfers) others still have ample leeway to bolster the EA's economy through fiscal support.

¹⁶In addition, public debt plays a pivotal role in providing a safe and liquid asset which should appropriately be taken into account (Holmstrom and Tirole (1998), Caballero et al (2016)). Needless to say, there is broad agreement over the perils of excessive,

hang should be restructured as quickly and decisively as possible, optimally through outright haircuts, to avoid a drawn-out period of economic pain that will eventually result in the inevitable write-off (cf. [Reinhart and Trebesch \(2014\)](#), [IMF \(2015a\)](#)).

Calls for countercyclical fiscal policy are also occasionally criticized on the grounds of Ricardian equivalence ([Barro, 1974](#)). As with confidence effects, this argument would carry weight if it held true and households were in fact Ricardian. However, empirical support for this conjecture is scarce ([Romer, 2009](#)). Generally speaking, following the rational expectations revolution ([Lucas, 1976](#)), large parts of the macroeconomic literature have long emphasized the neutrality of money and a reduced or even no role at all for discretionary government intervention within the standard RBC model (cf. [Kydland and Prescott \(1982\)](#), [Barro and Gordon \(1983\)](#)), which can result in highly misleading policy descriptions ([Romer, 2016](#)). New Keynesian DSGE models, that incorporate various types of frictions and imperfections, tend to qualify many of these findings and even turn them on their head.

Given that much of the concerns over employing fiscal policy countercyclically in the EA cannot be plausibly explained on macroeconomic grounds, one is left with two arguments that advocate for fiscal consolidation in the midst of a recession: moral hazard and political economy considerations, including the respect for fiscal rules in its own right. Going easy on fiscal consolidation may ease pressures to reform the economy and once the recession recedes policy makers may find it more difficult to push through with unpopular measures. Alas, it is doubtful whether the benefits of insisting on front-loaded fiscal consolidation during a recession in order to increase incentives for faster implementation of structural reforms outweigh the macroeconomic costs of such an approach. Besides, it seems questionable on moral grounds to leverage structural reforms through the economic hardship of sovereign countries which tends to affect the weakest members of society ([Kentikelenis et al, 2014](#)) rather than the ones in charge of economic policy. In order to deal with the time-inconsistency problem, fiscal rules should be designed accordingly (Sect. 5.2) while the implementation of structural reforms should be accompanied by (conditionally provided) macroeconomic policy support (Sect. 5.3). This, however, requires addressing deeper-seated shortcomings in the institutional design of the EA which will be discussed in the following section.

unsustainable credit growth, both in the public and the private sector.

5 Shortcomings in the institutional design

Soaring spreads in the EA associated with concerns over the potential break-up of the EA, structural problems, and a belated monetary policy response compounded fiscal policy mistakes. But all of these factors have been fanned by flaws in the institutional design of the EA which has initially allowed for unsustainable developments before inhibiting an effective policy response to the crisis.

This section identifies the following main, interdependent shortcomings in the design of the EA: 1) an absence of classic optimum currency area (OCA) prerequisites, 2) the supremacy of rules over discretion, 3) the resulting over-reliance on structural reforms, and 4) the lack of effective (and self-reflective) crisis-response mechanisms.

5.1 No Optimum Currency Area

The dangers of creating a monetary union without having the necessary pre-conditions in place have long been known.¹⁷ Proceeding anyhow for political reasons put the cart before the horse and left the EA ill-prepared to deal with crisis events as the hope that greater integration would follow suit turned out to be futile. Classic OCA theory posits that a currency area optimally displays high mobility of labor and capital as well as price and wage flexibility (Mundell (1963), McKinnon (1963)). Moreover, it should exhibit a fiscal transfer mechanism in order to be able to address asymmetric shocks, e.g. in the form of a large common budget (de la Dehesa, 2011). However, labor mobility in the EA is hampered by cultural and linguistic barriers, there is substantial price stickiness given nominal wage rigidities, and fiscal transfers are - barring few exceptions such as EU funds which barely make up 1% of total EU GDP - ruled out by design ("no-bail-out clause" as stipulated by Art. 125 of the Treaty on the Functioning of the European Union). EFSF and the ESM transfers to weak member states struck by large negative shocks have so far largely constituted the rollover of existing debt, albeit at favorable conditions, and provided only little support to finance current expenditures or investment.¹⁸

¹⁷As Sims (1999) predicted, "the fiscal institutions as yet unspecified will have to arise or be invented in order for EMU to be a long term success" (p. 1). See also Feldstein (1992).

¹⁸Rocholl and Stahmer (2016) calculate that "only €9.7 billion or less than 5% of the total amount of €215.9 billion being distributed in the 1st and 2nd programme were not used for debt-related payments and bank recapitalizations and thus directly contributed to the Greek fiscal budget" (p. 4).

In the absence of national monetary policies and the exchange rate to facilitate adjustment, trying to achieve internal adjustment through nominal wage cuts and fiscal consolidation is extremely difficult above being inherently deflationary and contractionary. True fiscal risk-sharing mechanisms are therefore indispensable in order to stabilize economies in the wake of negative shocks (see Sect. 6.1). As such risk-sharing mechanisms involve the extension of common liabilities, they would have to be accompanied by a commensurate delegation of sovereign responsibility to the European level.

5.2 Rules reign supreme

Having given up monetary policy as a national policy tool to stabilize the economy in a cyclical downswing, currency area member countries have to rely on domestic fiscal policy to a large extent. However, despite improvements at the margin, the current set of fiscal rules hamstringing an effective countercyclical fiscal policy response for countries when they need it most, i.e. when GDP and revenues shrink and automatic stabilizer related expenditure pressures rise. Consequently, the stability and growth pact, whose deficit and debt ceilings have essentially been set ad-hoc on political rather than economic grounds, has attracted criticism for having obstructed a quick recovery in the EA.¹⁹ Attempts to introduce more flexibility in the rules in order to give countries greater leeway in employing fiscal policy as a stabilization tool have faced considerable resistance from countries that consider revisiting or relaxing rules as a certain way to perdition.²⁰ Interestingly, the deficit bias that the stability and growth pact was meant to address has been hardly visible in the data anymore over the past years which have been characterized by procyclical tightening of fiscal policy in the EA (Carnot and de Castro, 2015). In order to address moral hazard concerns effectively, it would be more expedient to put the right incentives into place ex-ante through rules that mandate surpluses during good times (when imposing fines for failure to comply is both more feasible and sensible) and allow for supportive fiscal policy during bad times. Portes and Wren-Lewis (2014), for example, offer concrete suggestions in this regard that i.a. involve a fiscal council to provide independent advice and supervision, contain strong countercyclical elements with public debt acting as a shock absorber, take

¹⁹See for example Buiter (2003), Tilford and Whyte (2011), Eyraud and Wu (2015), Mody (2015).

²⁰Dullien and Guerot (2012) ascribe the phenomenon of rigid rules and righteousness reigning supreme over discretionary pragmatism to ordoliberalism as a guiding principle among leading German policymakers, even when it goes against the country's own very interests as Wolf (2012b), Evans-Pritchard (2014), and Fratzscher (2014) note.

monetary policy constraints into account, and allow for rolling deficit targets.

5.3 Over-reliance on structural reforms

The consequence of foregoing fiscal policy as a macroeconomic policy tool with monetary policy being constrained at the ZLB is that all hopes are being pinned on structural reforms as a panacea to jump-start growth and generate employment. But given that the effects of structural reforms tend to be small or even contractionary over the short run (Eggertsson et al, 2014), especially when not accompanied by supportive macroeconomic policies (IMF, 2016b), it seems dangerous to rely on structural reforms alone to get out of a slump induced by a shortfall in aggregate demand.

While all EA countries would surely benefit from targeted structural reforms over the medium run, the medium run could become ever more distant in the absence of fiscal support. Given that the implementation of structural reforms is politically easier to accomplish during times of crisis, granting short-run relaxation of fiscal constraints in exchange for the implementation of structural reforms could create policy space for the needed macroeconomic support to fully reap the growth potential of these reforms (Eichengreen and Evans, 2015).

5.4 Lack of adequate crisis-response mechanisms

The inception of the ESM in 2012 has been a major step forward. Yet, in view of the considerable amounts of time, energy, and political capital that European policymakers have invested in discussing and devising responses to the crisis in Greece since 2010, it is astonishing how little progress has been made in achieving the desired objectives of assisting the country in overcoming its economic crisis and putting debt on a sustainable path. To the opposite, public debt has soared from 126% of GDP at the end of 2009 to around 180% by 2015 despite an enormous fiscal adjustment. And while Greece has made considerable strides in reforming its economy (although plenty still remains to be done) (OECD, 2016b), the impact on growth or investment has barely been discernible so far. In view of the previously mentioned empirical findings, these outcomes are little surprising. What has been surprising, however, is the seeming refusal among European policymakers to candidly assess the macroeconomic premises of the adjustment programmes, e.g. during the negotiations to the third one in the first half of 2015 within the Eurogroup, although proposals for a workable adjustment programme had been abound (see for example Papaioannou et al (2015), Eichengreen

and Wyplosz (2016)).²¹ This stands in stark contrast to the IMF, which has acknowledged earlier mistakes, e.g. pertaining to excessive and premature demands for fiscal consolidation and the design of the Greek adjustment programme (IEO of the IMF (2014), IMF (2015b), IEO of the IMF (2016)). Consequently, the IMF has rejected demands for its renewed participation in the absence of major debt relief concessions (IMF (2015a), IMF (2015a)) while calling European demands for a 3.5% primary surplus in Greece from 2018 on "higher than what we consider economically and socially sustainable" and "potentially counterproductive" (Lagarde, 2016).

One explanation for the widespread phenomenon of resisting the reconsideration of earlier positions could be the presence of pervasive "groupthink" Janis (1971). According to Ball (2012), "when groupthink occurs, individuals go along with what they perceive as the majority view or the view of a group leader" (p. 15).²² Domestic political economy constraints may have constituted another important contributing factor. Eventually, EA policies, such as those directed towards Greece, have to be approved by national governments and, ultimately, by their electorate. While public opinion itself is not immutable to the communication of members of the government, certain messages might be considered more 'marketable' than others, especially when blame can be apportioned to people outside their electorate. Although enhancing risk-sharing mechanisms and providing greater fiscal support upfront is likely to be pareto-improving as the likelihood that debts will be repaid increases, election cycles, myopia, and economic illiteracy pertaining to the endogeneity of outcomes tend to favor short-termist "kicking the can down the road" policies. In summary, *"many influential observers recognize the bind in which Europe finds itself. (...) Yet existing rules, institutions and political bargains prevent effective action"* (Baldwin et al, 2015).

²¹The claim that there has not been an alternative to front-loading fiscal consolidation in the early stages of the euro crisis lacks substance. Countries that had lost market access such as Greece certainly did not have the means for less contractionary fiscal policy in their own right (or run any deficit for that matter). Nonetheless, an earlier and more comprehensive debt restructuring and the provision of greater bridge financing by the European partners up front could have enabled them to do so and obviated the need for further rescue packages by reducing the overall costs of fiscal support in net present value terms. Hence, decisions to assume a large part of Greece's liabilities towards private creditors and to demand large front-loaded fiscal adjustment measures reflected political choices rather than binding economic constraints.

²²Kahnemann (2011) and Thaler and Sunstein (2008) offer further psychological explanations that i.a. allude to status quo bias and loss aversion, hampering a change in thinking and action.

6 Three ways forward

6.1 Greater integration

Although the EA does not constitute a classical OCA, flaws in its design can be corrected. In order to address the problems lined out in Sect. 5.1, the monetary union should be completed through fiscal union to the largest possible extent. This implies the establishment of risk-sharing and fiscal transfer mechanisms with the necessary corresponding transfer of sovereignty.²³ Optimally, greater fiscal union would involve the creation of European safe assets such as Eurobonds or ESBies (von Weizsäcker and Delpla (2011), Brunnermeier et al (2016)), the introduction of common automatic stabilizers such as a euro-area wide unemployment insurance and deposit insurance, as well as a mechanism for discretionary transfers as a response to asymmetric economic shocks (Benassy-Quere et al (2016), Corsetti et al (2016)). It is important to note that intra-European fiscal transfers do not constitute a zero-sum game but rather lead to stronger and more robust growth in all European economies. Furthermore, it would be desirable to establish a debt-restructuring framework that lays out insolvency rules for sovereigns in order to deal with excessive debt overhang in individual member states and future possible crisis events (Panizza, 2013). Likewise, the increased usage of GDP-linked bonds could help in addressing debt sustainability concerns (Blanchard et al, 2016). Fiscal rules should be revamped in order to deter procyclicality (see Sect. 5.2).

Greater integration would facilitate the implementation of structural reforms, ameliorate the negative effects of internal devaluation, and allow for a gradual reduction of fiscal and current account deficits instead of harmful front-loading of fiscal adjustment. On the monetary side, the implicit liabilities of Target2-balances would be reduced quasi-automatically as confidence returns without the need for OMT to ever being put to the test after all. Unfortunately, the experience of the crisis years has so profoundly damaged trust in the European project among Europe's citizens that public support for greater delegation of sovereign responsibilities to the EU level and the establishment of risk-sharing mechanisms seems scarce (see Sect. 6.3).

²³Legrain (2014), for instance, lines out a blueprint after surveying a number of different reform proposals.

6.2 Of pegs and pain: (Partial) break-up of the euro area

A number of economists have endorsed the idea of Greece leaving the EA due to the social and economic costs of the country's adherence to the currency area and the difficulties associated with internal devaluation.²⁴ An exit could have been accompanied by technical assistance, balance of payments support, and humanitarian aid. It is therefore not unfathomable that Greece would have been better off outside the EA had it exited and defaulted early on,²⁵ given that the arguable first best of timely and comprehensive default on private creditors' claims, greater fiscal support upfront within the currency union, and a supportive aggregate fiscal stance in the EA has not been attainable. However, while "Grexit" has been a recurrent theme in the policy debate, it has so far been averted amid concerns over the integrity of the monetary union, including potential repercussions on the rest of the EA as speculative attacks on the "weakest" members of the currency union (in terms of fiscal sustainability) could ensue. Overall, a scenario of partial break-up would be surrounded by high uncertainty and hard to assess quantitatively.

6.3 Status Quo: Muddling through

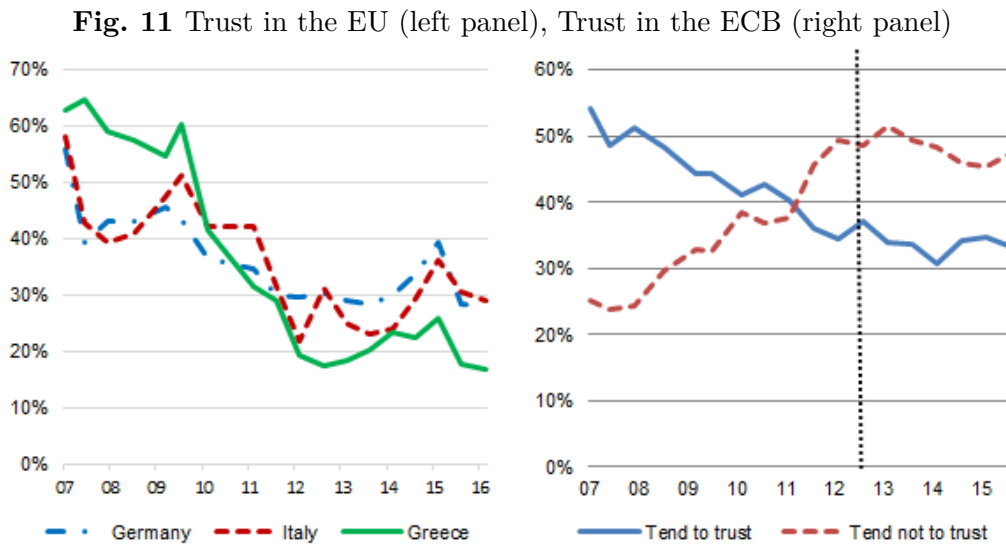
Over the past few years, EA leaders have been putting up just enough political capital, commitment, and funds to keep the EA together but not enough to make sufficient progress towards a currency union that can prosper over the long-term. The uncertainty looming over Greece and the future of the EA has barely receded, holding back domestic drivers of growth. Given little political appetite for greater integration and fiscal support, the EA appears to be stuck in an environment characterized by mass youth unemployment in debtor countries, stagnant growth in creditor countries, and growing animosity on both sides over the perpetual rollover of debt.

Alarmingly, survey results suggest that about 80-90 % of young people in Spain, Portugal, or Greece feel "marginalised by the economic crisis, that is to say excluded from economic and social life" ([Eurobarometer, 2016a](#)). [Pew \(2016\)](#) reports that about two-thirds of survey respondents in Spain,

²⁴See for instance [Feldstein \(2012\)](#), [Rogoff \(2012\)](#), [Sinn \(2015\)](#), [DeLong \(2015\)](#). [Schmitt-Grohé and Uribe \(2011\)](#) estimate the costs of adhering to a fixed currency regime following large negative external shocks. In their baseline scenario, they find that such adherence leads to an increase in unemployment by more than 20 percentage points and median welfare costs of between 4 and 10 percent of consumption per period.

²⁵[Levy Yeyati and Panizza \(2011\)](#) study the costs of sovereign defaults and find that default events tend to be associated with the beginning of economic recoveries.

France, and Italy disapprove of the EU's handling of the economy. As Fig. 11 illustrates, trust in the EU and the ECB has been falling rapidly, although it recovered somewhat shortly after the OMT announcement.



Source: Eurobarometer (2016b), Note: The charts display the percentage of respondents in selected member countries (left panel) / in the EU (right panel) who said they "tend to trust" the EU (left panel) / ECB (right panel). The dotted line in the right panel indicates the timing of the OMT announcement.

Currently the economic and monetary union is doing the opposite of what it was designed to: it is driving the people of Europe apart instead of bringing them together. Populist, and often extremist, anti-European parties are on the rise again as the unabating crisis has been fueling nationalist sentiment.²⁶ Increasing dissatisfaction with the European project, in large parts attributable to poor economic policies (Wren-Lewis, 2014a), and a corresponding unraveling of European identity and solidarity are putting the European idea at risk.

Monetary policy appears to have done its best - within the legal and political confines - to contain the contraction in prices and growth since Mario Draghi took office. While asset purchases and interest rate cuts have largely run their course as outlined in Sect. 3, the ECB has one powerful option left which should be added to its monetary policy toolkit as I will argue in the following section.

²⁶de Bromhead et al (2012) describe how allowing depressed economic conditions to persist has been conducive to the rise of right-wing extremist parties during the Great Depression. See also Ponticelli and Voth (2011).

7 Outright creation of broad money

At the current juncture a strong case can be made for coordinating monetary and fiscal policy to decisively raise inflation back to target and stimulate nominal demand (see Sect. 3.3). While such coordination is still anathema to many policymakers (see Sect. 7.5 for associated concerns and remedial measures) and would therefore face substantial political resistance, there is one legally feasible measure with comparable impact that could be implemented by the ECB: the outright creation of broad money through a permanent increase in base money which is directly transferred to households (henceforth OBM).

7.1 The idea

Direct lump-sum transfers of money from the central bank to private households constitute a special case of "helicopter money" and the one closest to [Friedman \(1969\)](#)'s original parable. It has gained a steadily growing number of followers among academics and the financial press alike, after having been thrust back into the policy debate by [Bernanke \(2002\)](#).²⁷

The term helicopter money as it is commonly used can refer to outright monetary financing of the deficit (including tax cuts or increased expenditures), permanent QE (with acquired bonds never being sold and expiring bonds being replaced by new ones), or direct transfers to households, the corporate sector or financial institutions. Out of these options, direct transfers to households are arguably the most equitable and effective while not violating the prohibition of monetary financing as stipulated in Art. 123 of the Lisbon Treaty and Art. 21 of the ECB statute.

As described in Sect. 3.1, despite the expansion in central bank money, broad money creation has been subdued against the backdrop of muted bank lending. OBM would circumvent the dependence on commercial banks in creating purchasing power through loan origination by transferring money directly to private households, e.g. in the form of cash, cheques, or bank transfers which would in turn stimulate consumption and thereby raise aggregate demand (see also Sect. 7.2). While the modes of implementation differ in operational terms, they all achieve the desired result: an outright increase in broad money and a corresponding boost to nominal GDP through an increase in both real GDP and prices, allowing the economy to escape from the liquidity trap irrespective of whether Ricardian equivalence holds or not

²⁷See for example [Reichlin et al \(2013\)](#), [Galí \(2014\)](#), [Muellbauer \(2014\)](#), [Blyth and Lonergan \(2014\)](#), [Caballero et al \(2015\)](#), [Turner \(2015a\)](#), [The Economist \(2016\)](#).

(Buiter (2014), Turner (2015b)); see also Sect. 7.5). Welfare losses associated with a too tight monetary policy, which is constrained by the ZLB, can therefore be overcome by OBM, effectively providing a "free lunch" (cf. Wren-Lewis (2014b)). While OBM cannot overcome real capacity constraints, it has real effects through bringing actual output back to potential as formally shown by Galí (2014) and Arbatli et al (2016). Hence, the larger the initial output gap, the greater the real effects of OBM. As the output gap closes, prices will react more strongly to increases in broad money than real GDP, enabling an exit from the ZLB.

7.2 Magnitude

As regards the potential magnitude of OBM, a simple back of the envelope calculation may provide some preliminary insights although the calculation naturally rests on several simplifying assumptions. Muellbauer (2014) has suggested providing each household with a transfer of €500 which may be too low to decisively raise nominal GDP. Under conservative assumptions of a marginal propensity to consume (MPC) of 0.4,²⁸ a multiplier of 1, and given a nominal GDP in the EA of around €10 trillion and a population of 340 million, it would *ceteris paribus* require a transfer of €735 to every citizen of the EA to boost nominal GDP by 1%.²⁹

The total sum distributed by the ECB under this highly hypothetical example would amount to €250 billion, which would be well below the Eurosystem's consolidated conventional loss absorption capacity (CLAC) of around €440 billion as of end-2015.³⁰ The more relevant measure in this context, the consolidated non-inflationary loss absorption capacity (NILAC), which comprises the discounted gains from seigniorage as well as the outstanding stock of currency in circulation, is much higher still and conservatively es-

²⁸Estimates from the Australian "cash splash" of 2009, in which the government sent households below certain income thresholds lump-sum transfer payments suggest that the MPC has been roughly 0.4 (Leigh, 2012). In the case of OBM, the MPC would likely be higher given that the transfer would not add to national debt, alleviating potential Ricardian effects.

²⁹Naturally, some of the additional demand would go into imports, which would provide a boost to economies outside the currency area. This, in turn, would stimulate exports, albeit to a smaller degree. If net demand for foreign currency increases in response to OBM, the euro would depreciate and prove a boon to the export sector. However, it is also possible that net demand for euros would increase due to confidence effects associated with OBM among foreign investors.

³⁰The CLAC consists of capital and reserves (€97 billion) as well as revaluation accounts (€346 billion), which constitute unrealized gains on gold, foreign-exchange reserves, and securities (ECB, 2016).

estimated by [Buiter and Rahbari \(2012\)](#) to be around seven times the size of the CLAC in 2012. Needless to say, the central bank should try to stay away as far as possible from such an upper limit to prevent the disanchoring of expectations but it is nevertheless useful to be cognizant of the dimensions involved. In trying to lift the economy out of its low growth, low inflation equilibrium a prudent approach is therefore warranted. If necessary, further rounds of OBM could be implemented, contingent on the distance to the ECB's inflation target.

7.3 Balance sheet dynamics

On the central bank balance sheet, the OBM induced increase in liabilities could be offset by losses to equity (Fig. 12), which could turn negative in due course. Since a central bank cannot become insolvent in a fiat money system, the negative equity position could technically be carried over indefinitely.³¹

However, since excess reserves (stemming from OBM for example) tend to be remunerated, once the economy exits from the ZLB, losses could theoretically increase in an explosive manner and create the (political) risk of policy insolvency ([Del Negro and Sims \(2015\)](#), [Hall and Reis \(2015\)](#)). In response, the central bank can sell assets, raise reserve requirements, and change or even stop the remuneration of reserves. The central bank can also choose to gradually reduce the negative equity position with future seigniorage gains.³² Considerations regarding the timing and size of seigniorage gains should not stand in the way of monetary policy decisions that may be necessary to achieve the ECB's primary objective of maintaining price stability.³³

Empirical evidence indicates that countries with low levels of central bank equity also tended to fare worse in ensuring price stability ([Adler et al, 2016](#)). At the same time, low levels of central bank equity often reflect overall institutional weaknesses, in particular regarding central bank independence. As a number of advanced economies' central banks with negative equity such as those of the Czech Republic, Chile, or Israel, have demonstrated, there are

³¹Using Monte Carlo simulations [Bindseil et al \(2004\)](#) show that "*central bank capital still does not seem to matter for monetary policy implementation, in essence because negative levels of capital do not represent any threat to the central bank being able to pay for whatever costs it has. Although losses may easily accumulate over a long period of time and lead to a huge negative capital, no reason emerges why this could affect the central bank's ability to control interest rates. (...) One could therefore conclude that the model implies a perfect dichotomy between the central bank balance sheet structure and its ability to fulfill its monetary policy tasks*" (p. 23).

³²For further discussion and Ricardian implications see Sect. ??

³³The present value of future seigniorage gains is even likely to increase under OBM as seigniorage grows when economic growth, inflation, and interest rates pick up.

no economic reasons³⁴ why manageable amounts of negative equity should impact negatively on a central bank's independence or ability to conduct monetary policy in the presence of robust monetary frameworks and high institutional quality (cf. BIS (2009), Benecka et al (2012)).

In the case of the Eurosystem, the ECB can likewise operate with negative equity in principle. The ECB statute's Art. 33 on the allocation of net profits and losses states that *"in the event of a loss incurred by the ECB, the shortfall may be offset against the general reserve fund of the ECB and, if necessary, following a decision by the Governing Council, against the monetary income of the relevant financial year in proportion and up to the amounts allocated to the national central banks (...)."*³⁵

If the central bank wished to avoid negative equity, it could, for instance, create a deferred asset in line with standard practice at the Federal Reserve Bank of New York.³⁶

Fig. 12 Stylized Central Bank Balance Sheet after the Outright Creation of Broad Money

Assets		Liabilities		Assets		Liabilities	
Claims on MFIs		Transfer to HH (CIC and bank reserves)		HH perpetuity		Transfer to HH (CIC and bank reserves)	
FX Reserves		Currency in circulation (CIC)		Claims on MFIs		Currency in circulation (CIC)	
Gold		Bank reserves		FX Reserves		Bank reserves	
Government Bonds		Other liabilities		Gold		Other liabilities	
Other claims and assets		Revaluation accounts		Government Bonds		Revaluation accounts	
		Equity		Other claims and assets		Equity	
		Loss on equity (negative)					

Note: Selected possibilities to balance the central bank balance sheet: 1) Negative equity (left panel); 2) Acquisition of zero-coupon perpetuity from households (right panel).

Another - although rather exotic option - would be to acquire a perpetual zero-coupon perpetuity from each individual household in return for

³⁴There might be psychological ones which should be negligible for all practical purposes (Turner, 2015b).

³⁵Bunea et al (2016) provide an overview of how various central banks handle profit distribution and the accounting of losses.

³⁶See for example Carpenter et al (2013): *"When Reserve Bank income is not sufficient to cover interest expense, realized losses, operating and other expenses, a deferred asset is created. (...) [T]here is little guidance as to the whether or not there is a limit to the potential size of the asset. It may be plausible to assume that it would not be allowed to exceed the value of all future earnings, possibly in present discounted terms, given the fact that it is paid down through future earnings"* (p. 13).

the transfer which would have to be created for this very purpose (see "HH perpetuity" in Fig. 12). This could take the form of a non-interest bearing promissory note, redeemable at the option of the household (akin to British consols). Since no rational household would ever exercise this option, the perpetuity does not effectively constitute a liability for households and simply serves to counterbalance the central bank's balance sheet on the asset side (comparable to the "trillion dollar coin" proposal in the US).

7.4 Squarely within the remit

OBM does not require cooperation between monetary and fiscal authorities beyond possible administrative support to facilitate the transfer (e.g. through the provision of social security or tax identification numbers). For OBM to be effective one has to assume, of course, that the government respects the independence of the central bank in pursuit of its primary objective and does not choose to offset any increase in broad money and aggregate demand through a corresponding fiscal contraction.

It is important to note that even if one does not share the assessment that the EA suffers from a shortfall of aggregate demand, OBM may not only be the only but also the single most effective policy instrument to re-anchor expectations and achieve inflation rates of below, but close to, 2% over the medium term (cf. Sect. 3.3). Besides serving the Eurosystem's primary objective of maintaining price stability, OBM would also contribute to the Eurosystem's broader objectives of supporting the EU's general economic policies which i.a. comprise full employment and balanced economic growth (EU, 2010). Hence, it appears appropriate to categorize OBM as a monetary policy instrument rather than expansionary fiscal policy through the central bank backdoor, falling squarely within the ECB's remit.³⁷

7.5 Associated concerns and criticism

One of the most commonly heard arguments against any form of helicopter money is that it could compromise central bank independence and put its credibility at risk (Issing, 2015). However, as Sims (2013) notes, "central bank independence" should not mean that all connections between monetary and fiscal policy authorities are severed". While unconstrained helicopter money

³⁷It deserves mentioning that any central bank operation has fiscal consequences. Even the central bank's most conventional tool, changing the main refinancing rate, will invariably alter refinancing conditions for the government. It is therefore more instructive to distinguish policies according to their intent rather than according to which other policies would have yielded a similar outcome.

in an environment of weak institutions and already low central bank independence would certainly be problematic, neither argument holds up to greater scrutiny in the context of the EA. Given that OBM would be fully compatible with the mandate of the ECB as lined out above and that the underlying decision making process would be governed by the same considerations that guide every other monetary policy decision, the risk that the ECB would become susceptible to political pressure is as remote as it is now.³⁸

Besides concerns over central bank independence, critics of unconventional monetary policy measures frequently argue that accommodative monetary policy would disincentivize efforts to implement structural reforms ([German Council of Economic Experts, 2014](#)).³⁹ Yet, trying to promote structural reforms through monetary policy constitutes the very attempt to infringe on the ECB's independence as it would entail compromising its price stability mandate ([Bini Smaghi, 2014](#)).

Notwithstanding these general considerations, in order to safeguard the ECB's independence explicitly, the implementation and scale of OBM should be communicated as being strictly contingent on inflation dynamics, implying that further rounds of OBM would only be considered if inflation and inflation expectations continue to fall short of 2% over an extended period of time. As regards credibility, the ECB's credibility would, if anything, benefit from implementing a monetary policy instrument such as OBM that would raise both inflation and inflation expectations back to target. Likewise, negative central bank equity does not impact on the central bank's credibility as long as it retains policy solvency as several advanced economies central banks have shown (see Sect. 7.3).

In terms of redistributive consequences, OBM would be more equitable than any other monetary policy measure, in particular QE, which disproportionately benefits the asset-rich, as each citizen would get the exact same transfer, irrespective of her portfolio structure and net creditor or debtor status. Since the redistributive effects would be held to a minimum, there is no reason why the central bank would somehow lack the democratic legitimacy to employ OBM as a monetary policy tool. Naturally, there will be redistributive second round effects once OBM starts achieving its desired medium-term inflation target. However, these redistributive effects are attributable to having an inflation target which is greater than zero (for good reason), and not to the monetary policy instrument which helps to achieve

³⁸If one was opposed to OBM on grounds of this argument, then, by analogy, the central bank should never lower interest rates either because that might tempt politicians to call for further rate cuts in due course.

³⁹Although this does not necessarily have to be the case, see Sect. 5.3.

this target.⁴⁰ Besides, the ECB does not operate outside the democratic process as governing council members are appointed through elected officials with the obligation to fulfill the Eurosystem’s mandate without regard to redistributive consequences (that any monetary policy decision entails).

Another criticism comes from [Borio et al \(2016\)](#) who argue that in order to claim the benefits that the newly created bank reserves [R] provide, the central bank would have to give up its primary monetary policy instrument. Once the economy picks up following the ”additional expansionary impact” of helicopter money that [Borio et al \(2016\)](#) concede, the central bank would have to refrain from raising interest rates in order to avoid either imposing a tax on the private sector (by not remunerating R) or engaging in debt-financing after all (by remunerating R with funds that would have otherwise accrued to the government). This argument, while technically sound, overlooks a key point. Regardless of whether the central bank chose to remunerate R after exiting the ZLB or not, it would have still achieved the intended purpose by definition since otherwise it would not have to take a decision on the remuneration of R after all. Due to a mix of real and price effects, aggregate nominal demand would be higher than in the equilibrium that would have resulted under inaction. Whether that involves lower transfers to the fiscal authorities, who could have achieved a similar outcome but failed to act on their own, or a tax on the private sector in the equivalent nominal (but lower real) amount of the initial stimulus in the future is irrelevant for the effectiveness of OBM, irrespective of whether households (and banks) are Ricardian or not.⁴¹

Lastly, concerns regarding the central bank’s ability to control future inflation because the newly created reserves do not come with a corresponding asset, that can be sold to withdraw liquidity from the system, neglect two facts: First, due to QE the Eurosystem is awash with assets, that far exceed the amount of any hypothetical OBM operation, which can be readily sold if need be. Second, if the central bank wishes to refrain from raising interest rates, which would imply remunerating R at the central bank’s expense, it can opt to raise and not remunerate reserve requirements which currently stand at 1% in the EA. While not posing a constraint on bank lending at low levels (see Sect. 3.1), reserve requirements become binding at very high levels since

⁴⁰For an empirical investigation of the redistributive consequences of inflation see [Doepke and Schneider \(2006\)](#) who find that moderate rates of inflation tend to benefit young and middle-class households.

⁴¹Contrary to government debt, interest on and repayment of OBM is state-contingent (besides being optional). Therefore, even if OBM would be perceived as a liability of the public sector, its present value is lower than an equivalent amount of government debt by definition. See also [Turner \(2016\)](#) for a discussion of this argument.

banks face a haircut on the collateral they provide to obtain central bank money to meet reserve requirements. Therefore, a strictly circumscribed and diligently communicated boost to broad money cannot lead to runaway inflation beyond central bank control.⁴²

7.6 Historical precedents

Opponents of helicopter money have invoked the uncertainties that would surround such a seemingly radical monetary policy measure. Still, there are a few examples of helicopter money in advanced economies which had the desired effect of supporting nominal GDP without creating runaway inflation or compromising the credibility of the central bank such as Japan in the 1930s or Canada between 1935-75 ([Ryan-Collins, 2015](#)).

Notably, Germany's reunification experience and ensuing currency union can be characterized as a fiscal operation conducted by the central bank. Eastern German Ostmark were exchanged against the much more valuable Western German D-Mark at a rate of 1:1 up to a certain limit per household and 2:1 beyond. While the associated costs were not borne by the central bank but allocated to the "Ausgleichsfonds Währungsumstellung" (Currency Conversion Equalisation Fund), which stood at around DM 58 billion (around €30 billion) as of end-1994, the skewed conversion rates led to a rise in broad money and inflation, thereby monetizing parts of the created liabilities ([Zinsmeister, 2009](#)).⁴³

7.7 Where do we stand?

There are signs that the idea of helicopter money has transcended from the academic realm into the policy debate. ECB president [Draghi \(2016\)](#) has called it an "interesting concept", while ECB chief economist [Praet \(2016\)](#) has specified that in principle the ECB "can issue currency and (...) distribute it to people", although calling it "an extreme sort of instrument". Likewise, Federal Reserve Chair Yellen has expressed her view that under certain extraordinary circumstances monetary and fiscal policy cooperation "is something that one might legitimately consider" ([Gillespie, 2016](#)). All of these statements reflect the recognition that "ultimately, [helicopter money] is a question of political desirability rather than technical or legal constraints"

⁴²See also [Sheard \(2013\)](#), [Sims \(2013\)](#), [Buiter \(2014\)](#)). For a discussion of the usage of reserve requirements as a policy tool see [Gray \(2011\)](#).

⁴³Different to the one-off character of helicopter money, however, the subsequent permanent conversion of wages (and pensions) at an overvalued exchange rate harmed competitiveness and employment.

(Saravelos et al (2016), p. 12). Whether OBM will be added to modern central banks' monetary policy toolkits remains to be seen. As this section has shown, it might be a worthwhile addition.

8 Conclusion

The ongoing crisis in the euro area is one of historic dimensions and endangers the European project. In this chapter I have tried to put the developments in the euro area since the beginning of the crisis into perspective by looking at why the economic performance in the euro area has so conspicuously fallen behind that of the US and of the UK. I have argued that front-loaded fiscal consolidation in the EA when the recovery was just gaining ground has not only stifled growth but also failed to bring down public debt ratios. Far from improving, confidence deteriorated as aggregate demand collapsed and depressed private investment further. Instead of using historically low nominal and real interest rates to fund investments that exhibit a high social rate of return and crowd in private investment in due course, e.g. into infrastructure and education, euro area governments have mostly been cutting down on such while keeping up much less productive current spending.

The ECB's accommodative monetary policy measures have helped to curb the fall in output and inflation, although they have generally been implemented later and to a lesser extent than in the US and the UK.

The often touted panacea of structural reform is no macroeconomic policy tool to stabilize an economy characterized by deleveraging forces and large output gaps. As structural reforms take time to unfold their growth potential and may even be contractionary in the short run, they should be sequenced carefully and accompanied by supporting macro policies.

Macroeconomic policy mistakes have been promoted and compounded by flaws in the currency area's institutional design which is in dire need of a major overhaul. Given the political obstacles to achieving the first-best solution of greater integration, involving common fiscal institutions and revamped, less procyclical fiscal rules, the euro area finds itself stuck in a bad equilibrium characterized by low growth and inflation, high unemployment, and elevated public debt.

In view of this analysis, the burden of conducting macroeconomic policy in the euro area falls on the ECB as the only institution with the de-facto power and potential willingness to act. As conventional and existing unconventional monetary policy tools have run out of steam at the zero lower bound and increasingly pose risks to financial stability, the outright creation of broad money through lump-sum transfers from the central bank to private

households may well be the most effective measure going forward to achieve the Eurosystem's primary objective and lift the economy out of its slump. Carefully calibrated within the legal confines of Art. 123 and strictly conditioned on inflation dynamics, the outright creation of broad money would fall squarely within the ECB's remit and has the potential to strengthen its credibility. The redistributive effects of such an operation would be orders of magnitude smaller than those stemming from QE. If communicated clearly, the outright creation of broad money should therefore be much more palatable to the public than bond-buying programs such as QE or OMT, negative interest rates, or the abolition of cash.

Little is lost by addressing the threat of stagnation head on. As [Kennedy \(1961\)](#) once remarked "there are risks and costs to a program of action. But they are far less than the long-range risks and costs of comfortable inaction". Idleness is no option for Europe anymore.

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