Annals of the Fondazione Luigi Einaudi
Volume LI, December 2017: 131-158

WHEN KEYNES GOES TO BRUSSELS: A NEW FISCAL RULE FOR THE EMU?

Francesco Saraceno *

ABSTRACT

The Economic and Monetary Union (EMU) institutions are consistent with a New Consensus that emerged in the 1980s, limiting the role for macroeconomic policy to short term stabilizations by means of rules. I will argue that the policy inertia induced by the Consensus may have played a role in the disappointing performance of EMU economies even before the crisis.

The crisis of the Consensus, and the debate on secular stagnation, proved that Keynesian and possibly persistent excesses of savings over investment may hamper growth. This has put fiscal policy back to the center of the scene, and given the *General Theory*, at eighty, a second youth. I will argue therefore that the EMU fiscal rule should be amended to allow semi-permanent negative government savings. I will finally argue that a modified Golden Rule may serve this objective, and allow EU-wide policy coordination. This seems the only reasonable reform with some chances of being adopted by the EU divided policy makers.

Keywords: Fiscal Rules, Fiscal Policy, EMU, Golden Rule, Secular Stagnation, Keynes, Policy Mix.
JEL-codes: B22, E02, E62, E65.

Introduction

The annual gathering of central bankers at Jackson Hole is usually closely watched, because it announces policy changes, and in general it reveals the mood of central bankers. The August 2016 meeting was no ex-

* OFCE-SciencesPo, Paris and LUISS School of European Political Economy, Rome. Address for correspondence: francesco.saraceno@sciencespo.fr.

Paper presented at the IMF OCP Brunel "Global Labor Markets workshop", Paris, 1-2 September 2016, and at the conference "The Relevance of Keynes to the Contemporary World. Eighty Years since The *General Theory*", Fondazione Luigi Einaudi, Torino, 13-15 October 2016.

ISSN: 2532-4969
doi: 10.26331/1019

ception. Even if no major policy shift was announced, a cry for help came from the symposium, as central bankers made it clear that they were running out of ammunitions in fighting deflationary pressures and global stagnant growth (Fleming 2016).

A number of issues seem to worry, more or less explicitly, central bankers. *First*, while conventional and unconventional monetary policy measures have somewhat worked, in that they made (almost) impossible for financial institutions to hoard cash and to restrain from lending, they were almost completely ineffective in boosting private sector confidence and in restarting credit demand. *Second*, having brought almost to the limit their capacity to fight deflation, central banks are increasingly worried by the possibility of a new shock, that would find them powerless. *Third*, and related, monetary policy cannot fight the battle alone, and a bolder role for other policies is called for. In particular, fiscal policy is the "new" kid in town, back from the cave were it had been buried in the 1980s after the rational expectations revolution.

But two other questions, for the moment hidden underneath the surface, seem to contribute to the central bankers' sleepless nights. The first, related to the new debate on secular stagnation is: what if we live in a "new normal", made of low potential growth and near-zero equilibrium interest rates? What would the consequences be for the policy mix? This worry is compounded by a second unspoken question which is how to heal the sick man of the world economy, the EMU.

The gloomy mood of central bankers reflects among other things a lack of theoretical framework of analysis. The pre-crisis consensus that framed macroeconomic policy has been challenged by the crisis, most notably in two respects: (a) monetary policy dominance is over; and (b) the superiority of rules over discretionary policies is challenged.

This paper will try to assess the consequences of this reshuffling of the consensus for the EMU, that is built precisely on both fiscal and monetary rules, and on monetary dominance. In section 1 I will highlight the building blocks of the consensus, and show how they impregnated the institutions that were designed with the Maastricht Treaty of 1992 to govern the European Union. Section 2 will then argue that these institutions forced policy inertia, and that this policy inertia should be considered when assessing the relative macroeconomic performance of the EMU, as compared with the US, both before and after the crisis. Then, I will tackle the issue of secular stagnation (section 3), and of its implication for fiscal policy. This will lead me, in section 4, to argue that the EMU should adopt a looser fiscal rule, most notably excluding investment from deficit figures. This rule, I will argue, may also become a tool for coordinating and implementing much needed EU-wide industrial policies.

1. The Crisis and the End of Consensus Macroeconomics

1.1. *The Pre-Crisis Consensus*

After the rational expectations revolution of the 1970s, New Classical Macroeconomics, and most notably Real Business Cycle (RBC) Theory, dominated the intellectual (and political) landscape for more than a decade. The main innovation of these models with respect to the pre-Keynesian neoclassical theory was the incorporation of rational expectations in a Walrasian framework, in which demand disturbances played no role. Within this stream of research, income fluctuations where the optimal result of optimizing agents' reaction to supply side disturbances ("technological shocks", as broadly defined).

RBC models nevertheless ran into methodological and empirical problems, such as the fact that long business cycles seemed difficult to explain if agents were rational and fully informed. Furthermore, the ambition of RBC models to explain co-movement in macroeconomic variables turned into a major problem when the approach was shown not to fit some basic regularities, such as the fact that interest rates, or the propensity to save, during slumps move in the opposite direction than predicted by the theory (Phelps 1990: 86-90).

Together with the difficulties of RBC models, emerged the attempt to recover Keynesian features in microfounded models, in which imperfections of various nature could cause departures of demand from natural output (see e.g. the papers collected in Mankiw and Romer 1991). The economics profession therefore evolved towards what might be called a "New Consensus" that blends a short run with Keynesian features, and a long run where supply-side factors are dominant (Blanchard 1997). This consensus has a representation in standard macroeconomics undergraduate textbooks, that are usually split in two independent parts.[1]

The typical tools of the New Consensus, widely used by academics and by international institutions, are the Dynamic Stochastic General Equilibrium (DSGE) models, that embed in a RBC structure a number of nominal rigidities and imperfections: these models most commonly feature price and wage rigidities, accompanied by the existence of a number of consumers who are unwilling or incapable of maximizing utility over time, the so-called Non-Ricardian consumers. Rigidities in turn allow for the appearance of significant demand shortages, and hence of Keynesian features,

---

[1] It may be noticed that the crisis also triggered an interesting discussion on how macroeconomics should be taught (Blanchard 2016).

that are nevertheless limited to the short run. Furthermore, central banks have an impact on the economy, because rigid prices fail to instantaneously adapt to nominal interest changes and the real interest rate therefore can be at least in the short run impacted by monetary policy choices. Going through the many facets of the New Consensus is well beyond the scope of this paper[2]. What is relevant for our purposes is that the New Consensus has developed a number of results that are independent of the features of individual models:

1 The baseline model is the Real Business Cycle model in which fluctuations are determined by the optimal reaction of agents to supply side shocks, most notably technological shocks, and are hence to be considered "natural". Market imperfections and rigidities may cause this natural equilibrium to be different from the Paretian first-best. Rigidities and imperfections may have different sources: efficiency wages, staggered price and wage setting, incomplete markets, search and bargaining, information asymmetries, imperfect competition, liquidity constraints or coordination problems, are some of the many imperfections that can be embedded in otherwise standard rational expectations models to yield departures of the natural rate from the Pareto optimum.

2 To increase the natural growth rate of the economy, and to make the natural equilibrium converge to the first best, policy needs to eliminate the rigidities through the very same *structural reforms* that were called for by New Classical macroeconomists.

3 Market imperfections, mainly nominal rigidities, also cause short run departures from the natural growth rate, to yield demand-driven business cycle fluctuations in the short run. More precisely, when the economy is hit by a shock, imperfections prevent agents from reacting to the shock optimally, remaining on the natural output path.

4 The short run deviations from natural output tend to be reabsorbed in the medium run by markets through (mostly price and wage) flexibility.

5 Discretionary macroeconomic policies are ineffective to stabilize economic activity. Rules are to be preferred because they make policy predictable and hence easier to embed in agents' expectations.

6 Monetary policy should be preferred to fiscal policy mostly for two reasons. First, it is less subject to lags in decision and in implementation; second, it can be delegated to independent and technocratic bodies that are not subject to political biases and capture by vested interests. Furthermore, monetary policy aimed at stabilizing inflation will in most cases also keep

---

[2] A good starting point for the interested reader are two papers by Olivier Blanchard (2000, 2009); see also Woodford (2009).

output at its optimal level (what Blanchard and Gali 2007 call "divine coincidence"), thus making any further policy intervention unnecessary.

7 Short run fluctuations of natural output have little, if any, influence on long run growth, as there is no reason for supply side determinants to be affected by temporary deviations from the optimal path.

The scope of this paper is not to ask "how Keynesian" is the New Keynesian theory that lies beneath the New Consensus. It is enough to notice here that the answer would be "not much", as the model only allows temporary deviations from a framework in which market forces spontaneously tend, if left alone, towards a first (or second) best that constitutes the best of possible worlds.

In particular, and this is instead very relevant for the argument of this paper, the New Consensus embraces the RBC rejection of sustained and persistent excesses of savings over investment, which were the central feature of Keynes' *General Theory* (1936). Precisely the impossibility to generate such persistent demand shortages, explains the fact that, after the crisis the New Consensus has been challenged in many quarters, including by economists that contributed to its development.

1.2. *EMU Institutions and the New Consensus*

While monetary policy may play some role in smoothing the cycle, the New Consensus removed fiscal policy, even in the short run, from the set of tools available to policy makers. Theoretical and empirical work on fiscal policy, therefore, focused on the design of "optimal" rules (see Kopits and Symansky 1998) aimed at preventing opportunistic behaviours and excessive (distortionary) weight of the government in the economy.

The New Consensus shaped European institutions, that were put in place with the Maastricht Treaty in the early 1990s. The Treaty centered European economic governance on the rejection of active macroeconomic policies:

- Embracing the "divine coincidence", the ECB only was given a mandate for price stability, furthermore with considerable autonomy in pursuing it.
- Furthermore, the Stability and Growth Pact (SGP) forces countries to rely solely on automatic stabilizers to cushion economic fluctuations. The SGP requires countries to balance their balance over the cycle, which means that only cyclical deficits are allowed.
- Last, but not last, the Maastricht Treaty gives the Commission a strong saying in competition policies, with the objective of favouring structural reforms and removing obstacles to the efficient working of markets.

By contrast, in the United States, the Full Employment and Balanced Act of 1978 (the Humphrey-Hawkins Act) amended the Federal Reserve Act in establishing a dual objective of price stability and full employment for monetary policy. At the same time, attempts to introduce a fiscal rule for the US government have never been successful. This is not surprising as the US Federal government has an important stabilization role to play in absorbing asymmetric shocks hitting the States that, with the exception of Vermont, have very strict fiscal rules.

I will argue in the next section that these institutional differences may have played a role in explaining the relatively poor performance of the EMU before and during the crisis.

1.3. *The Consensus: Unfit to Deal with the Crisis*

The global financial crisis has shaken the consensus in many respects. Excessive private debt emerged as a trigger of the crisis when the problems of a relatively small segment of credit markets (subprime loans) triggered a race to recapitalization and deleveraging, and then a generalized fall in the price of financial assets. The difficulties of the financial sector were then transmitted to the real economy through credit tightening by banks in difficulty, and the fall in demand by consumers and businesses whose wealth had evaporated.

Following the unfolding of the crisis, that started with a near-collapse of the financial sector, the first shortcoming of DSGE models to be pointed out was their inability to embed meaningful financial sector behaviour, and the appearance of bubbles. When the crisis eventually evolved into a recession, *via* the credit crunch, it is the macroeconomic properties of the New Consensus framework that came under scrutiny. The balance-sheet recession (Koo 2011), a massive negative wealth effect, could hardly be understood, and tackled, by means of the New Consensus supply-based models. There was much more than nominal and real rigidities could account for, in the dramatic demand shortage of 2008-2009.

Two of the New Consensus policy results were therefore challenged by the crisis[3]: *First*, the predominance of rules over discretionary policy, as the downturn was so deep that monetary rules quickly hit the zero-lower-bound (ZLB), and fiscal rules stopped applying because of the exceptional circumstances embedded in the Stability Pact. *Second*, monetary dominance ceased to exist, and fiscal policy made it back, at least temporarily, into the policy makers' toolbox.

---

[3] In fact, the crisis did challenge most tenets of the New Consensus (see e.g. Ostry, Loungani, and Furceri 2016 and Saraceno 2017). Here, I will focus on the ones that are relevant for the argument of the current paper.

The New Consensus monetary dominance is the reason why most countries, when the crisis began in 2007-2008, favoured monetary policy to try to contrast the recession. The prompt intervention of central banks through massive credit to financial institutions, was successful in that it prevented the meltdown of the financial sector. This injection nevertheless, was ineffective to restart the economy. In the process of deleveraging, banks, businesses and households shrank their balance sheet, thus reducing liquidity at a faster pace than credit was increased by central banks, which was therefore not turned into demand for goods and services (Adrian and Shin 2010). The *liquidity trap*, came back from history books[4], and made monetary policy loose traction, as was clear by the end of 2008. In line with Keynes' prescriptions, fiscal policy then took the witness; in the spring of 2009, most advanced and emerging economies implemented massive stimulus plans that supported demand and put the economy on a recovery path, even if at the price of a generalized deterioration of public finances.

The coordinated fiscal expansion was fruitful, and is credited with triggering the recovery (Eichengreen and O'Rourke 2009). But as soon as the acute phase of the crisis was over, the fear of deficits and debt caused a quick reversal of the policy stance. The turn towards austerity was particularly brutal in Europe (see section 3.4), where the crisis in peripheral countries (Greece, Ireland, Portugal, Spain) was interpreted as a fiscal profligacy story, and therefore "cured" with fiscal consolidation. The US were not exempt from a policy reversal; the sequester of 2013 marked the beginning of a fiscal contraction that many judged premature. Nevertheless, as we will see in the next section, the timing of this contraction made it remarkably less destructive than in the EMU.

2. EMU vs USA: A Tale of Policy Inertia

2.1. *Chasing the United States*

The two largest world economies, the United States and the Economic and Monetary Union, constitute a convenient natural experiment in that they have similar economic "fundamentals" (productivity, wealth, financial structure), but also different institutional settings. In particular, as we said, while in the EMU fiscal policy is constrained by a rule, in the US fiscal authorities retain full discretionality.

---

[4] Japan in fact stands to show that the liquidity trap should never have been relegated to history books. The decade-long Japanese stagnation was nevertheless considered by the Consensus at the apex of its influence to be specific of an inefficient institutional system.

Table 1 reports yearly average growth rates of GDP and CPI, together with average unemployment over the same periods. Focusing for the moment on the crisis period (2008-2015), one may notice that not only the US outperformed the EMU in terms of real performance (GDP growth and unemployment). But they also managed to keep inflation closer to the 2% target that the two central banks share.

Table 1: Selected Macroeconomic Variables, 1999-2015

		1999-2015	1999-2007	2008-2015
CPI	*USA*	2.4%	2.8%	1.5%
	EMU	1.9%	2.2%	1.3%
GDP	*USA*	2.3%	2.9%	1.4%
	EMU	1.3%	2.2%	0.1%
UNEMP	*USA*	6.1%	5.0%	7.6%
	EMU	9.5%	8.6%	10.4%

Source: European Commission - Fred
GDP and CPI: Average Yearly Changes. UNEMP: average
EMU is the weighted average of EMU initial 12 members

If we look in particular at unemployment, the US outperformed the EMU since 1992 (figure 1). True, unemployment during the crisis increased remarkably more with the crisis; but since then it has decreased to the pre-crisis levels.

The US economic model has problems that just a casual look at some macro variables cannot account for (instability and inequality, just to name two). But it is undeniable that, from a macroeconomic viewpoint, it showed strong dynamism, together with resilience during the crisis, that the EMU has cruelly lacked.

The New Consensus highlights US market flexibility as an explanation for the difference in performance. The excessive rigidity of EMU markets, in particular labour markets, is a drag on firms' dynamism and willingness to hire workers. On top of that, as we saw, it reduces the capacity of the system to return to the natural output following a shock. Tackling this rigidity would therefore allow to reduce incentives' distortions, and to convergence towards a first best equilibrium. How strong is this argument?

2.2. *Market Flexibility: Overrated?*

It is hard to deny that labour and product markets in the Eurozone could be streamlined and made more efficient. Yet, available evidence is

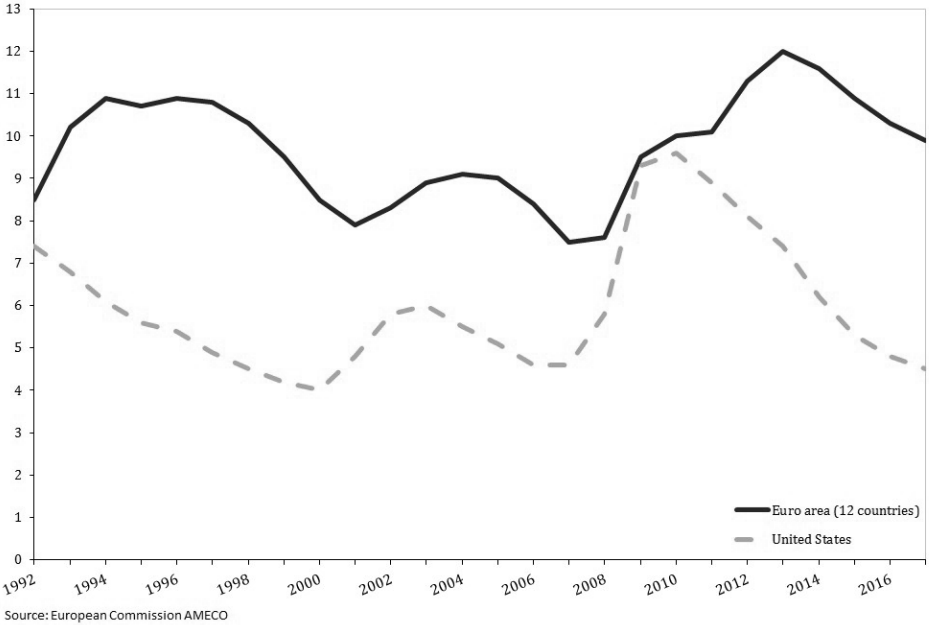


Figure 1: Unemployment Rates - 1992-2016.

somewhat at odds with the New Consensus narrative that reforms are all that is needed to improve economic performance.

In particular, if we look at labour markets, narrative does not take into account recent developments. Table 2, taken from Creel and Saraceno (2010), reports the evolution of the Employment Protection Legislation (EPL) index, computed by the OECD.

Table 2: Employment Protection Legislation Index

	1985	1995	2005	2008		1985	1995	2005	2008
Austria	2.21	2.21	1.93	1.93	Italy	3.57	3.57	1.82	1.89
Belgium	3.15	3.15	2.18	2.18	Netherlands	2.73	2.73	2.12	1.95
Denmark	2.4	1.5	1.5	1.5	Portugal	4.19	3.85	3.46	3.15
Finland	2.33	2.16	2.02	1.96	Spain	3.82	3.01	2.98	2.98
France	2.79	2.98	3.05	3.05	Sweden	3.49	2.47	2.24	1.87
Germany	3.17	3.09	2.12	2.12	UK	0.6	0.6	0.75	0.75
Greece	3.56	3.5	2.73	2.73	US	0.21	0.21	0.21	0.21
Ireland	0.93	0.93	1.11	1.11	EMU11	-	2.75	2.23	2.2

Source: Creel and Saraceno (2010)

The EPL index, as imperfect as it is, may be taken as a broad measure of labour market flexibility (large numbers indicating more rigid labour markets). While it is true that most European countries have high values of the index, it is also true that they experienced drastic reduction in the past years. Besides a shrinking pool of protected workers, EMU countries have an increasing share of workers covered by multiple types of contract (part-time, increasing protection, etc.) that are highly flexible. Thus, while average labour protection may still be larger than in Anglo-Saxon countries, protection of the *marginal worker* is by no means different. Firms wanting to smooth business cycle fluctuations through labour utilization can easily do it. Thus, labour market rigidity can hardly be seen as an obstacle for European businesses to strive.

More generally, evidence on institutions and labour market performance is weak and often contradictory so that the most cautious authors studying the subject have to conclude that, for example, "the broad-brush analysis that says that European unemployment is high because European labour markets are 'rigid' is too vague and probably misleading" (Nickell 1997, p.73). Paradoxically, the only convincing conclusion to emerge from the wide array of studies devoted to the subject is that no single labour market institutional setting proves to be superior to others and that success is determined by the interaction of institutions with country-specific factors (Freeman 2000).

To sum up, while still popular in policy circles and in the media, the Consensus narrative seems to have little support from the data. The opposition of "flexible" United States and "rigid" European countries, seems more a snapshot of the past, than a feature of the present. While too much emphasis is given to the Consensus narrative, another difference between the Eurozone and the United States is too often neglected: Policy activism.

2.3. *EMU Policy Inertia*

The New Consensus, embedded in European institutions and practices since the early 1990s, led European governments to give up active management of the business cycle, and to engage in a non-cooperative strategy through fiscal and social competition. Even before the global financial crisis hit the world economy, the inertia of European policy makers in comparison with their homologues across the ocean was striking. To assess monetary policy activism, look at table 3, from Fitoussi and Saraceno (2011). The table shows

Table 3: Short Term Rates

Descriptive Statistics 1999-2007		
	Fed Funds	*Repo*
Mean	3.61	3.01
s.e.	1.85	0.89
Max	6.5	4.75
Min	1	2

Source: Datastream

that in the pre-crisis period central bank rates in the US and in the Eurozone have been on average very similar (only 60 basis points of difference). *per se*, this is not informative, because the level of the interest rate has to be determined in regard to inflation and output gap objectives, which may have been different in the two zones. What is in fact striking, is the much higher variability of interest rates in the United States, with the standard error which is double with respect to the EMU, and a spread between the maximum and the minimum value which is also significantly larger.

There is little doubt that even before the crisis the ECB was substantially less proactive than the Fed. The ECB restraint could nevertheless be explained by the need to compensate for excessively lax fiscal policies in the Eurozone. This argument does not hold, nevertheless, if we look at table 4, also from Fitoussi and Saraceno (2011). The table reports descriptive statistics for the "fiscal impulse", defined as the change in the primary structural balance. This is the best, albeit imperfect, indicator of fiscal activism that we have, because it captures non-cyclical changes (and hence discretionary)

Table 4: Fiscal Impulse: Descriptive Statistics 1999-2007

	GER	ITA	ESP	FRA	EMU4*	UK	USA	JAP
Mean	-0.15	0.04	-0.30	0.23	-0.03	0.51	0.44	-0.73
s.e.	1.80	1.20	0.65	0.58	0.90	2.69	1.28	1.86
Max	4.39	2.72	1.03	1.23	2.27	5.25	2.88	1.51
Min	-2.08	-1.29	-1.09	-0.43	-0.70	-4.76	-0.92	-3.64

*Source: Datastream - *EMU4 (Ger, Fra, Ita, Spa) is weighed with GDP*

in the fiscal stance. Even if the US experienced higher growth on average (table 1 above), over the period they had a more expansionary stance. More importantly, as with monetary policy, the United States showed significantly higher fiscal activism over the period than the EMU4 (an interest-

ing exception being Germany). The standard error is significantly larger for the US (and even more for the UK and for Japan) than for the EMU4.

The higher reactivity of American fiscal authorities is not surprising if we consider that the US have a lower level of social protection and of automatic stabilization, which calls for a more active role of macroeconomic policies aimed at limiting the effects of harmful fluctuations of income (Creel and Saraceno 2010). But there is more than that. Even if the European fiscal rules (the SGP and now the Fiscal Compact) never yielded actual sanctions in spite of the numerous infringements, their very existence was capable of constraining governments' action through peer pressure and a general reprobation attached to fiscal (and monetary) policy activism (Fitoussi and Saraceno 2008).

2.4. *The EMU Response to the Crisis: Too Little and Too Late*

If inertia characterized EMU policy sice the inception of the single currency, the contrast with US policy activism is even more striking since the financial crisis began.

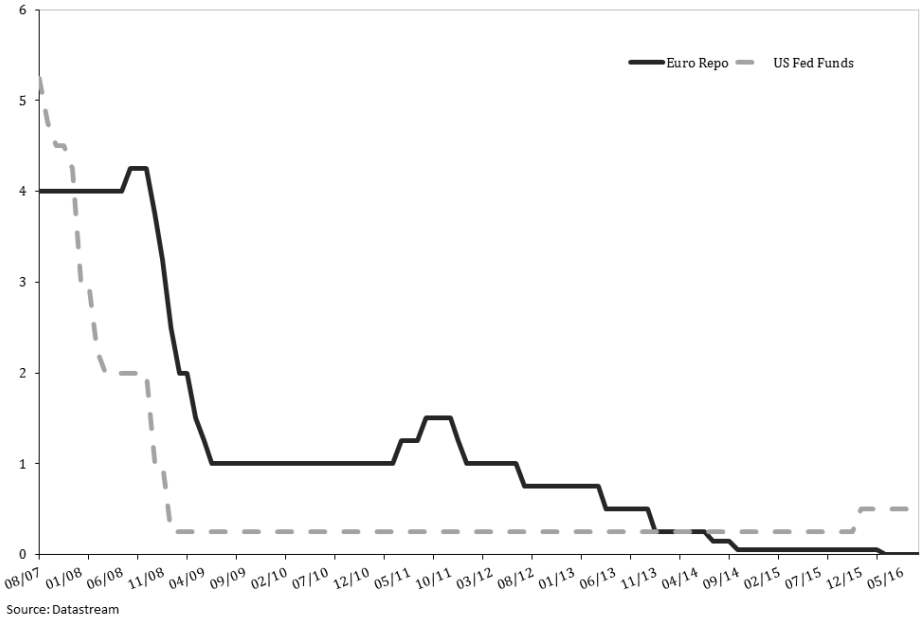
The behaviour of fiscal and monetary autorities during the recent crisis was consistent with their pre-crisis behaviour: They reluctantly reacted to the financial crisis, quickly reverted to the New Consensus prescription of limited intervention, and when they did eventually had to contrast the deflationary trap, they did it, once again, "too little and too late"

2.4.1. The Early Response

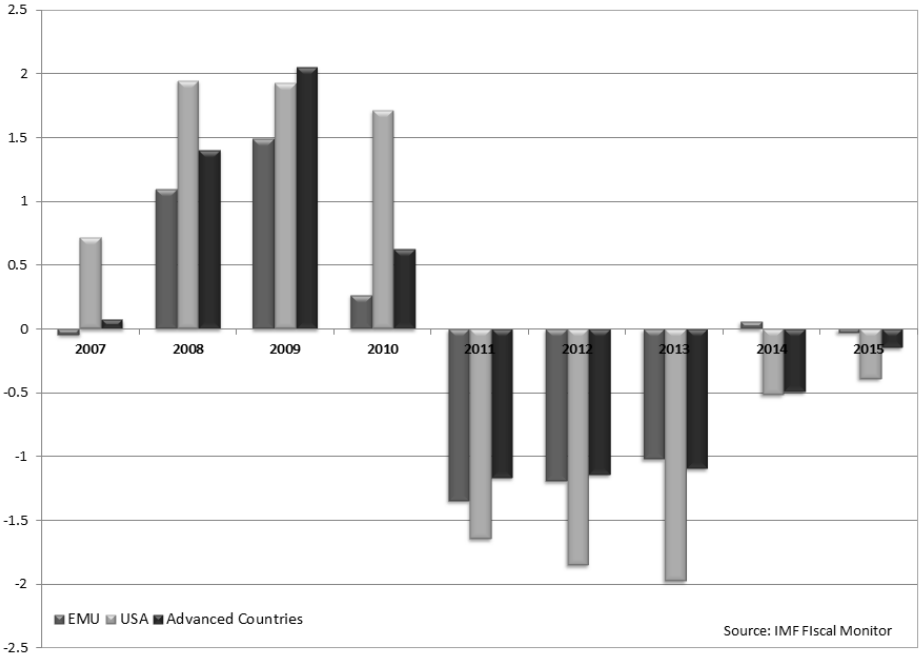
We said above that at the global level the crisis triggered a standard "Keynesian sequence": an early monetary response to the crisis, followed by a fiscal expansion when monetary policy lost traction.

European countries did follow the same pattern, but more timidly than the other advanced and emerging economies. Figure 2 shows that the Fed, consistently with the behaviour summarized in table 3, reacted faster, and more aggressively to the financial crisis, while the behaviour of the ECB rate cut was much more gradual (and interrupted by two famously controversial rate increases in 2008 and in 2011).

Similarly, when the economy hit the zero lower bound, the fiscal reaction had the same sign across the board, but was bolder in the US and in the other advanced economies. Figure 3 shows the fiscal impulse for the crisis years. While the US just for the three years 2007-2009 had a cumulated fiscal impulse of almost 5%, the EMU fiscal expansion began later, on a smaller scale, and was substantially over by 2010.



2



3

Figure 2: Central Bank Interest Rates 2007-2016. Figure 3: Structurally Primary Balance, % of GDP.

2.4.2. Too Much and too Early: The 2010 Fiscal Stance Reversal

In October 2009 the newly elected Papandreou government announced that Greece's government was on the verge of collapse, after having misreported public finance data for at least five years. European policy makers failed to recognize the specificity of Greece's troubles, and shifted their narrative about the crisis from a private debt bubble to a story of fiscal profligacy by a handful of peripheral countries (Sinn 2014).

In exchange for financial assistance from the EU and the IMF, countries in distress had to implement draconian structural reforms and austerity plans monitored by a Troika composed of the ECB, the European Commission, and the IMF. Austerity was not limited to the periphery, though, as core countries joined in the fiscal consolidation effort, that was seen to be the recipe for growth. A good example of this unwarranted policy shift is Germany that, in spite of the good health of its public finances engaged in a successful effort to balance its budget by 2015.

Austerity was grounded on the New Consensus belief that fiscal multipliers, the impact of government deficit on economic activity were rather low, certainly lower than one, and probably around 0.5. Thus, austerity was estimated to be only mildly recessionary in the short run, and expansionary in the long run, when the government withdrawal from the economy would unleash the potential of the economy. Some even claimed that austerity would be expansionary in the short-run as well, drawing on the literature started by the seminal work of Giavazzi and Pagano (1990) on expansionary fiscal consolidations: a fiscal contraction, improving confidence, triggers a boom in private sector expenditure that more than compensates the drop of government demand[5].

Events did not unfold as planned: the fiscal stance reversal slowed down the recovery worldwide, and in the Eurozone austerity plunged the economy in a double-dip recession from which it has not yet fully recovered.

2.4.3. *A Question of Timing*

Fiscal consolidation was not an exclusive European matter. Going back to figure 3,we may notice that the reversal of the fiscal stance also happened in the US, and it was even more marked than in Europe.

We should therefore ask why, if austerity was generalized, only the Eurozone suffered from the double-dip recession. One may be tempted to argue, in fact, that austerity cannot explain the difference in performance be-

---

[5] The fact that this literature has been shown to be very country-specific, and substantially proven wrong, was neglected by partisans of fiscal consolidation.

tween the EMU and the United States. The problem with that argument is that fiscal consolidation needs not to be assessed in isolation, but in relation to the environment in which it takes place. First, it started one year earlier in the EMU, in 2010. Second, fiscal expansion had been more robust in the US in 2008 and in 2009, thus avoiding that the economy slid too much: having been bolder and more effective in 2008-2010, continued fiscal expansion was less necessary in 2011-12, as the reduction of public demand in the US accompanied the increase of private expenditure. In other words, the United States government fully played the role of supporting aggregate demand when needed, and withdrew only when private demand gained momentum, the very definition of countercyclical fiscal policy. Granted, the recovery would probably have been stronger and faster if the fiscal stance in the US had remained expansionary. It remains nevertheless true that the fiscal contraction in the US only begun once the private sector showed at least some capacity to walk alone.

In the EMU, public purchases of goods and services should have continued to increase to compensate the continuing reduction of private spending; but this did not happen, with the result that fiscal policy ended up being countercyclical. Table 5 shows the correlation between public and private expenditure in the two periods. While correlation does not imply causation,

Table 5: Correlation Between Public and Private Expenditure

	2008-2009	*2010-2012*	*2013-2015*
EMU	-0.96	0.73	0.99
USA	-0.82	-0.96	-0.04

Source: Datastream

it indicates co-movement, and hence counter or pro-cyclicality. The negative correlation of the US for the two subperiods from 2008 to 2012, indicates that public expenditure was withdrawn only when private expenditure could take the witness, and never was procylclical (it turned neutral in 2013-2015). Europe is a whole different story. Fiscal contraction began when the private sector was not ready to take the witness, as the positive correlation (both for 2010-2012 and 2013-2015) indicates; the withdrawal of public demand therefore led to a plunge in economic activity and to the double-dip recession that the US did not experience.

The failure of austerity and reforms to put the world economy on the path of a robust recovery led the profession to reassess the New Consensus dismissal of fiscal policy. In particular, the IMF drew lots of attention with

a box in its Fall 2012 *World Economic Outlook*, that was later developed by its chief economist Olivier Blanchard (Blanchard and Leigh 2013). The IMF made an outright *mea culpa* on the size of the multipliers, arguing that in a deep downturn, and with monetary policy at the zero lower bound, their size was closer to 2 than to 0.5. As a consequence, the contractionary impact of fiscal consolidation had been larger than anticipated, and the recession made austerity, not only costly, but also self-defeating with respect to the objective to reduce the debt ratios.

Interestingly enough, in the EMU the debate opened by Blanchard and Leigh did not really resonate, and the official discourse (consolidation *cum* reforms) did not change until very recently, when policy makers at the ECB and at the Commission started asking for a fiscal expansion "within the boundary set by the rules". Nevertheless, faced with a stagnant economy EMU (monetary) policy authorities had to change stance in 2014. But if austerity has been too hastily embraced in 2010, the policy correction triggered by the *hannus horribilis* 2014 came too late. And was too little.

2.4.4. *Too Little and too Late: Monetary Policy*

When the world economy entered into a liquidity trap in 2009, and fiscal policy took the witness, the ECB, like other central banks, kept an accommodating stance, but remained in the background. The ECB low profile was not bound to last, though, because with the explosion of the Eurozone sovereign debt crisis, monetary policy came back to the forefront. The double-dip recession was followed by a weak export-led recovery in 2013, and by a new slide towards deflation in 2014.

Disappointing growth, and turmoil in sovereign debt markets, put enormous strain on the Eurozone, threatening the very survival of the single currency. The incapacity of European governments to coordinate in a bold and coordinated response to both speculation and faltering growth, forced the ECB to rush in order to avert disaster.

Interestingly enough, the path followed by the US was not very different. The political gridlock in the US forced President Obama to reverse the fiscal stance faster than he should have done it, and the Fed had to step in with its quantitative easing program that provided support to the economy. But similarities stop here. First, the United States have a federal structure, so that transfers between states (unemployment benefits and tax receipts) contribute to rebalancing asymmetric business cycles. Second, we saw (figure 3) that the US stimulus had been significantly larger than the one implemented by EU countries, so that its withdrawal was less ill-timed. Finally, while the ECB was (and still is) constrained by the no bail-out clause, that prevents it from directly purchasing sovereign bonds in the primary mar-

ket, the Fed has no such limitation. This means that while the Fed could act as a buyer of last resort and purchase government debt, thus making default virtually impossible (and keeping yields very low as a consequence), the ECB could not perform this important role of insurer. Eurozone countries in trouble therefore also had (and have) to fear speculation on their debt.

Since 2010 ECB action has been marked by three major interventions, all of them made necessary by exceptional circumstances. The first is the Long Term Refinancing Operations (LTRO) program, launched in late 2011. Then, in September 2012, the Outright Monetary Transactions (OMTs) program. Finally, more recently, Mario Draghi's (2014) Jackson Hole speech, followed by the ongoing EMU version of quantitative easing.

This is not the place to discuss the details of these programs (the interested reader can refer to Saraceno 2016). What is important to notice here is that in the three cases, the ECB moved because the Eurozone was at the edge of implosion, and mostly thanks to the impulsion of its president, Mario Draghi, who was forced to twist arms in the Governing Council.

Opposition to ECB action went to the point of legal challenges in front of the European Court of Justice (later dismissed), based on the claim that the ECB had acted beyond its mandate. And Mario Draghi had to provide an extensive interpretation of price stability ("the collapse of the euro would have an impact on financial and price stability") in order to implement the measures needed to defuse speculation and to try to support the economy. These skirmishes contribute to explain the delays and timidity of ECB action during the crisis. A good example of this timidity is the EMU version of QE, that started when the other central banks were already putting in place a tapering strategy, and in spite of the communication effort of the ECB, is limited in size (figure 4).

Mario Draghi's (2014) Jackson Hole speech has for the first time invoked the support of fiscal policy to fight deflationary pressures, a plea that since then has been repeated in almost any speech. Nevertheless, the 2014 speech also set the framework for this return of fiscal policy, that according to ECB and Commission officials, should always remain bounded by the rules set by the Stability Pact and the Fiscal Compact. The case for fiscal policy, therefore, was *de facto* limited to a handful of countries, most of them (like e.g. Germany) not willing to use the available fiscal space. Thus, as we write, the only concrete manifestation of fiscal policy in the EU is the Juncker Plan, a EU wide investment scheme geared at increasing private investment through co-financing of selected projects.

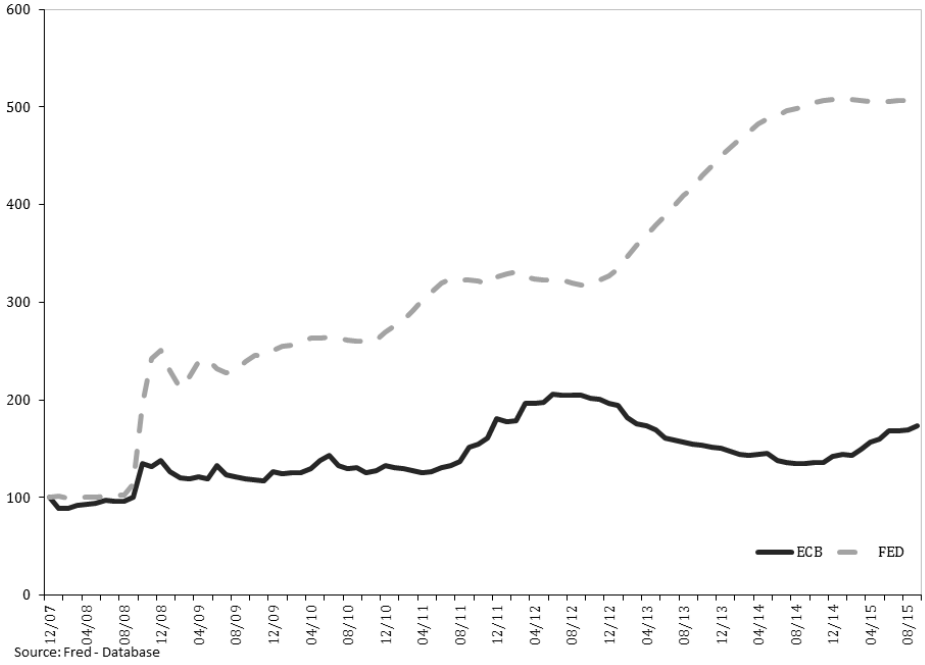


Figure 4: Central Bank Total Assets - December 2007=100.

2.4.5. *Too Little and too Late: Fiscal Policy*

The purpose of the Juncker investment plan, announced in November 2014, is to overcome the reluctance of private investors by relieving them, through co- financing, of part of the financial risk associated with infrastructure projects [6]. The plan, adopted by the European Parliament in June 2015, established a European Fund for Strategic Investments (EFSI) endowed with e21bn, coming in part from the European budget (e16bn), and for the rest from the European Investment Bank [7]. The Fund endowment should allow bond issuance allowing to increase available funding to €60bn. These resources will be topped by voluntary pledges from Member countries (that will not be counted as deficit within the Stability Pact framework). Third-party countries will also be allowed to contribute (China was the first to announce its contribution, in September 2015). This amount is then to be used to co-finance private investment projects for a

---

[6] This section builds in part on Le Moigne, Saraceno and Villemot (2016).

[7] The EIB is in fact the driving force, as the EFSI is just a label for the EIB assets linked to the plan (Claeys 2015).

total expected to reach €315bn over the three years 2015-2017. Expected leverage is therefore rather large: it is 5 if we take as a basis the €60bn the Fund should raise on markets; but it climbs to a staggering 15 if we use as a basis for calculation the initial endowment of €21bn.

The latest progress report by the Commission (July 2016) reports €20.4bn engaged by the EFSI in approved projects (13.6 for infrastructures and 6.8 for SMEs). This should lead, with private funds topping the public contribution, to mobilize around €116bn, more or less a third of the total of the plan, one year into the three-year horizon. The plan is therefore on track in terms of engaged resources.

Le Moigne, Saraceno, and Villemot (2016) use a simple inter-temporal stochastic general equilibrium model with public capital and non-Ricardian agents, to evaluate (a) the capacity of the Juncker plan to support the economy, enhancing private capital productivity; and (b)its ability to address the Eurozone liquidity trap.

The authors carry on their analysis by comparing the Juncker Plan with the *American Recovery and Reinvestment Act* (ARRA), implemented by the Obama administration in 2009.

Since it was announced, the Juncker plan was criticized as being "too little and too late." The simulations performed by Le Moigne et al. (2016) confirm this criticism, and help making it more precise: Had the Juncker plan been implemented in a timely manner, it would have helped to significantly shorten the recession. Even the relatively small investment plan agreed upon by the EU authorities could have had a positive impact, if implemented before the economy got trapped in a liquidity trap.

But once the political process delayed the intervention, then EU authorities should have implemented a much bolder plan. As it is, the Juncker plan is likely not going to be effective at all in lifting the economy out of a deflationary trap that is solidly installed. Thus, Le Moigne et al. (2016) rephrase the criticism of the plan as "probably too little, and certainly too late".

The announcement made on 14 September 2016 by Jean-Claude Juncker that the Commission would propose to double the financial capacity of the plan sounds like an acknowledgment of this criticism; however, this announcement also comes too late to make any significant difference, especially as the additional investments would be spread over a period far away in the future (2018-2022).

The story of the Juncker Plan confirms, indirectly, that a major flaw in European economic governance is its inability to respond quickly to shocks hitting the economy. An institutional architecture and decision-making process that could be adapted to the so-called "Great Moderation" (if it ever existed), are certainly not fit for the new era of instability which began in 2008.

To summarize the argument so far, the New Consensus had a significant impact on European institutions, and on the policies followed especially in the single currency areas. The Consensus is enshrined in European institutions since the Maastricht Treaty. Discretionary policies are limited at a bare minimum, while rules and government by the technocrats are preferred to remove the obstacles towards the Pareto optimal equilibrium of the economy. EU institutions and practices yielded inertial macroeconomic policies in Europe, even before the crisis hit in 2007. The comparison with the Unites States shows that there the Consensus policy prescriptions were watered down, especially during the crisis [8].

European institutions may prove even more unfit, in the coming years, if the world economy were to remain in a state of stagnant demand even oncethe crisis is over.

3. Secular Stagnation: Implications for Fiscal Policy

Because of its depth, and of its length, the crisis has triggered an interesting discussion among economists about whether the advanced economies will eventually return to the growth rates they experienced in the second half of the twentieth century. One view, put forward by Robert Gordon (2012, 2016) focuses on supply-side factors. Gordon argues (not unchallenged, see e.g. Phelps 2013) that each successive technological revolution has lower potential impact, and that in this particular moment, faltering innovation faces six headwinds likely to compress potential growth:

1 First, the demographic dividend in reverse motion, that imposes a burden on public finances

2 Then, rising inequality (see Piketty 2013), that reduces human capital accumulation

3 Third, the combined effect of globalization and the IT revolution, that increased the part of goods and services that became tradable. This in turn led to more competition in labour markets, and hence to lower wages and labour productivity.

4 Fourth, the increasing cost of managing the consequences of global warming, that also imposes a burden on public finances.

5 Fifth, the high burden of debt (public and private), bequeathed by the crisis

6 Finally, more specific to the US, the deterioration of educational attainment.

---

[8] French economist Jean-Paul Fitoussi usually says that the US are the main producer of neo-liberal doctrine, but only for export and not for domestic consumption!

All the headwinds tend to reduce (mostly human) capital accumulation, and hence future potential growth.

In a famous speech at the IMF in 2013, later developed in Summers (2014), Larry Summers revived a term from the 1930s, "secular stagnation", to describe a dilemma facing advanced economies. Summers develops some of Gordon's arguments to argue that lower technical progress, slower population growth, the drifting of firms away from debt-financed investment, all contributed to shifting the investment schedule to the left. At the same time, the debt hangover, accumulation of reserves (public and private) induced by financial instability, increasing income inequality (see also Fitoussi and Saraceno 2011), tend to push the savings schedule to the right. The resulting natural interest rate is close to zero if not outright negative, thus leading to a structural excess of savings over investment.

Summers argues that most of the factors exerting a downward pressure on the natural interest rate are not cyclical but structural, so that the current situation of excess savings is bound to persist in the medium-to-long run, and the natural interest rate may remain negative even after the current cyclical downturn. The conclusion is not particularly reassuring, as policy makers in the next several years will have to navigate between the Scylla of accepting permanent excess savings and low growth (insufficient to dent unemployment), and the and Charybdis of trying to fight secular stagnation by fueling bubbles that eliminate excess savings, at the price of increased instability and risks of violent financial crises like the one we recently experienced.

The former IMF chief economist Olivier Blanchard has elaborated on the meaning of Summers' conjecture for macroeconomic policy (Blanchard 2016). If interest rates will remain at (or close to) zero even once the crisis will be over, monetary policy will continuously face the dilemma of either sustaining growth, at the risk of bringing asset prices and bubbles beyond the point of no return that triggers a crisis; or to fight the formation of bubbles, at the price of not being capable of lifting the economy out of secular stagnation. The recent crisis is a good case study of this dilemma, with the two major central banks of the world under fire from some quarters, for opposiite reasons: the Fed for having kept interest rates too low, contributing to the housing bubble (Rajan 2010); and the ECB for having done too little and too late during the Eurozone crisis (Saraceno 2016).

Drifting away from the Consensus that he contributed to consolidate (see e.g. Blanchard 2009), Blanchard concludes that exclusive reliance on monetary policy for macroeconomic stabilization should be reassessed. With low interest rates that make debt sustainability a non-issue; with financial markets deregulation that risks yielding more variance in GDP and economic activity; and with monetary policy (almost) constantly at the

Zero Lower Bound, fiscal policy should regain a prominent role among the instruments for macroeconomic regulation, beyond the cycle. This is a very important methodological advance, that should nevertheless be completed with an explicit reference to a "new" fiscal policy doctrine.

On a related point, Adam Posen (2016) argues that fiscal policy may be a powerful tool for structural reform. Commenting the recent fiscal stimulus package announced by the Japanese government, Posen notices that fiscal policy is being used to boost labour market participation (most notably among women, through investment in day care, and tax breaks for secondary income earners); this is expected to boost future potential growth, thus establishing a further link between short-term stabilization policies and long-term growth. Posen notes furthermore that in spite of its high public debt, the announcement of Japan's new stimulus package has been followed with decreasing treasury yields, signalling that when fiscal policy is well designed, markets are not against government intervention.

Nevertheless, in his plea for fiscal policy, Blanchard falls short of a conclusion that naturally stems from his own reading of secular stagnation: If the economy is bound to remain stuck in a semi-permanent situation of excessive savings, and if monetary policy is incapable of reabsorbing the imbalance, then a new role for fiscal policy may appear, that goes beyond the short-term stabilization that Blanchard and Summers envision. In fact, there are two ways to avoid that the *ex ante* excess savings results in a depressed economy: either one runs semi-permanent negative external savings (i.e. a current ac- count surplus), or one runs semi-permanent government negative savings. The first option, the export-led growth model that Germany is succeeding to generalize at the EMU level, is not viable, except for an individual country implementing non cooperative strategies, because aggregate current account balances need to be zero.

The second option, a semi-permanent government deficit, needs to be further investigated, especially in its implication for EMU macroeconomic governance

4. Adapting EMU Institutions

There are a number of ways, not necessarily politically feasible, to allow EMU countries to run semi-permanent government deficits. A first one could be to restore complete national budget sovereignty, (scrapping the Stability Pact). This would mean relying on market discipline alone for maintaining fiscal responsibility. As an alternative, to the opposite side of the spectrum, countries could create a federal expenditure capacity (which would imply the creation of an EMU finance minister with capacity to

spend, the issuance of Eurobonds, etc.). Such an option is as unrealistic as the previous one. In an ideal world, the crisis and deflation would be dealt with by means of a vast European investment program, financed by the European budget and through Eurobonds. Infrastructures, green growth, the digital economy, are just some of the areas for which the optimal scale of investment is European, and for which a long-term coordinated plan would necessary. The increasing mistrust among European countries exhausted by the crisis, and the fierce opposition of Germany and other northern countries to any hypothesis of debt mutualisation, make this strategy virtually impossible.

The solution must therefore be found at national level, without giving up European-wide coordination, which would guarantee effective and fiscally sustainable investment programs.

4.1. *The Golden Rule*

In general, the multiplier associated with public investment is larger than the overall expenditure multiplier. This is particularly true in times of crisis, when the economy is, like today, at the zero-lower bound. Interestingly enough, in these cases, projects with longer time to build should be preferred: when the economy is at the ZLB, monetary policy reaction is muted, and the only way to decrease real interest rates is inflation. The supply side deflationary impact of public investment is therefore problematic because it increases the real interest rate, and when it is delayed public investment becomes more effective in lifting the economy out of the zero lower bound (Le Moigne *et al*. 2016).

Dervis and Saraceno (2014) recently proposed that the EMU adopts a fiscal rule similar to the one implemented in the UK by Chancellor of the Exchequer Gordon Brown in the 1990s, and applied until 2009. The new rule would require countries to balance their current budget, while financing public capital accumulation with debt. Investment expenditure, in other words, would be excluded from deficit calculation, a principle that timidly emerges also in the Juncker plan (for details, see Creel et al. 2009. Such a rule would stabilize the ratio of debt to GDP, it would focus efforts of public consolidation on less productive items of public spending, and would ensure intergenerational equity (future generations would be called to partially finance the stock of public capital bequeathed to them). Last, but not least, especially in the current situation, putting in place such a rule would not require treaty changes, and it is already discussed, albeit timidly, in EU policy circles.

The golden rule is not a new idea, and in the past it has been criticized (see e.g. Balassone and Franco 2000) on the ground that it introduces a bias

in favor of physical capital and penalize certain expenses like for example education and health care that - while classified as current - are crucial for future growth.

This criticism, however, can be turned around and transformed into a strength. Dervis and Saraceno propose that at regular intervals, for example in connection with the European budget negotiation, the Commission, the Council and the Parliament could find an agreement on the future priorities of the Union, and make a list of areas or expenditure items exempted from deficit calculation for the subsequent years. Joint programs between neighbouring countries could be encouraged by providing co-financing by the European Investment Bank. The modified Golden Rule would in fact yield a return, on a European scale, to industrial policy, a political and democratic determination of the long term growth objectives of the EU. The entrepreneurial State, through public investment, could once again become the centrepiece of a large-scale European industrial policy, capable of implementing physical as well as intangible investment. Waiting for a real federal budget, the bulk of investments would remain responsibility of national governments, in deference to the principle of subsidiarity. But the modified golden rule would coordinate and guide them towards the development and the well-being of the Union as a whole.

Dervis and Saraceno argue that the implementation of a golden rule of this kind would serve the purpose of focusing on the nature and quality of public spending in relation to the growth objective. It would also force European policymakers jointly to have a periodic and transparent discussion on the investment needs of their economies, and to coordinate policies as part of a process that would increase participation, cohesion and legitimacy in the Eurozone.

The financing of persistent deficits would not be a problem as long as excess savings exist. It would only be a matter of channelling savings into government bonds without creating instability. A number of recent proposals may be considered: for example "restricted" special public investment bonds (Koo 2011; Fazi and Iodice 2016), to avoid or limit speculative flows. In the very short run, the financing of pan-European projects through EIB bond issuance financed within the QE program. Finally to the other extreme, the issuance of perpetual bonds (Sachs 2014; Flaherty et al. 2016), would allow a *de facto* monetization of debt. Interestingly enough, accepting these bonds as collateral, central banks would ensure that they become desirable even when market return is substantially lower than social return.

5. Conclusion

For almost three decades, the EMU has been the laboratory of the New Consensus through institutions, and policies, that put much emphasis on the capacity of markets to absorb shocks better than macroeconomic policies. This paper has argued that the crisis, challenging the consensus, has proven that situations of excessive savings may emerge and be persistent, giving Keynes' *General Theory* a second youth, eighty years after its birth. I have drawn the institutional consequences, for the EMU, of this developments, and argued for the adoption of a fiscal rule allowing quasi-permanent government deficits to match the quasi-permanent private sector excess savings. This seems the only EMU reform that couples an economic rationale (filling a semi-permanent investment gap) with some chances of being adopted by the EU divided and uninspired leaders.

In conclusion, nevertheless, I would want to state that a Golden Rule would remain a second best, with respect to unconstrained fiscal policies. It is after all paradoxical that the New Consensus, while arguing in favour of overall market efficiency, does not seem capable of trusting the very markets it assumes efficient with the task of disciplining government fiscal policy, and punishing deviations from "wise" fiscal behaviours. Said differently, *tertium non datur*: either we prone market efficiency, but then markets should be capable of inducing government discipline, making rules unnecessary; or we acknowledge that markets may be inefficient in enforcing fiscal discipline, but then we are led to conclude with Keynes that discretionary policies are necessary for a well-functioning economy.

References

Adrian T. and Shin H.S. 2010, "Liquidity and Leverage", *Journal of Financial Intermediation*, 19 (3): 418-437.

Balassone F. and Franco D. 2000, "Public Investment, the Stability Pact and the 'Golden Rule'", *Fiscal Studies*, 21 (2): 207-229.

Blanchard O.J. 1997, "Is There a Core of Usable Macroeconomics?", *The American Economic Review*, 87 (2): 244-246.

— 2000, "What Do We Know about Macroeconomics that Fisher and Wicksell Did Not?", *The Quarterly Journal of Economics*, 115 (4): 1375-1409.

— 2009, "The State of Macro", *Annual Review of Economics*, 1 (1): 209-228.

— 2016, "How to Teach Intermediate Macroeconomics after the Crisis?", Peterson Institute for International Economics Blog, 2 June. Available at: https://piie.com/blogs/realtime-economic-issues-watch/how-teach-intermediate-macroeconomics-after-crisis (accessed September 25, 2017).

Blanchard O.J. and Gali J. 2007, "Real Wage Rigidities and the New Keynesian Model", *Journal of Money, Credit and Banking*, 39 (S1): 35-65.

Blanchard O.J. and Leigh D. 2013, "Growth Forecast Errors and Fiscal Multipliers", *American Economic Review*, 103 (3): 117-120.

Claeys G. 2015, "Juncker Plan: The EIB in the Driver's Seat", Bruegel Blog, 30 June. Available at: http://bruegel.org/2015/06/juncker-plan-the-eib-in-the-drivers-seat/ (accessed September 25, 2017).

Creel J., Monperrus-Veroni P. and Saraceno F. 2009, "On the Long-Term Effects of Fiscal Policy in the United Kingdom: The Case for a Golden Rule", *Scottish Journal of Political Economy*, 56 (5): 580-607.

Creel J. and Saraceno F. 2010 "The Crisis, Automatic Stabilisation, and the Stability Pact", *Revista de Economia y Estadistica*, 48 (1): 75-104.

Dervis K. and Saraceno F. 2014, "An Investment New Deal for Europe", Brookings Blogs – Up Front, 3 September. Available at: https://www.brookings.edu/blog/up-front/2014/09/03/an-investment-new-deal-for-europe/ (accessed September 25, 2017).

Draghi M. 2014, "Unemployment in the Euro Area", Speech at the Annual Central Bank Symposium in Jackson Hole (August 22).

Eichengreen B. and O'Rourke K. 2009, "A Tale of Two Depressions", *VoxEU* (Last Update: 2010).

Fazi T. and Iodice G. 2016, "Why Further Integration is the Wrong Answer to the EMU's Problems: The Case for a Decentralised Fiscal Stimulus", *Journal for a Progressive Economy*, forthcoming.

Fitoussi J.-P. and Saraceno F. 2008, "Fiscal Discipline as a Social Norm: The European Stability Pact", *Journal of Public Economic Theory*, 10 (6), 1143-1168.

Fitoussi J.-P. and Saraceno F. 2011, "Inequality, the Crisis and After", *Rivista di Politica Economica*, 1: 9-28.

Flaherty M., Gevorkyan A., Radpour S. and Semmler W. 2016, "Financing Climate Policies through Climate Bonds – A Three Stage Model and Empirics", *Research in International Business and Finance*, forthcoming.

Fleming S. 2016, "Central Bankers Fear Threat of Low-growth Rut", *The Financial Times*, 28 September.

Freeman R.B. 2000, "Single Peaked vs. Diversified Capitalism: The Relation between Economic Institutions and Outcomes", *National Bureau of Economic Research Working Paper Series* No. 7556.

Giavazzi F. and Pagano M. 1990, "Can Severe Fiscal Contractions Be Expansionary? Tales of Two Small European Countries", *NBER Macroeconomics Annual*, 5: 75-111.

Gordon R.J. 2012, "Is US Growth Over? Faltering Innovation Faces Six Headwinds", *CEPR Policy Insight 63*, September.

— 2016, *The Rise and Fall of American Growth: The U.S. Standard of Living since the Civil War*, Princeton: Princeton University Press.

Keynes J.M. 1936, *The General Theory of Employment, Interest, and Money*, London: MacMillan.

Koo R. 2011, "The World in Balance Sheet Recession: Causes, Cure, and Politics", *Real World Economics Review*, 58: 19-37.

Kopits G. and Symansky S.A. 1998, "Fiscal Policy Rules", *IMF Occasional Papers* 162.

Le Moigne M., Saraceno F. and Villemot S. 2016, "Probably too Little, Certainly too Late. An Assessement of the Juncker Investment Plan", *Document de travail de l'OFCE* 10.

Mankiw N.G. and Romer D. (eds.) 1991, *New Keynesian Economics*, Cambridge, MA: MIT Press.

Nickell S. 1997, "Unemployment and Labor Market Rigidities: Europe versus North America", *The Journal of Economic Perspectives*, 11 (3), 55-74.

Ostry J.D., Loungani P. and Furceri D. 2016, "Neoliberalism: Oversold?", *Finance and Development*, 53 (2): 38-41.

Phelps E.S. 1990, *Seven Schools of Macroeconomic Thought*, Oxford: Clarendon Press.

— 2013, *Mass Flourishing: How Grassroots Innovation Created Jobs, Challenge, and Change*, Princeton: Princeton University Press.

Piketty T. 2013, *Le capital au XXI^e siècle*, Paris: Seuil.

Posen A. 2016, "Shinzo Abe's Stimulus is a Lesson for the World", *The Financial Times*, 2 August.

Rajan R.G. 2010, *Fault Lines: How Hidden Fractures Still Threaten the World Economy*, Princeton: Princeton University Press.

Sachs J. 2014, "Climate Change and Intergenerational Well-being", in L. Bernard and W. Semmler (eds.), *The Oxford Handbook of the Macroeconomics of Global Warming*, Oxford: Oxford University Press: 248-259.

Saraceno F. 2016, "The ECB: A Reluctant Leading Character of the EMU Play", *Economia Politica*, 33 (2): 129-151.

— 2017, *L'économie à l'épreuve des faits. Comprendre les controverses du passé pour éclairer les défis de la société*, Paris, Revue Banque Édition.

Sinn H.-W. 2014, "Austerity, Growth and Inflation: Remarks on the Eurozone's Unresolved Competitiveness Problem", *The World Economy*, 37 (1): 1-13.

Summers L.H. 2014, "U.S. Economic Prospects: Secular Stagnation, Hysteresis, and the Zero Lower Bound", *Business Economics*, 49 (2): 65-73.

Woodford M. 2009, "Convergence in Macroeconomics: Elements of the New Synthesis", *American Economic Journal: Macroeconomics*, 1 (1): 267-279.