SUSTAINABLE FINANCE LAB

THE NEW UNCONVENTIONAL

FISCAL AND MONETARY POLICY OPTIONS FOR THE EUROZONE IN TIMES OF ECONOMIC, POLITICAL AND CLIMATE CRISIS

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The Sustainable Finance Lab (SFL) is an academic think tank whose members are mostly professors from different universities in the Netherlands. The aim of the SFL is a stable and robust financial sector that contributes to an economy that serves humanity without depleting its environment. To this end the SFL develops ideas and provides a platform to discuss them, thus bridging science and practice.

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CONTENTS

THE NEW UNCONVENTIONAL: **SUMMARY**

The eurozone has weathered the storm that followed the global financial crisis of 2008. It has experienced its eight consecutive year of economic expansion and unemployment is close to an all-time low.

However, there are also worries. **The global economic cycle may be about to turn.** Many fear that the eurozone will be short of both fiscal and monetary instruments to give the economy the stimulus it would need to minimize the economic damage and to safeguard price stability.

The monetary policy stance in the eurozone is still highly accommodative. What used to be 'unconventional' monetary policy seems to have become the 'new normal'. Interest rates are negative and the limits of the sovereign bonds that the European Central Bank (ECB) can purchase are in sight.

Fiscal policy options are also limited, as government debt levels in many countries are still substantially higher than what is allowed under the Stability and Growth Pact (SGP), while there is strong resistance against more risk-sharing instruments for the eurozone and against loosening the budgetary constraints.

This raises the question: **What policy tools are left to stimulate the economy were a new economic downturn to strike?** What fiscal and/ or monetary stimulus is possible? What 'new unconventional' mix of fiscal and monetary policies may be required?

These questions will this year be addressed at both the ECB review of its monetary policy strategy as well as at the EU economic governance review. This paper underlines the relevance and urgency of finding fiscal and monetary policy space and explores where it can be found.

Common fiscal shock absorbers can be developed that focus on public goods like education, (youth) unemployment and climate. **A common investment agenda** can also increase convergence. Such investments could be made conditional on growth enhancing structural economic reforms.

Next to new fiscal instruments, new monetary instruments may also be needed for the ECB to reach its price stability targets. For this, new unconventional instruments can be developed, like an **extension of the targeted longer-term refinancing operation** (TLTRO) that induces commercial banks to lend, **or more direct fiscal-monetary coordination**, for instance through the European Investment Bank and National Promotional Banks.

Such instruments also **may be more effective in achieving price stability**. Whereas the current approach of quantitative easing works indirectly through the financial system, closer fiscal-monetary coordination has a more direct impact on the real economy.

More direct monetary approaches may also **allow the ECB to give substance to its secondary objective**, as it is required to do according to Article 127 of the Treaty on the Functioning of the Union: to contribute to "the general economic policies in the Union".

However, it is clear that **fiscal policy should be in the lead** and shoulder its share of the burden. Monetary policy cannot be expected to do the heavy lifting again to the extent it has done in the eurocrisis of 2009-2012.

Such fiscal-monetary coordination could **address simultaneously economic, political and environmental objectives** by contributing to:

- **Lowering the debt burden** by raising inflation and boosting economic growth, thus creating fiscal space;

- **Driving economic convergence** between the euro member states by stimulating productive investments in the South, where these have been reduced the most severely since 2008;
- **Reducing the negative political sentiment** about the euro and wider European cooperation, by raising economic growth and convergence. This could help the finalization of the banking union and the installation of other common shock absorbers in the eurozone;
- **Strengthening growth-enhancing structural reforms**, either as a conditionality for investments or as a result of fewer political tensions;
- **Lower the pressure on current account imbalances in the South to grow**, like they did before 2009, as economic convergence diminishes the chance of unsustainable debt levels building up;
- **Achieving environmental objectives**, like limiting climate change.

Such improvements of the fundamental economic situation could also make it possible to **move monetary policy into more familiar territory**: raising interest rates and shrinking the size of the ECB balance sheet. This would create the monetary policy space to fight a next economic downturn in more conventional ways.

Together, EU-institutions, member state governments and the ECB can develop new instruments to withstand a new economic downturn. The aim should be a balanced approach, a 'new unconventional' fiscal and monetary policy mix. Preserving the clear distinction between the fiscal and monetary spheres. Fiscal policy should lead and thus create the necessary monetary policy room. This way **the vicious cycle of economic divergence and political tensions in the eurozone can be broken, while at the same time accelerating the energy transition.**

1. INTRODUCTION

The eurozone has weathered the storm that followed the global financial crisis of 2008. Despite many predicting its break-up, the eurozone is still there. What's more, it has experienced eight consecutive year of economic expansion, with unemployment close to an all-time low.

At the same time, there are worries. The global economic cycle may be about to turn and many argue that the eurozone will be short of both fiscal- and monetary instruments to give the economy the stimulus it then needs (Bartsch *et al.*, 2019; Lonergan, 2020; Wolf, 2019).[1]

The ECB may have saved the eurozone in 2012 by promising to do 'whatever it takes' and deploying new measures. Measures that, at the time, were highly unconventional. Currently, these measures seem to have become the 'new normal' and run into their limits. This has given rise to the question: what can fiscal and monetary policymakers still do, should a new economic downturn present itself?

In 2015 the Dutch academic think tank Sustainable Finance Lab (SFL) has proposed that the ECB should find more direct ways of stimulating the economy than through the route of quantitative easing, that had been deployed by the central banks of the US, UK and Japan. SFL suggested that, rather than buying existing government bonds, new bonds of the European Investment Bank could be bought that would finance new investments (Benink & Boonstra, 2015; Sustainable Finance Lab, 2015).

With the interest rate still negative and the limits of quantitative easing now in sight, these proposals may have a renewed relevance. This paper aims to feed the conversation on this topic amongst central bankers, politicians, ministries and academics. Is a new mix of fiscal and monetary policy instrument necessary? And if so: what form could this take? What are its advantages and disadvantages? What could this 'new unconventional' look like? These questions will be addressed this year at both the ECB review of its monetary policy strategy as well as at the EU economic governance review.

To this end we start discussing the state of the eurozone economy, with a particular focus on the growing divergence between the North and South. We

[1] See also comments by Mario Draghi, Janet Yellen, and Lawrence Summers at the recent AEA meeting (American Economic Association, 2020).

also discuss growing divergences *within* eurozone member states and the political tensions resulting from this.

We then focus on fiscal policy: what has been its role in the recent eurocrisis? How have the budgetary requirements developed? What is to be expected of fiscal policy in the next economic downturn, taking political developments into account? What alternative routes are possible?

Next, we discuss the possibilities for new monetary instruments. How can the central bank in times of crisis stimulate the economy more directly, and hence have a more direct impact on inflation? Can the central bank thus be more effective in reaching its primary objective of price stability? And how, through such a policy, can the ECB also contribute to its secondary objective of contributing to the general economic policies of the EU, like its productivity development, economic convergence and making the economy more socially and ecologically sustainable? We discuss in particular the contribution that the ECB can make to the political priority of the European Commission on climate.

No one can predict when a new economic downturn will present itself or how severe this will be. However, we do know that it will come and that the eurozone is still fragile, given the high debt levels in many of its least economically dynamic members and the low level of common shock absorbers. For this reason, it seems prudent to develop new instruments, a new mix of fiscal and monetary policies, a new unconventional.

2.
A FRAGILE UNION

A flourishing union...

At first glance the eurozone seems to be flourishing. The eurozone economy has been growing for eight years in a row and at 7.6%[2], the unemployment level is almost on an historical low. Since the conception of the euro, inflation has been on average 1,7%, which sits comfortably within the ECB's primary goal of price stability, defined as an inflation of below but close to 2,0% inflation in the medium term. Non-performing loans (NPLs) have been steadily decreasing in the European banking sector, especially in the South. NPLs in Italy declined from 12,9% of total assets in 2013 to 6,9% in 2018.

The eurozone is also increasingly an economic union. The dispersion of growth rates across euro area countries has fallen considerably since 1999. Since 2014 it is comparable to the dispersion across states in the US. This process is largely driven by the deepening of European value chains (Imbs & Pauwels, 2019). Moreover, the policy powers have been ramped up at the euro and EU level, under the flags of the Banking Union and the Capital Markets Union. The European Stabilisation Mechanism is fully operational and even a modest eurozone fiscal budget exists.

... with its troubles...

However, looking more closely, cracks appear in this shiny image. Despite record low unemployment, wages have only increased moderately. Over the period 2012-2018 the economy has on average grown more than four times faster than wages.

Government debt levels have also developed in an adverse manner. The Maastricht Treaty spells out that government debt may not exceed 60% of GDP. However, the lowest average debt level was at 67%, in 2007 right before the crisis. After the crisis, the average eurozone debt level increased to 96% in 2014.

These high debts are all the more reason for concern given the historically low level of economic growth. Over the last decade (2008-2018) average annual economic growth in the eurozone has been below 1%, far from the levels reached before 2008 of 2-3%.

The combination of high debts and low economic growth makes it even more painful that inflation has been on such a sustained low level. Eurozone inflation bottomed out in 2015 at 0,2%. In the period of 2013-2018, the average inflation in the eurozone has been less than 1%.

[2] All data in the paper is obtained through AMECO database, unless otherwise specified.

Investment levels have also decreased to a disappointing level in the last decade. The current eurozone investment level is approximately 600 billion euros below the trendline of total investment before the crisis.

Banks are also still carrying a high burden with them compared to their counterparts across the ocean. Non-performing loans (NPLs) in the eurozone are still three times higher than in the US (European Central Bank, 2019b). The average return on equity of European banks is barely half the level of their US rivals (Morris *et al.*, 2019).

...despite unprecedented level of monetary stimulus

What's more, this at best mixed economic performance has been achieved with an unprecedented level of monetary stimulus. The interest rates set by the European Central Bank have been historically low ever since 2009, with the deposit rate being negative since 2014.

ECB policy rates

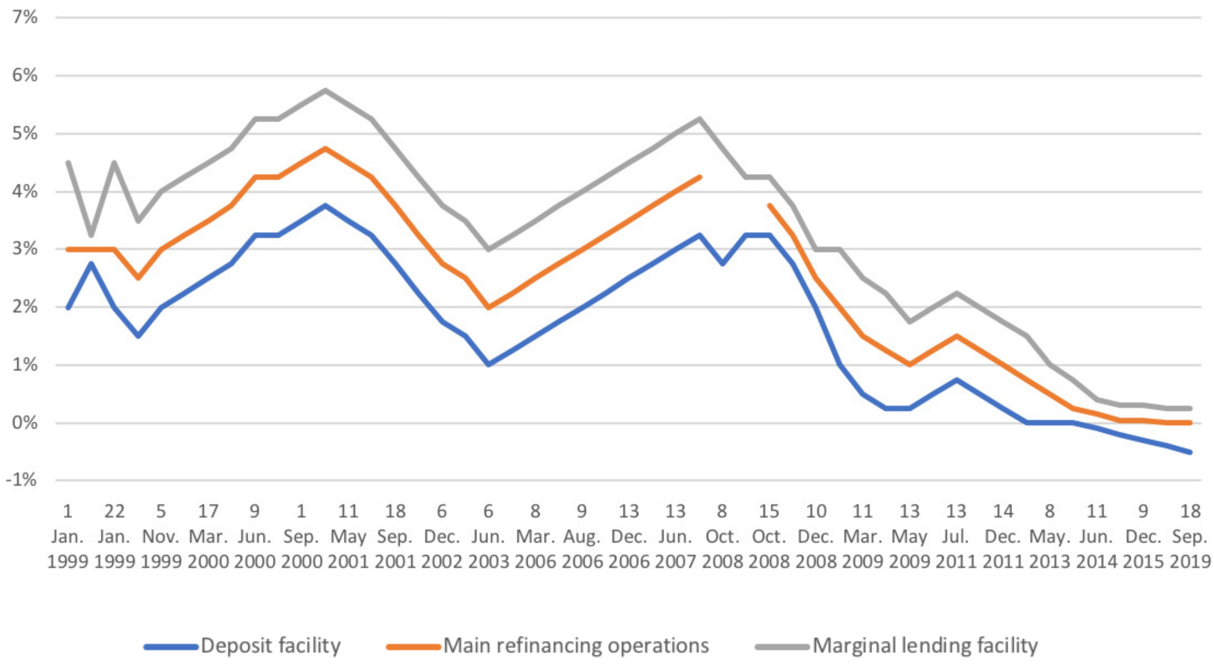


Figure 1 Source: ECB 2019

Not only have the interest rates been low, but after committing to do 'whatever it takes to save the euro' by ECB president Draghi in 2012, the ECB has also pursued policies of quantitative easing – as has been done before by the Bank of Japan, the US Fed and the Bank of England. This means that the central bank buys existing debt in the expectation that this will indirectly stimulate the real economy, as interest rates are reduced and risk-taking stimulated. At the height of this endeavor, from April 2016 to March 2017, the ECB bought 80 billion euros of bonds a month (see Figure 2). The bond purchase programmes have been stopped in December 2018, only to be restarted in November 2019 for an unspecified time, starting with 20 billion euros a month.

ECB Balance sheet (Assets in EUR million)

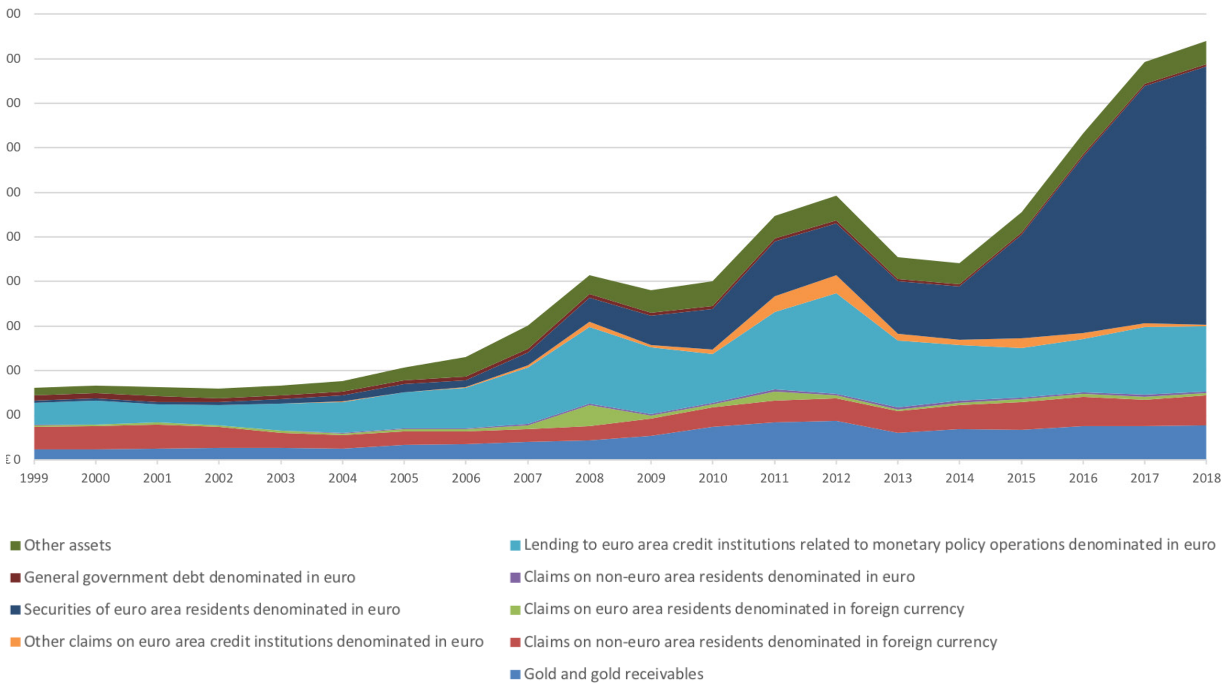


Figure 2 Source: ECB 2019

More than 12 years after the first ECB crisis response, it has done what it takes to save the euro, but the monetary union is still in a fragile state.

3. THE GROWING DIVERGENCE BETWEEN THE NORTH AND SOUTH

The biggest problem for the eurozone may, however, not be its overall lackluster economic performance. More worrisome is the large and growing divergence between euro member states, as this is a fundamental threat to the eurozone, especially given the absence of euro area-wide fiscal stabilization mechanisms.

The economic pain in the South

There has historically been a large difference in unemployment levels between euro member states. The start of the euro reduced these differences starkly. However, from 2007 onwards, unemployment has gone up significantly stronger in the South, where it is still currently much higher.

Unemployment rate

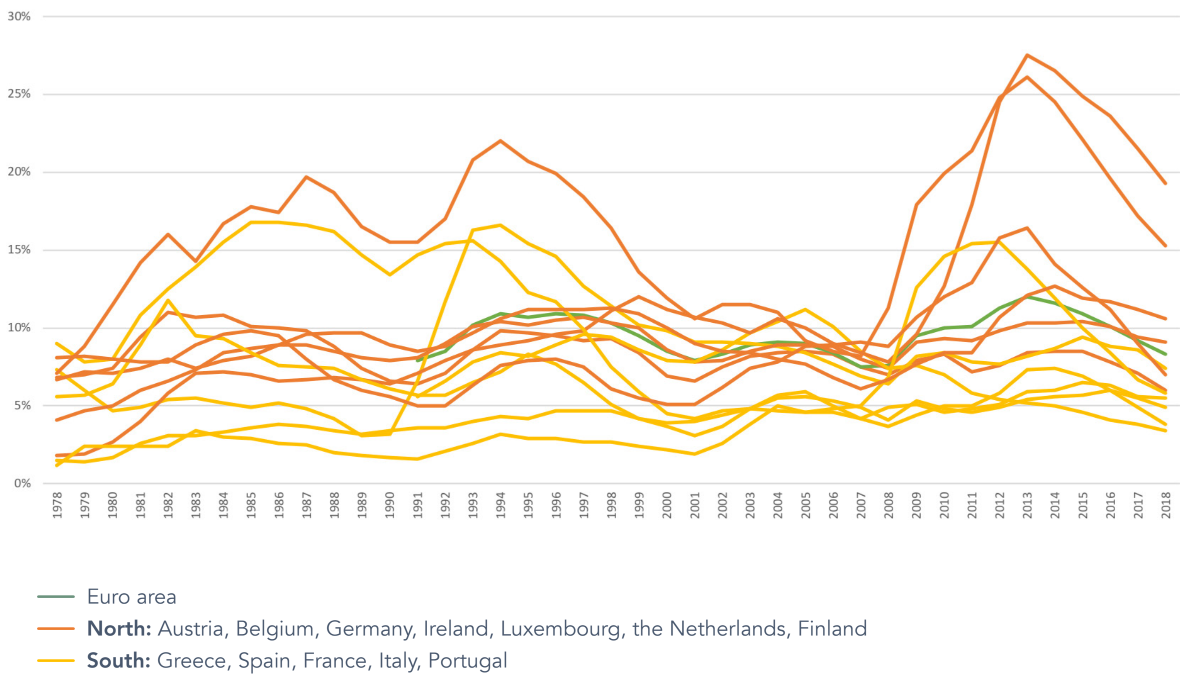


Figure 3 Source: AMECO database 2019

Wage increases are also much lower in Southern euro nations than in Northern, even when considering that wages barely increased in the Northern countries.

The broken promise of convergence

This growing divergence stands in sharp contrast to what the Maastricht treaty promises: an ever larger convergence of the EU member states. One of the first proclamations in the text is that all contracting parties are "resolved to achieve the strengthening and the convergence of their economies" (TEU, 1992, p. 2).

However, whereas income levels did rise in absolute terms, in relative terms the gap between the richest and poorest eurozone members has only increased. Between 1987 and 2018 the difference in GDP earned per hour worked between the 12 original eurozone countries doubled.

GDP per hour worked (current prices)

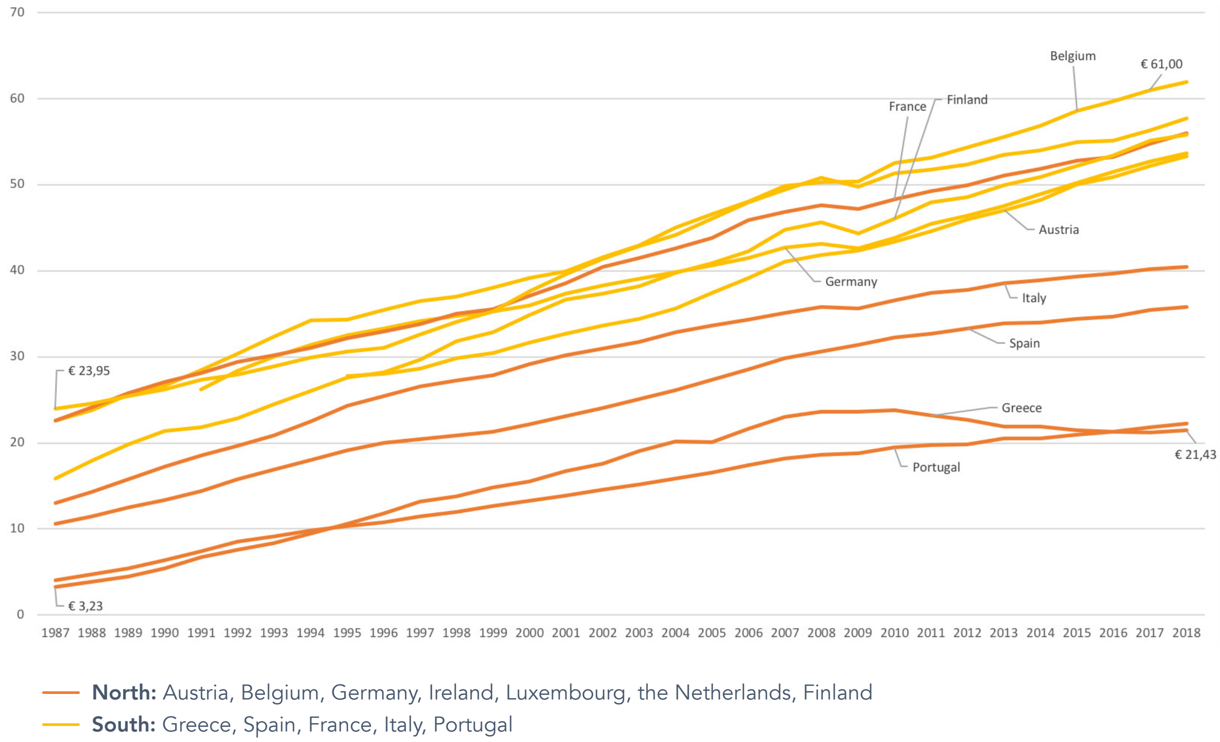
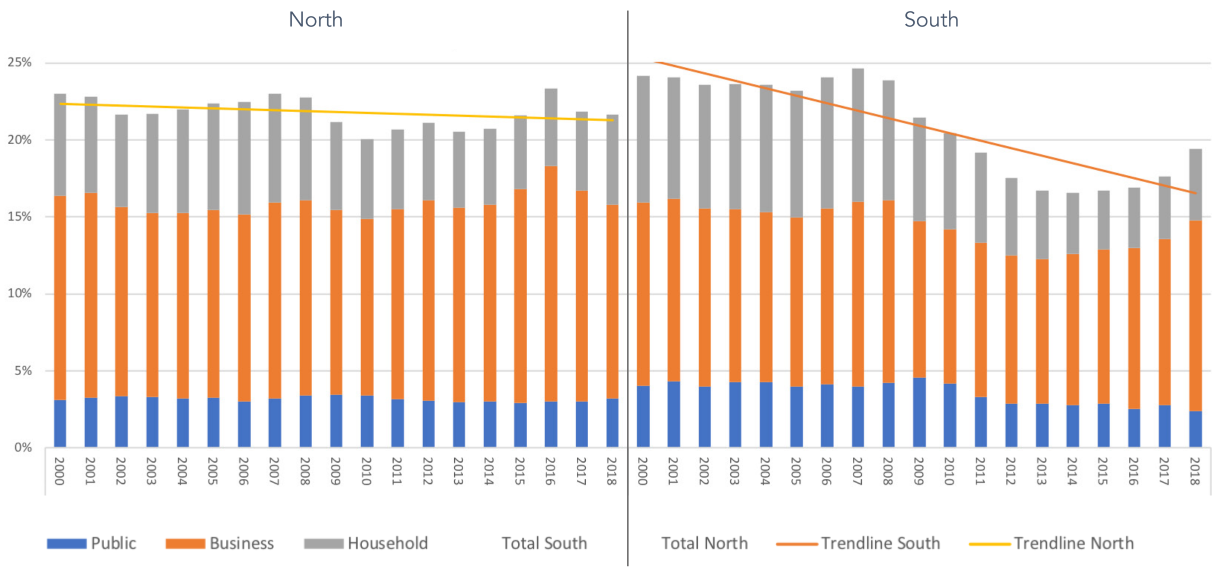


Figure 4 Source: AMECO database 2019

Looking at the development in investment levels one can expect this divergence to increase further. Investment levels in Southern euro countries were exceeding those of Northern countries from 2000 until 2008. However, this reversed in the euro crisis when investment levels in Southern Europe decreased dramatically, especially household and government investment fell.

Euro countries investment (%GDP)



North: Austria, Belgium, Germany, Ireland, Luxembourg, the Netherlands, Finland
South: Greece, Spain, France, Italy, Portugal

Figure 5 Source: AMECO database 2019

The stalled reform agenda

Aside from investments, economic reforms can also increase productivity. Since 2010, the so-called "European Semester" has become the unified framework for the coordination and surveillance of fiscal and structural economic policies in the EU. Annually the European Commission spells out growth-enhancing recommendations for economic reform, its Country Specific Recommendations.

During the height of the euro crisis, when emergency loans were made conditional on implementing reforms, there was an acceleration of reforms in targeted countries. However, the tempo of economic reforms has been going down. Implementation rates of country-specific recommendations are modest, and have worsened since the economic environment has improved and market pressure on sovereigns has subsided (Efstathiou & Wolff, 2019).

4. DIVERGENCE AS A FUNDAMENTAL THREAT TO THE EURO

The large and growing divergence in economic development between the North and South of the eurozone is worrying for two reasons. Firstly, it makes it harder for the South to bring its excessive government debt back to sustainable levels. Secondly, the divergence was one of the root causes of the euro crisis, one of the drivers of the imbalances that built up before 2008. The divergence is thus both an impediment to restoring the economy to a healthy state and a threat to future financial stability of the eurozone.

Debt sustainability

Aside from the interest rate level and timing of the debt repayments, the debt level relative to the economy, the debt-income ratio, is an important indicator of debt sustainability. After all, economic activity generates the income necessary to pay interest and service the debt. Southern European countries not only suffer from lower economic growth, higher unemployment and lower levels of investment, but they also have substantially higher government debt levels.

Government debt (%GDP)

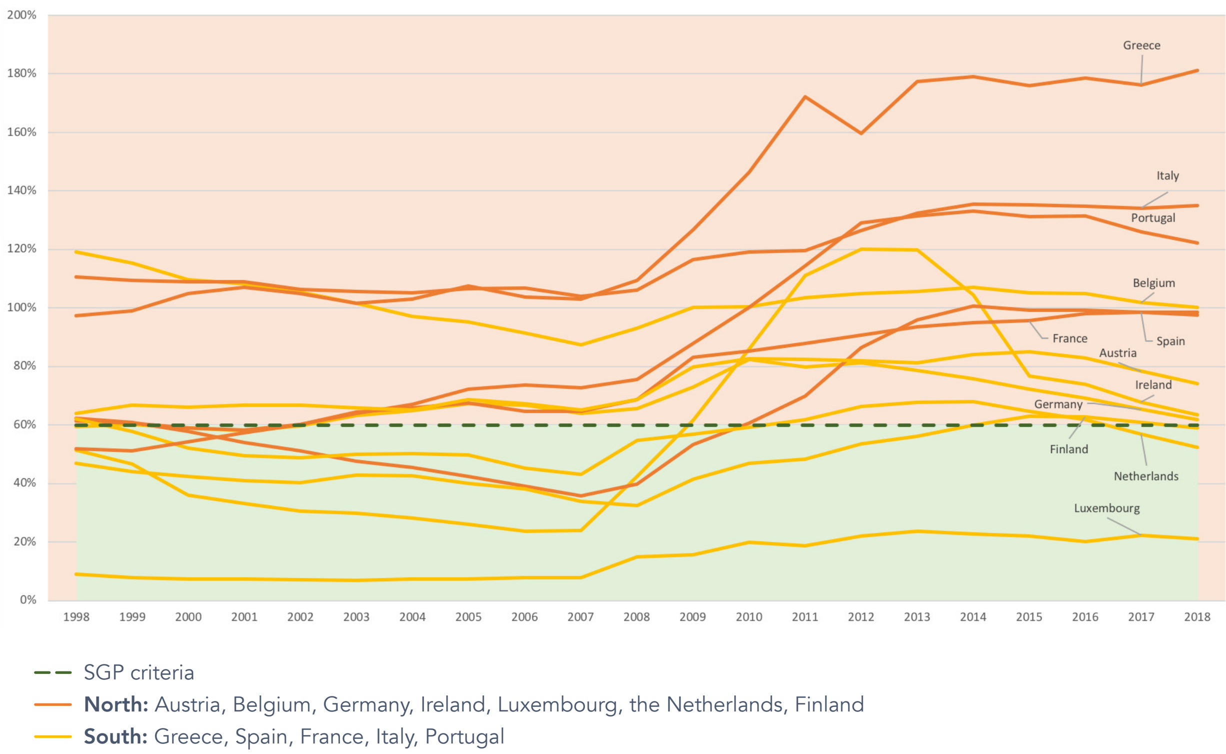


Figure 6 Source: AMECO database 2019

Divergence as a cause for the eurozone crisis

For the most part, these higher debt levels can be explained by structural differences between North and South. Due to great differences in productivity, after the start of the euro, a very unbalanced flow of goods emerged from North to South. Consequently, this resulted in a money flow the other way around. This has been arguably the root cause of the euro crisis (Holinksi *et al.*, 2012).

Since their accession to the EU, Southern countries received monetary transfers from the North. During the '90s this amounted to on average 3%GDP. This flow of money, the EU structural and cohesion funds, were diverted to the East after the fall of the Berlin Wall and the accession of former Soviet bloc countries to the EU. As a result, at the start of the euro in 1999 this flow had been reduced to 0,3%GDP.

The diversion away of cohesion money and the ensuing current account deficits caused the average savings rate of 5%GDP in Southern euro to reverse into a lending rate of also 5%GDP. Because of this, even before the euro crisis, the South spend annually 5%GDP in interest and debt repayments.

Current account balance (% GDP)

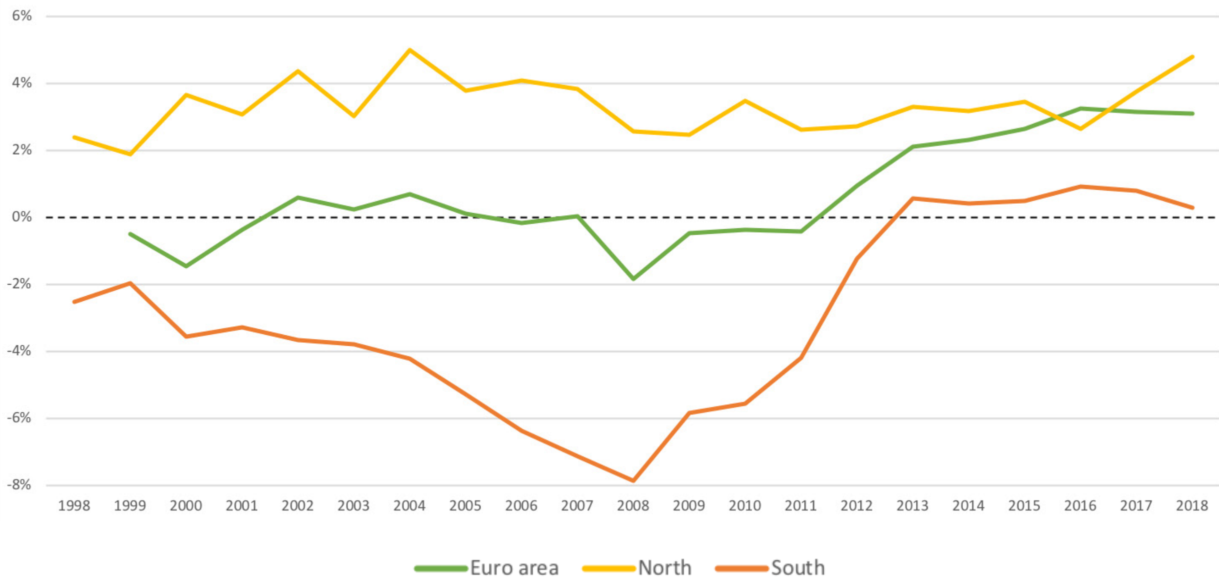


Figure 7 Source: AMECO database 2019

Due to the structural reforms, in particular austerity measures, the current account deficit of the South has recovered and turned into a small surplus. Unfortunately, this disappearance has taken place mainly as a result of decreasing imports, rather than increasing exports. The question, therefore, again becomes how stable this new situation is. The current account deficits of the South have long functioned as an exhaust valve, covering the structural difference and the lacking convergence between eurozone countries.

5. THE GROWING DIVERGENCE WITHIN EURO MEMBER STATES

Divergence has not only taken place between the euro member states. Painful divergences are also visible within euro member states, both in the North and the South. These have given rise to growing anti-EU political sentiments that put a strain on the eurozone and wider European cooperation.

Wages lagging behind economic growth

In the eurozone, over the last three decades, the economy has grown on average twice as fast as have wages. This means that a large part of economic growth does not end up in the pockets of the working population. Real wages have even declined over the period of a decade in Greece, Spain, Portugal and have remained stagnant in Italy. However, sluggish wage growth is not an exclusive Southern phenomenon. Wages declined also over a ten year period in Finland and were stagnant in Belgium and Ireland. Large differences between economic growth and wage development are also visible in Germany, the Netherlands and Austria.

Comparison economic growth and wage growth

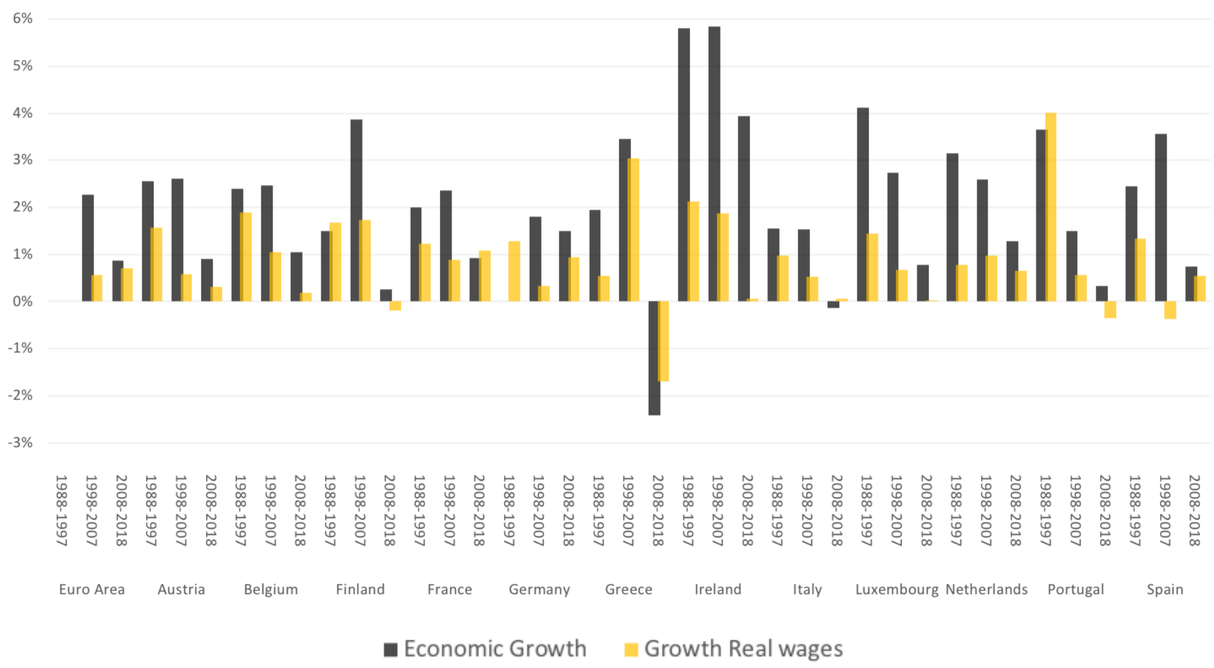


Figure 8 Source: AMECO database, 2019

Growing inequality in Germany

Income inequality is still moderate in the eurozone compared to the US. It is distinctively higher in the South, with Spain, Portugal, Greece and Italy at the top. It is noteworthy that in Germany inequality has been steadily rising. It increased from one of the lowest in 2004 towards 2018 by a staggering 30%. The German Gini-coefficient is now closer to that of the South than of the North.

Even more remarkable is the ensuing wealth distribution in Germany. A closer look to within country wealth distributions could explain Germany's reluctance during the euro crisis to write off debts in the South or alleviate the problems with fiscal transfers. The median household in Germany possesses less wealth than the median household in Portugal, Greece, Italy and Spain. This picture does not radically change when considering the mean household. A somewhat surprising take from the two graphs is that where Southern euro countries perform on almost all facets worse than their Northern counterparts, they trump these same countries when it comes to the possessed private wealth (De Grauwe & Ji, 2013a).

Median Net Wealth
(EUR thousands)

Mean Net Wealth
(EUR thousands)

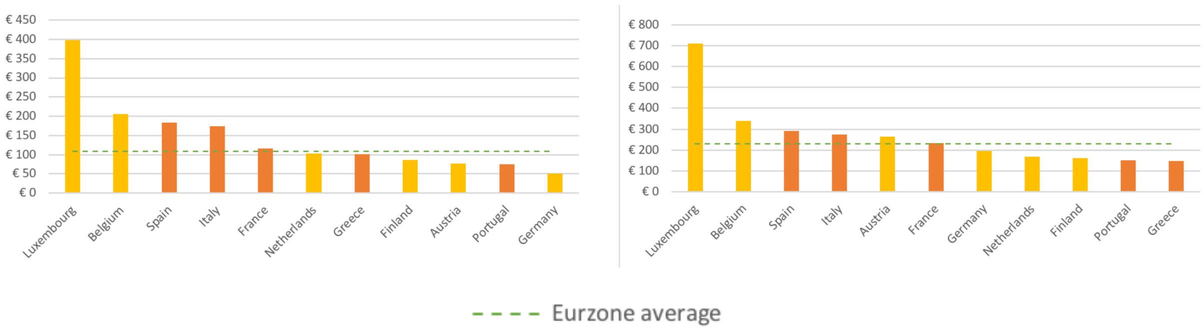


Figure 9 Source: European Central Bank (2013)

Growing Euroscepticism

Despite seven relatively good macro-economic years, many citizens still do not feel they are progressing, also in the North. Wages lag behind economic growth, income and wealth inequalities are rising or are perceived to do so. The austerity measures have left their marks, hurting the lower income groups stronger (Reeds & Portes, 2018). At the same time, the asset purchase scheme by the ECB has driven up prices of stocks and debt instruments, which are generally held by the more prosperous, asset-owning, part of society.

Together, these dynamics have created a fertile ground for Euroscepticism and anti-European sentiments. Populist parties grew quickly and some even raised to power, such as in Italy and Austria. These dynamics have put a strain on the eurozone and the wider European cooperation, fed distrust amongst member states and discontent within each member state.

6. STRENGTHENING THE FISCAL FOUNDATION OF THE EURO

The euro crisis showed what it means to be a monetary union without the appropriate common shock absorbers. The euro has endured, but the foundation of the monetary union remains fragile. The fiscal response to the previous crisis fell short and no convincing steps have been set to ameliorate this. The European Commission has however tabled proposals in the economic governance review that will be discussed this year.

The euro area, far from an 'optimal currency area'...

It has been clear from the beginning that the euro is less of, what economists call, an 'optimal currency area' than most other monetary unions. Compared to the United States and Canada, real exchange rates, as well as real securities prices, are considerably more variable in Europe. Also, labor mobility and the speed of labor market adjustment are lower in Europe (Eichengreen, 1991). Shock absorption through private financial channels is more than five times as small in the euro area compared to the US (Heijdra *et al.*, 2018).

As the economy is less unified, and is slower to adapt, there is a larger need for fiscal transfers to cushion the effects of economic shocks. However, these are also substantially lower in the eurozone and the European Union then they are in other monetary unions. The EU budget is around 1%GDP, whereas the federal budgets in Canada, Switzerland, and the United States represent about half of government spending, or 15-20%GDP (Escolano *et al.*, 2015).

These deficiencies have been known since the first discussions on the EMU, with the Delors report (1989) already calling for the harmonisation of fiscal and budgetary policies. The introduction of the euro led to rules that limit the fiscal freedom of the euro member states, the so-called Stability and Growth Pact (SGP), best known for its limits to budget deficits of 3% and of the government debt of 60%. However, no solution has been found for a shared fiscal stimulus.

… as became painfully clear during the euro crisis

During the euro crisis the problematic nature of this status quo became apparent, as the countries most severely hit by the economic crisis could not resort to adjustment of the exchange rate, while the SGP limited their fiscal capabilities. At the same time, the ECB formulates its monetary policy for the whole euro area. Thus, ECB president Draghi (2012) indicated, the eurozone found itself in a "bad equilibrium" where "you may have self-fulfilling expectations that feed upon themselves and generate very adverse scenarios."

Countries with similar fiscal outlooks (e.g., Spain and the UK) experienced very different borrowing costs (De Grauwe & Ji 2013b). De Grauwe (2011) argues that countries in a monetary union are more vulnerable to 'unnecessary' (or non-fundamental) contagion of bad news in sovereign debt markets through self-fulfilling panic because they lack control over their currency. Market pessimism about a sovereign's ability to service its debt can trigger higher interest rates, which makes it harder for the sovereign to rollover its short-term debt and so forth. This self-fulfilling dynamic is less likely to occur when a sovereign has control over its currency, even though its fundamentals may be worse, because the markets recognize the presence of a central bank that stands ready to inject the necessary liquidity.

As a result, eurozone countries needed to resort to austerity, thereby creating a deflationary bias. In comparison, the US eased its fiscal policy much stronger than the eurozone, with 6.5%GDP (2008-2009) versus 3%GDP in the euro area (2008-2010). In both currency areas, fiscal policy then contracted in a similar vein, with the big difference that in the US the economic recovery was under way while the eurozone was still in a recession. This while public debt levels were similar in the two jurisdictions (Draghi, 2018). As a result, unemployment went up much higher in the eurozone than in Japan and stayed on a high level longer than in the US.

Unemployment Rate

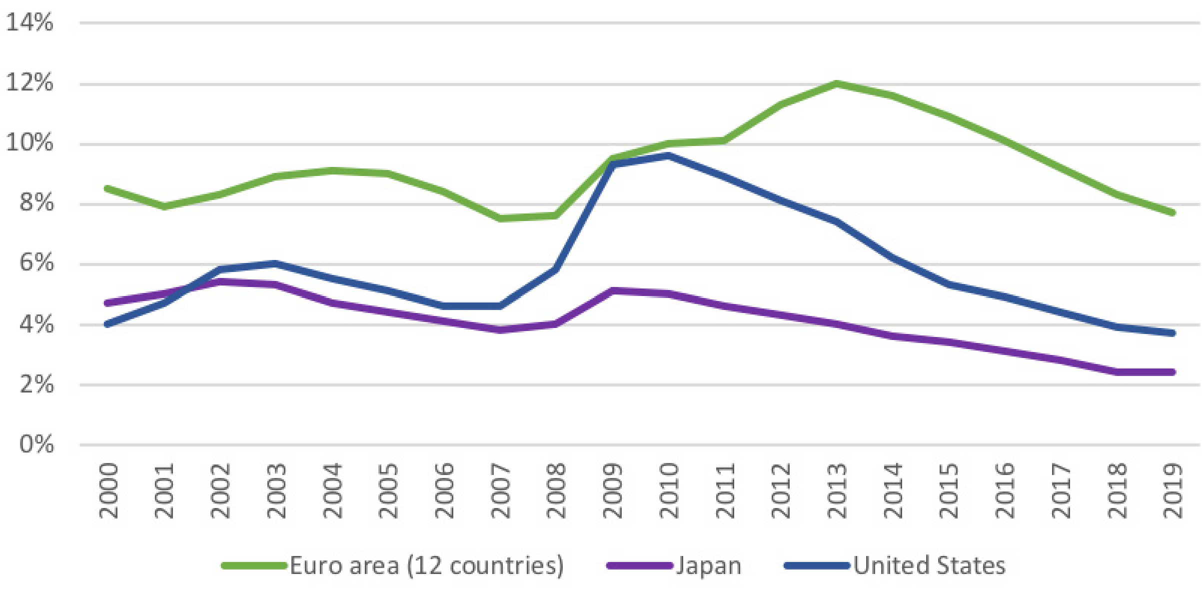


Figure 10 Source: AMECO database 2019

The foundation remains fragile

The euro crisis did initiate unprecedented reforms in many fields. As we saw, government budgets and current accounts were balanced, economic reforms undertaken. Also the 'euro architecture', the rules and institutions at the euro and EU level, changed quite drastically. At the height of the euro crisis, this mainly concerned extra instruments to enforce spending rules, strengthen the budgetary constraints[3] as well as monitoring other imbalances[4]. New mechanisms of financial stabilization for countries in fiscal stress were created as well, and in 2012 a permanent European Stability Mechanism (ESM) was founded[5].The ECB announced in 2012 an Outright Monetary Transactions (OMT) plan to buy state securities of countries which accepted to enter into an ESM-financed support programme. Before, in 2010, it launched the Securities Market Programme to purchase government bonds on the secondary market.

After the crisis subdued, ambitious reform proposals were put on the table. The so called 'Five presidents report' (Juncker, 2015) stated that "Europe's Economic and Monetary Union (EMU) today is like a house that was built over decades but only partially finished. When the storm hit, its walls and roof had to be stabilised quickly. It is now high time to reinforce its foundations". The envisaged stronger foundation comprised a binding convergence process as part of the finalization of the Economic Union and a Fiscal Union that should provide macroeconomic stabilisation for the euro area. More than four years after the "Five presidents report" has been published, a fair conclusion would be that progress has been modest at best.

[3] Through the so called '6-pack'-, '2-pack'-, Fiscal Compact- and European semester reforms.

[4] Like the Macroeconomic Imbalances Procedure and the macroprudential surveillance by the European Systemic Risk Board.

[5] Since 2011 the ESM (and its temporary predecessors EFSM and EFSF) supported Greece, Portugal, Ireland, Cyprus and Spain with loans subject to conditionality.

Whereas important steps have been set with regard to the Banking Union, it is still unfinished as there is still no common deposit insurance. The state of the discussion on this, especially in the Northern European member states, indicates that this is not something to be expected to be realized in the near future. The Capital Markets Union has not led to much deepening of capital market integration. Hence it has contributes little in terms of the desired private shock absorption. And lastly, the outline for a eurozone budget (the 'budgetary instrument for convergence and competitiveness') that was agreed in June 2019 is far from the stabilisation fund envisaged by the Five Presidents, as it is not to be used for stabilisation purposes and no budget is decided upon yet.

Fiscal policy options going forward

In 2007 it was then president of the Eurogroup Jean Claude Juncker who said: "We all know what to do, but we don't know how to get re-elected once we have done it." This still summarizes well the situation that fiscal policymakers face when it comes to strengthening the fiscal foundations of the euro monetary union. There is a real danger that too quick a risk sharing, resulting in fiscal transfers, will generate a political backlash. At the same time, fiscal policy makers would be wise to acknowledge that in a new economic crisis it is not likely that the ECB would be able to do the heavy lifting to the extent that it has done in the previous crisis. The monetary policy space is much smaller. It is for that reason even more important that fiscal space needs to be created.

In its recent 'Economic governance review' the European Commission (2020b) acknowledges this: "because monetary policy is increasingly constrained by the effective lower bound on interest rates, the appropriate role of fiscal and economic policy in macroeconomic stabilisation should be assessed." The EC brings back into the discussion a fiscal stabilisation capacity for macroeconomic stabilisation at the level of the euro area as a whole. Echoing earlier calls for fiscal stabilisers in fields where the democratic legitimacy of governments is greatest, where solidarity is felt strongest and that contribute to shock absorption the strongest. Here one can think of education and the fight against youth unemployment (Boot & van Riel, 2014) or a more broader a euro-area unemployment insurance scheme (Darvas, Wieser & Zenios, 2019). The EC (2020b) also calls for the completion of the financial union (Banking Union and Capital Markets Union), the introduction of a common safe asset and the review of the regulatory treatment of bank sovereign exposures.

Additionally, in light of the "substantial additional investments needed to modernise infrastructure, make the EU economy climate-neutral by 2050 and foster the digital transition", the EC also proposes the greater use of green budgeting tools: "re-assessing the appropriateness of the current flexibility clauses in terms of their scope and eligibility, in order to facilitate the right type and level of investment while preserving debt sustainability" (EC, 2020b).

The EC concludes that growth enhancing reforms have stalled. The question is how to win back momentum in this field. In all likelihood, this would require a *grand deal* to be struck between the North and South, which could conceivably entail linking fiscal help to growth-enhancing economic reforms. Where the South proposes reform plans, a detailed multi-annual agenda of implementing structural reforms of their economies, especially in their labour and services markets and pension systems that will structurally strengthen their economies, to be matched by well targeted EU financed investments (ESFRC, 2016 & 2020). This could change the current negative political dynamic between North and South that, if left unchecked, could spark a new crisis of trust in the eurozone.

A well-funded InvestEU program could be used for this. Giving European countries strong incentives for proposing credible projects. Those projects should not only give a short-term impetus to spending, but should also structurally lift Europe's growth potential. These proposals will have to be evaluated by the EIB, which will have to be assisted in this process by external advisors and consultants (ESFRC, 2016).

7. SEARCHING FOR MONETARY POLICY SPACE

The ECB is reaching the limits of its monetary policy space, with negative interest rates and the limits of the sovereign bond buying programme in sight. This should induce fiscal policy makers to play a more active role in stimulating the economy were a new economic downturn to strike. However, it seems prudent for the ECB to also explore new options for monetary policy that could support such fiscal efforts to counter deflationary pressures. Following fiscal action, monetary policy space could be created using new instruments that have a more direct effect on the economy.

The limits of the current monetary approach

During the euro crisis years, the ECB has arguably been the most responsive and potent European institution when it comes to stimulating the eurozone economy. However, the instruments used by the ECB seem to have run their course.

Interest rates are already in uncharted, negative, territory. Drawing fire, especially from Germany, where Deutsche Bank chief executive Christian Sewing, warned that cutting interest rates further into negative territory would "ruin the financial system" (Arons & Comfort, 2019). The German tabloid newspaper Bild Zeitung accused Mr Draghi of being "Count Draghila" who "sucks our bank accounts empty" (Carrel, 2019). In the Netherlands the pension funds are suffering from the low interest rates that strongly increase their liabilities and may force them to lower the pensions.

The empirical evidence of low interest rates on the interest margins and hence profitability of banks is mixed (Boungou, 2019; Lopez, 2019). However, as monetary policy rates decline further below zero, monetary policy could reach a "reversal rate" where negative effects on bank profitability outweigh improvements from the macroeconomic outlook and increased bank lending (Brunnermaier & Koby, 2019). For that reason, the ECB fears that "declining bank lending rates could squeeze banks' margins beyond adequate risk coverage" (ECB, 2019a).

Another downside of the low interest rate is the lowering of productivity development through the prevalence of so called "zombie firms", firms that cannot cover their debt repayments from their profits (Banerjee & Hofmann, 2018). Their survival depends on the perpetually rolled-over loans by their banks. (Borio, Gambacorta, Hofman, 2015; Borio, 2018). Zombie firms weaken productivity as they crowd out resources from more productive firms (Banerjee & Hofmann, 2018) and make the economy more vulnerable to interest rate increases (Borio, 2018).

This thus leaves little to no room for further cuts in interest rates and thus for the usual monetary reaction to an economic downturn. In reaction to the dotcom crisis in 2001 the ECB lowered its rates by 2%, and after 2008 by even 4%.

Also, the unconventional measures taken over the last years are running into their legal limits, like the maximum of one third of outstanding sovereign bonds. These limits may be self-imposed, and hence the ECB may change them, but these then risk being challenged in court. As this will give the ECB a decisive vote on debt restructuring which may be seen as monetary financing, something that is explicitly forbidden in the EU Treaties (Article 123). It is estimated that with the current amounts of bonds bought, 20 billion euro a month, there is only one year left before the limits are reached (Stubbington, 2019). This means that at the pace of the last crisis, where at the height 80 billion euro a month was bought, there would only have been room for less than three months.

The (perceived) lack of effectiveness of the current monetary approach is also fueling public resentment. With real estate and stock prices going up, but wages remaining stagnant, wealth inequalities increase. The influence of the quantitative easing on the asset prices has been little researched and the results it delivered are unclear. However, most studies find that it has inflated asset prices substantially (Balatti *et al.*, 2018; Bridges & Thomas 2012; Joyce, 2011).

Former heads of eurozone central banks have argued that the ECB should redefine its inflation target. By lowering this from the current 2% to 1% the need for further stimulus is reduced (Koranyi, 2019). Whereas the ECB has the freedom to make this adjustment, this may very well increase the economic and political problems of the eurozone as this makes it even harder to pay off debts and leave less of a cushion for the eurozone when an economic downturn would present itself. It is for this reason that many economists would rather argue in favor of a higher than a lower inflation target (Arnold & Vladkov, 2019, Ball, 2014; Blanchard *et al.*, 2010).

ECB 'going direct': a framework dividing fiscal and monetary responsibilities

After it calmed markets in 2012 stating it would do 'whatever it takes' to save the euro, markets now are increasingly questioning: what can the ECB still do when a next downturn arrives to support fiscal measures? Unconventional monetary policy is looking more and more like 'pushing on a string', trying to induce an already overindebted private sector to take on even more debt.

A potential way out is for central bankers to move out of their monetary comfort zone and deploy instruments that have a more direct impact on the real economy, the place where inflation is created and measured. This may actually be required in order to fulfill the central banks mandate of achieving price stability. Such alternatives were suggested recently (Coppola, 2019; de Grauwe, 2019; Wolf, 2019) echoing earlier proposals along these lines (Benink & Boonstra, 2015; Bernanke, 2016; Lonergan, 2016; Turner, 2015).

One of the more recent and elaborate proposals was presented by the Blackrock Investment Institute and was co-authored by two former central bank presidents, Stanley Fisher and Philipp Hildebrand (Bartsch *et al.*, 2019). They argue that monetary policy is almost exhausted, and that fiscal policy will struggle to provide stimulus in a timely fashion given high debt levels and the typical lags with implementation. In this situation "policymakers will inevitably find themselves blurring the boundaries between fiscal and monetary policies. This threatens the hard-won credibility of policy institutions and could open the door to uncontrolled fiscal spending" (Bartsch *et al.*, 2019, p. 2). They argue that a clear framework is needed that spells out the different and separate roles played by both fiscal and monetary authorities.

The central element in this is the so called 'standing emergency fiscal facility' (SEFF). The SEFF is essentially a priority list of investments drawn up by the fiscal authorities. It is thus the politicians who decide on the spending priorities. It is, however, the monetary authorities that decide when, and to what extent, they will provide funding for these priorities, as well as how and when to end this once the targets related to price stability are met. This decision will be based entirely on monetary considerations. It is monetary policy makers that decide how many extra investments are needed to bring the price-level back to target. According to Bartsch *et al.* (2019) a practical way of "going direct" would need:

1. A definition of the (unusual) circumstances that trigger such fiscal-monetary coordination;
2. An explicit inflation objective that fiscal- and monetary authorities are jointly held accountable for achieving;
3. A mechanism that enables nimble deployment of productive fiscal policy;
4. A clear exit strategy. Once inflation is back at target and monetary policy space is regained, the facility will be closed.

The effectiveness of such a policy framework would depend on it being implemented well in advance of the next downturn. A clear and credible stimulus strategy helps investors to understand what will happen and may thus reduce the amount of stimulus needed.

The legal basis for the ECB 'going direct'

The EU Treaty bans direct deficit funding of governments (Article 123). Government bond purchases therefore are subject to restrictions. However, Bartsch *et al*. spell out two routes that may be legal under EU Treaties.

The first has been set out by Lonergan (2016) and involves perpetual, zero-coupon targeted longer-term refinancing operation (TLTRO) for bank loans to each adult citizen. The other option, also mentioned earlier by amongst others Benink and Boonstra (2015) and de Grauwe (2019), focuses on public borrowing via the European Investment Bank (EIB) and national promotional banks (NPB).

As the ECB works with strict keys as to how to spread investments, EIB bonds should stipulate these as well. The ECB can then increase the percentage of EIB-bonds in its public sector purchase programme (PSPP) exceeding the current limit of 50% of outstanding bonds for such institutions. This would give the ECB a decisive vote in any debt restructuring. This may sit uneasy with the monetary financing prohibition. On the other hand, increasing the exposure to the EIB instead of buying government bonds will reduce the ECB exposure to debt of individual governments.

In the end, what is illegal monetary financing and what is necessary to safeguard the price stability of the currency is a question of proportionality. The most important thing therefore is that the ECB can show that its course is necessary to reach its goal of price stability and that other instruments would not have been effective. The ruling of the European Court of Justice on the ECB's Outright Monetary Transactions (OMT) programme speaks to this effect. It concluded that the "OMT programme, in seeking to preserve the singleness of monetary policy, contributes to achieving the objectives of that policy" and is "likely [t]o contribute to its primary objective, which is to maintain price stability" (ECJ, 2015, p. 2).

The main argument against monetary financing is the inflationary effect it may have. This idea took hold in the late '70s en '80s after the experience of stagflation. At that time, the challenge was to get inflation down. Currently, and especially in the circumstances of an economic downturn discussed here, it is deflation that is being risked.

The investment agenda of the Union

It is up to governments and parliaments to decide on the exact investment priorities. The new European Commission president von der Leyen recently declared that environmental protection is "our most urgent task" (von der Leyen, 2019). Through its 'Green Deal' the European Commission wants Europe to become "the world's first climate-neutral continent by 2050" (EC, 2019). At the same time the ECB has been taking climate concerns increasingly into account. In 'going direct' the ECB can built on these initial steps.

Reaching the stated goals on climate change requires large investments in the coming decades. For Europe investments are needed in (EC, 2018; EIB, 2019):

- **energy efficiency** for heating/cooling, lighting, power, transport. Investment, notably in residential buildings, needs to double in the coming decade. Energy efficiency investments in buildings and industry represent approximately three-quarters of the total energy investment required in the period 2021-30, equal to EUR 281 billion per year;
- the share of **renewable energy** technologies will have to increase substantially. Wind and solar power are projected to represent the majority of low-carbon energy sources by 2050. Meeting the EU 2030 target is likely to involve doubling or tripling today's capacity in renewable power generation;
- As these renewable energy technologies are variable in nature investments are needed to increase the **flexibility of energy systems**, including different forms of storage, flexible capacity and demand response;
- Further investments are needed for **decentralization, electrification** and **digitalisation of the energy systems**.

The current investment gap

Most estimates of the yearly average additional investment (public and private) necessary to achieve the EU's current 2030 climate and energy targets are in the range of €175 billion to €290 billion. The European Commission's most recent estimate (European Commission, 2019) of this 'green investment gap' is €257 billion per year.

Sector	Investment gap (billions)
Residential	€ 125
Service	€ 71
Transport	€ 21
Power generation	€ 21
Power grid	€ 13
Industry	€ 4
Boilers	€ 2
Total	**€ 257**

Whereas several plans have recently been laid out to increase investments in the energy transition, these do not seem to be able to close the investment gap. The 'InvestEU Fund', the successor of President Juncker's 'European Fund for Strategic Investments' (EFSI), is expected to alleviate around 10% of the European investment gap in sustainable infrastructure (Rubio & Virel, 2018).

Recently, the European Commission has issued its 'European Green Deal Investment Plan' (2020) that aims to mobilise at least EUR 1 trillion of private and public sustainable investments over the upcoming decade. Whereas in itself this would be insufficient to close the investment gap that is almost three times as big, doubts have also been voiced over whether the plan actually has the instruments to achieve this target (Claeys & Tagliapietra, 2020).

ECB is already starting to take climate risks into account

More directly financing the energy transition would built on an ongoing development where central banks are increasingly already taking climate issues into account. The importance of climate risks for the stability of the financial sector is also recognized by central banks (NGFS, 2018, 2019). The new ECB president Lagarde stated that she wants to put "protection of the environment at the core of the understanding of its mission" (Lagarde, 2019).

In their role as supervisors, central banks have become increasingly vocal about the risks of climate change, urging banks, insurance companies and pension funds to take these into account. However, for their own balance sheets climate risks so far have not been taken into account.

The guiding principle in the implementation of monetary policy has been 'market neutrality,' whereby the central bank buys a proportion of the market portfolio of available bonds. This implies a carbon bias, because capital-intensive companies tend to be more carbon intensive and credit rating agencies and the broader market seem not to take climate risks fully into account yet (Andersson, 2016; Hing, 2019). As a result central bank's own portfolio is relatively carbon intensive when compared to even the average of the economy (Matikainen *et al.*, 2017). This exposes the central bank to transition risks. In a study of the ECB balance sheet it is estimated that when transition risks are taken into account, 5% of the bonds currently being purchased could have a worsening of their credit rating to such an extent that they would no longer be eligible (Monnin, 2018).

Calls have been made for central banks to start taking climate risks into account in setting and executing their monetary policies. For this the following avenues have been suggested, where the last two are 'green' ways to 'go direct' as discussed in the previous chapter:

Greening the ECB's collateral framework: by assigning the more carbon intensive assets a higher haircut, or even excluding the most carbon intensive assets, especially those of governments and corporates that do not commit to a time-bound Paris alignment. For this the ECB needs to review its Eurosystem credit assessment framework (ECAF) to ensure that the external credit assessment institutions take climate risks into account. Another possibility is to do more of this credit assessment in-house, using the credit assessments made by some of the Eurosystem banks like the Banque de France and the Bundesbank (Suttor-Sorel, 2019).

Greening the ECB's quantitative easing programme: another possibility is for the ECB to steer or tilt the allocation of the Eurosystem's assets and collateral towards low-carbon sectors. This does not mean that the ECB would only buy 'green bonds'. As this is still a very small percentage of the overall market the ECB would quickly dominate this market. However, the ECB can buy more or less of certain bonds based on the carbon footprint of companies and sovereigns. This would reduce the cost of capital for these sectors relative to high-carbon sectors. This allocation policy can be designed so it does not affect the effective implementation of monetary policy (Schoenmaker, 2019). Recently the Swedish Riksbank has sold debt from the Australian states of Queensland and Western Australia, and the Canadian province of Alberta from its portfolio of foreign exchange reserves as these regions have too high a carbon footprint (Stubbington, 2019).

Greening the targeted longer-term refinancing operation (TLTRO): through its targeted longer-term refinancing operation (TLTRO) the ECB lends to commercial banks at a lower interest rate, on condition that they extend new loans the productive parts of the private sector, so excluding mortgages. Lonergan proposes to increase the popularity of this instrument by increasing both its duration and the interest advantage from the current three-year TLTROs at minus 0.5 per cent to a 10-year loan at minus 1 per cent or minus 2. In addition, this money would be available only to banks that are directly using the funds to finance sustainable energy investments (Lonergan, 2020).

Fiscal-monetary coordination: as discussed in the previous chapter, next to the existing bonds that central banks take on their balance sheet as collateral or in the process of quantitative easing, central banks can also channel new money into more direct investments. For this new bonds issued by National Promotional Banks (NPB) and the EIB could be preferentially bought by the ECB. While the ECB is already buying NPB and EIB bonds as part of the Public Sector Purchase Programme (PSPP) of its quantitative easing. Expanding the amount and publicizing it could act as a form of guarantee, which could both (1) lower NPBs' and the EIB's cost of financing and (2) enable them to take more risks (e.g. fund uncertain R&D, new technology, experimental projects) and fund less bankable projects.

8. DISCUSSION

The vicious circle of the eurocrisis

That the eurozone at its inception was incomplete, lacking the necessary political and fiscal union, has been acknowledged from the start. The expectation was that along the way solutions would be found, as has always been the case with the European Union (Middelaar, 2014).

However, a different dynamic may have been developing in the eurozone since 2010. One where the crisis did not feed the political appetite for an ever closer union, but may actually erode the necessary support base for even maintaining the status quo.

Since the start of the eurocrisis, sentiments have been fed that pit North against South and everyone against the European institutions in Brussels, and increasingly also against the ECB in Frankfurt. Whereas the crisis has raised the awareness amongst politicians and policymakers that further steps that strengthen the euro architecture are needed, the political capital to actually take these steps has been lacking. The same can be said of the economic reform agenda. Thereby further undermining the much-needed economic convergence process, making another crisis both more likely and harder to resolve.

It could be that in a next crisis the EU rediscovers its resilience, utilizing the next crisis as an opportunity for further integration. For now, however, we can only establish that the dramatic, at times existential, eurocrisis of 2009-2012 has not led to an institutional set up that would effectively prevent this crisis from recurring. It is also clear that the economic and political dynamic is worse than it was before the start of the eurocrisis. Both the fiscal and monetary spheres are still in crisis mode and therefore seem ill prepared for an economic downturn.

A new covenant between the fiscal and monetary domain

There is a heating global debate whether fiscal and monetary authorities still have enough firing power left to deal with a next economic downturn. The eurozone is particularly vulnerable, given the concentration of government debt in some of its least economically dynamic member states, the lack of common shock absorbers, both public and private, and the already highly accommodative monetary policy stance.

The outgoing ECB president Mario Draghi (2019) called for "recreating fiscal space by raising potential output through reforms and public investment". This has also been the message of Christine Lagarde in her first speech as the new ECB-president (Lagarde, 2019). Pleas that have been met with silence or outright rejection.

However, monetary policy is reaching its limits. In a next economic crisis fiscal policy needs to share more in the burden. Needed is a new covenant between fiscal and monetary policymakers. In this report we have outlined room that we see in both the fiscal and the monetary sphere.

For the eurozone to withstand a next storm, more coordination is needed between the fiscal and monetary spheres. In the fiscal space, growth enhancing structural reforms could be linked to EU-funded investments. The monetary policy space can contribute to this using more direct instruments.

Towards a virtuous cycle

Together, EU-institutions, member state governments and the ECB can develop new instruments that have a more direct impact on the real economy. A new set of unconventional measures is possible where monetary and fiscal policy built upon each other more directly, while preserving a clear distinction between the fiscal and monetary spheres. This may be needed to effectively address a next economic downturn, minimizing the economic costs and safeguarding price stability.

However, such an approach may also have added benefits through structurally strengthening the eurozone economies and increasing convergence between them. Investments can increase productivity and promote other policy aims like accelerating the energy transition. This way a 'new unconventional' fiscal-monetary policy mix may allow the ECB to give substance to what it is required to do according to article 127 of the Treaty on the Functioning of the Union: to contribute to "the general economic policies in the Union".

A virtuous cycle may be created where economic progress reduces political tensions, broadening support for further growth enhancing economic reforms as well as making possible the finalization of the banking union and other common shock absorbers in the eurozone. Increased investments will help in particular the South where there is the least fiscal policy room, and where investments have been reduced the strongest. Together with the higher inflation, this will alleviate the debt burden and so create much needed fiscal space. Economic convergence will also lower the pressure on current account imbalances to grow as the South is developing in a more balanced way with the North. Thus reducing the chance of unsustainable debt levels building up as they did before 2009.

Lastly, it may also help to move monetary policy into more familiar territory in terms of interest rates and size of the ECB balance sheet.

Next steps

Many questions remain about the desirability of such a new unconventional fiscal and monetary policy mix and its exact form. To this end we have formulated a research agenda that we will pursue and discuss in 2020.

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GLOSSARY

AEA	American Economic Association
AMECO	Annual macro-economic database
ECAF	Eurosystem Credit Assessment Framework
ECB	European Central Bank
ECJ	European Court of Justice
EFSF	European Financial Stability Facility
EFSI	European Fund for Strategic Investments
EFSM	European Financial Stabilisation Mechanism
EIB	European Investment Bank
EMU	European Monetary Union
ESM	European Stability Mechanism
EU	European Union
EUR	Euro
GDP	Gross Domestic Product
NGFS	Network for Greening the Financial System
NPB	National Promotional Bank
NPL	Non-performing loan
OMT	Outright Monetary Transactions
PSPP	Public Sector Purchase Program
SEFF	Standing Emergency Fiscal Facility
SFL	Sustainable Finance Lab
SGP	Stability and Growth Pact
TEU	Treaty of European Union
TLTRO	Targeted Longer-Term Refinancing Operation
UK	United Kingdom
US	United States

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