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Are the current "automatic stabilisers" in the Euro Area Member States sufficient to smooth economic cycles?

Euro Area Scrutiny

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Abstract

Since 2008, and as the result of central banks reaching the zero-lower bound, fiscal policy has come back as a potential, possibly primary, tool to stabilize business cycles. We present evidence that European countries have historically relied on automatic stabilisers for counter-cyclical policies, while discretionary fiscal policy has been pro-cyclical (unlike in the US). Pro-cyclical fiscal policies became so strong in the years 2010-14 that they completely eliminated the benefits of automatic stabilisers. Looking forward, there are calls to strengthen automatic stabilisers. We argue in this paper that without addressing the reasons behind the pro-cyclicality of discretionary policy, this cannot be a solution. Strengthening automatic stabilisers faces similar challenges and trade-offs as proposals to make discretionary policy more countercyclical.

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EXECUTIVE SUMMARY

In a monetary union, such as the Euro area, fiscal policy is the only economic policy tool at the national level to stabilize fluctuations in economic activity. And even at the Euro level the role of fiscal policy has recently become prominent after the central banks (including the ECB) hit the zero-lower bound, and ran out of (traditional) monetary policy tools. Given the current levels of central bank interest rates it is very likely that in the next crisis central banks will again be out of ammunition and fiscal policy will be asked to play a strong stabilizing role.

Fiscal policy is a combination of automatic stabilisers and discretionary changes in budgets. Traditionally, automatic stabilisers have been seen as superior because they satisfy the three properties of optimal fiscal policy: timely, temporary and targeted. Discretionary policy was seen as slow, leading to permanent changes in spending and too dependent on political goals. In addition, empirical evidence suggests that automatic stabilisers are powerful tools in advanced economies, more so in Europe where governments are large. Discretionary policy, on the other hand, has been pro-cyclical in the Euro area, in particular in the years 2010-14 (the "austerity" years).

Given the effectiveness of automatic stabilisers, a natural question is what it would take to strengthen them. In theory, the answer is simple: more responsive spending and revenues. In practice, we face some difficult challenges to overcome. Currently, automatic stabilisers are mostly the result of policies that have nothing to do with stabilization. Government size, which is the largest source of automatic stabilisers, or progressive taxation are designed to deal with political and social demands, not stabilization. In order to strengthen automatic stabilisers, we would need to introduce purely cyclical elements in the budget that become large enough when they are needed, during crisis. An obvious example could be having a list of "shovel-ready" investment projects waiting for the next recession. This sounds right, but logistically this starts looking more like discretionary policy. Timing will be an issue (how ready are those projects?), political influence will be an issue (which projects go first?) and judgement will be an issue (how severe is the recession?).

Because the similarities between large scale new categories of cyclical spending (or taxes) and discretionary fiscal policy, this paper argues that to design a more powerful fiscal policy one first needs to understand and address the causes of pro-cyclical fiscal policy. The experience of 2010-14 shows that there were at least three driving forces behind pro-cyclical discretionary policies in the Euro area. First, unfounded pessimism, based on flawed statistical models, that was reflected in constant and quick revisions of potential output. What was cyclical was immediately assumed to be permanent. Second, a European fiscal policy framework that is not designed to allow aggressive countercyclical fiscal policy when needed. This is partly about the rules of the Stability and Growth Pact, but also about the ideology that permeates through policy discussions. And third, national fiscal policy in the Euro area can be constrained by the risk perception of financial markets. When financial markets doubt about a particular country, interest rates increase and deficits become too costly. A potential solution to this last issue is a European-wide system of fiscal policy stabilisers. A European system of unemployment insurance would be an example of such a framework, but it is unlikely that it would reach the required size. Potentially, a program that supports European-level shovel-ready projects or, more realistically, a European-wide funding vehicle for discretionary policies in recessionary times (Euro bonds) would be an alternative. But in each of these two examples one cannot underestimate the complexities involved in their design and implementation. Not only we face several technical issues, but we also need to address the deep political implications on how we share the burden and risk during times of crisis.

1. INTRODUCTION AND SUMMARY OF THE LITERATURE

The consequences of the global financial crisis starting in 2008–2009 have been dramatic for the Euro area. While the initial GDP drop and the early recovery in 2010 were similar to that of the other advanced economies, the years that followed were marked by substantially lower GDP growth. A decade of low growth has left the Euro area's GDP 15% below its pre-crisis trend.

During these years, the Euro area witnessed two recessions and struggled with its economic policy tools (monetary and fiscal policies). The ECB was unique among advanced economies by raising interest rates in 2011 in the mistaken anticipation of a quick exit from the crisis. This assumption was soon to be proven wrong and the actions reversed as the ECB moved its interest rates to 0% (and later into negative territory).[1]

In the first two years of the crisis, fiscal policy was countercyclical, leading to large government deficits. But the associated increase in government debt and, in some cases, spikes in interest rates forced Euro countries to embark on a wave of austerity starting in 2010. While there is still a debate about the consequences of these fiscal policy decisions, most of the recent results in the academic literature suggest that the pro-cyclical nature of fiscal policy in the period 2010-14 was a key factor contributing to the weak growth performance of the Euro area (Fatas and Summers (2018)).

How did we get fiscal policy so wrong? Before the crisis, the academic literature did not provide strong or consistent advice on the optimal framework for the conduct of fiscal policy. Fiscal policy was always seen as secondary to monetary policy when it came to economic stabilization. The logic was that, unlike governments, central banks could act fast and were not subject to political interference (Taylor (2000)). The fear was that active government policies would not be timed properly, and lead to permanent government spending on the wrong type of expenditures.[2]

For exactly this reason automatic stabilisers were always seen as the best fiscal policy tool (timely, targeted and temporary). However, there was very little discussion on what type of automatic stabilisers were needed and whether the current level was sufficient. Automatic stabilisers were seen as working and "doing their thing".[3]

But recent events, in particular the fact that central banks have lost their traditional interest rate tool, has brought the focus of attention back to fiscal policy (Eggertsson and Woodford (2004), Eggertsson, Mehrotra, and Robbins (2017)). But is fiscal policy effective? How can we strengthen its role?

Evidence on the effectiveness of automatic stabilisers is broad and strong (Gali (1994), Fatás and Mihov (2001), Debrun and Kapoor (2010)). Evidence on the effectiveness of discretionary fiscal policy is much more mixed and a source of an endless debate among academics and policy makers on the size of fiscal policy multipliers.[4] Why the difference between the two? In principle, the mechanisms through which automatic stabilisers work are similar to those through which discretionary fiscal policy works. But the logic has always been that in the case of automatic stabilisers we get the timing right because of their

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[1] The interest rate decrease was later supported by a program of asset purchases (quantitative easing) that mimicked what the US central bank had done much earlier in the crisis.

[2] For this reason, the literature talks about the need for timely, targeted and temporary active fiscal policy (Auerbach, Gale, and Harris (2010)).

[3] See, for example, Taylor (2000) or Cohen and Follette (2000).

[4] See Blanchard and Leigh (2013) or Auerbach and Gorodnichenko (2011) as examples of empirical studies supporting large fiscal policy multipliers and Ramey and Zubairy (2018) for a more pessimistic view on the effects of discretionary fiscal policy.

automatic nature, they are temporary in nature and they target spending and taxes that are, by definition, affected by the business cycle.

There is possibly one more reason why automatic stabilisers were always seen as a better tool compared to discretionary measures: discussions on discretionary fiscal policy tend to generate divergent views, because they have a more political and ideological nature. They are seen as linked to fundamental issues of government size and the nature of government interference in the economy, issues around which there are strong debates.

This paper presents an overview of how automatic stabilisers work in the Euro area and how they compare to discretionary changes in fiscal policy. The paper starts by presenting a basic framework to understand fiscal policy and stabilization. We follow by presenting broad evidence of how automatic stabilisers have worked relative to discretionary fiscal policy during the past decades. We finish with some concrete policy recommendations for the next crisis.

2. FISCAL POLICY OVER THE BUSINESS CYCLE

2.1 Sustainability and stabilization

From a macroeconomic point of view, we can think of fiscal policy as trying to achieve two objectives: sustainability and stabilization.

Sustainability requires that governments maintain debt levels under control. Most policy discussions on sustainability are centred around the idea of a non-explosive debt-to-GDP ratio. And in cases when the levels of debt are considered to be too high, the discussions are about achieving a decreasing debt-to-GDP ratio. Regardless of the objective, what governments control are current taxes and spending. The difference between the two is what constitutes the primary balance (when we exclude interest payments from the calculation). We can then express the sustainability goal as the required balance to achieve our debt objective. And this balance is a function of the interest rate, the growth rate of GDP and the initial level of debt. In the context of the European fiscal policy framework, this is captured by the medium-term objective.

When it comes to the second objective of fiscal policy, i.e. stabilization, fiscal policy is expected to support aggregate demand. When private spending is low, the contribution of government budgets to aggregate demand should be high, what we call countercyclical fiscal policy.

The best way to measure the contribution of the government budget to aggregate demand is the change in the overall balance Blanchard (1993)). The logic can be justified using a standard, textbook-type, static Keynesian model, where fiscal policy affects aggregate demand via two forces. Higher government spending boosts aggregate demand one to one. Taxes smooth disposable income as long as they are low when income is also low.

2.2 Automatic versus Discretionary Fiscal Policy

Budget balances react to the cycle via automatic rules regarding taxes or government spending. This is what is known as automatic stabilisers. In addition, governments can implement changes in spending or taxes in order to stabilize the economy, what we call discretionary fiscal policy. Discretionary fiscal policy is typically measured as changes in the budget balance after we eliminate automatic stabilisers. We refer to this concept as the cyclically adjusted balance (CAB) (also known as the structural balance).[5]

Separating these two components of the budget requires a measure of the business cycle and a sense of how taxes and spending automatically react to it. Both of these tasks can be challenging and errors in their assessment can lead to large fiscal policy errors (we will discuss this possibility later in the paper).

The measurement of the CAB typically relies on an indirect approach, using the output gap and then postulating an elasticity of taxes and spending to the output gap. These calculations are done separately for different budget components.

Once we have an estimate of the CAB we can calculate automatic stabilisers as a residual: the part of the overall budget balance that is not captured by the CAB.

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[5] In the EU fiscal framework, there is a also an explicit treatment of "one-off components" when calculating the structural balance. They are generally quite small but can be large during times of crisis.

2.3 The strength of automatic stabilisers

Automatic stabilisers are about elements of the budget that work to increase deficits during downturns and reduce them during times of strong economic growth. There is widespread confusion about what is the main source of these stabilisers. Conventional wisdom is that automatic stabilisers are the results of the *cyclical* components of the budget. For example, unemployment benefits increase during recessions because unemployment is high and if taxes are progressive, the average tax rate will vary over the business cycle and they will be low during recessions and high during expansions. While these statements are correct, they ignore the biggest element of the government budget that is responsible for the stabilizing function: its size.

To illustrate this point, let's start with a benchmark case that is quite realistic: imagine that taxes are proportional to income and that the level of government spending does not react much to cyclical fluctuations. Under these assumptions, the strength of automatic stabilisers is just equal to the size of the government (measured as a percentage to GDP). And by the size of government we mean the total spending, regardless of what the resources are being spent in. What matters is the a-cyclicality of the spending and not the type of spending.

This logic is very intuitive. It tells us that when taxes are proportional to income and government spending is constant, the ratio of taxes to GDP is constant. The fact that taxes move proportionally with output means that the volatility of disposable income is identical to the volatility of income. Stabilization only happens because of a-cyclical government spending. This means that the ratio of government to private spending increases during recessions and this is the only reason why we see a worsening of the budget balance. And the larger the government, the larger the change in the budget balance.

In our empirical analysis, we will show that for most advanced economies, and the Euro area, this effect dominates the strength of automatic stabilisers. It would take elasticities of taxes and spending to be much larger than the current levels for this "size" effect not to be the dominant one.

3. FISCAL POLICY IN THE EURO AREA

3.1 The stabilizing role of fiscal policy

We now present evidence on the role of automatic stabilisers and discretionary fiscal policy among Euro countries (and other OECD economies). Following our early logic, the stabilizing role of fiscal policy can be summarized as the reaction of the budget balance to cyclical conditions. The budget balance is typically measured as a % of GDP (or potential GDP). Cyclical conditions can be measured by the output gap or simply by GDP growth. We refer to the elasticity of the budget balance to cyclical conditions as the stabilizing strength of fiscal policy.[6]

If we use the overall balance, we capture all the stabilizing effects of fiscal policy. If we use the cyclically-adjusted balance we only measure the discretionary component, and if we only include the difference between those two, we are capturing the automatic stabilisers.

In Table 1 we present a summary of the results of analysing fiscal policy in OECD economies as well as in the subsample of just Euro members. The first three rows present the results of using data starting as early as it is available (1980 for some countries) and the last three rows present the results of only analysing the years after 2008.[7]

Table 1: Cyclicality of Fiscal Policy

Variable	OECD	Euro
Overall	0.255	0.230
Discretionary	-0.152	-0.188
Automatic Stabilisers	0.383	0.363
Overall (post-2008)	0.361	0.334
Discretionary (post-2008)	-0.107	-0.103
Automatic Stabilisers (post-2008)	0.455	0.412

Source: Author's calculations using OECD data. See Appendix.
Note: Numbers represent the variation of budget balances (as % of GDP) to a 1% change in real GDP Growth

Positive coefficients mean that fiscal policy is countercyclical: budget balances are large when GDP growth is strong and they decline in periods of recession. The overall balance changes by about 0.25-0.36 percentage point of GDP for a 1% change in real GDP. All the countercyclicality comes from automatic stabilisers (their size is around 0.4). Discretionary fiscal policy has the wrong sign, signalling that it is pro-cyclical or, in other words, destabilizing.

The results are similar in the most recent years, except that automatic stabilisers are larger and discretionary fiscal policy is slightly less pro-cyclical, making the overall policy more stabilizing. There is not a big difference between a typical OECD economy and the Euro members although Euro countries seem to display slightly more pro-cyclicality than an average OECD country.

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[6] Our analysis of fiscal policy components is standard in the academic literature and among policy makers. See for example the recent analysis of Mohl, Mourre, and Stoviceck (2019).

[7] An appendix presents in detail the variables being used as well as the regression from which these estimates are extracted.
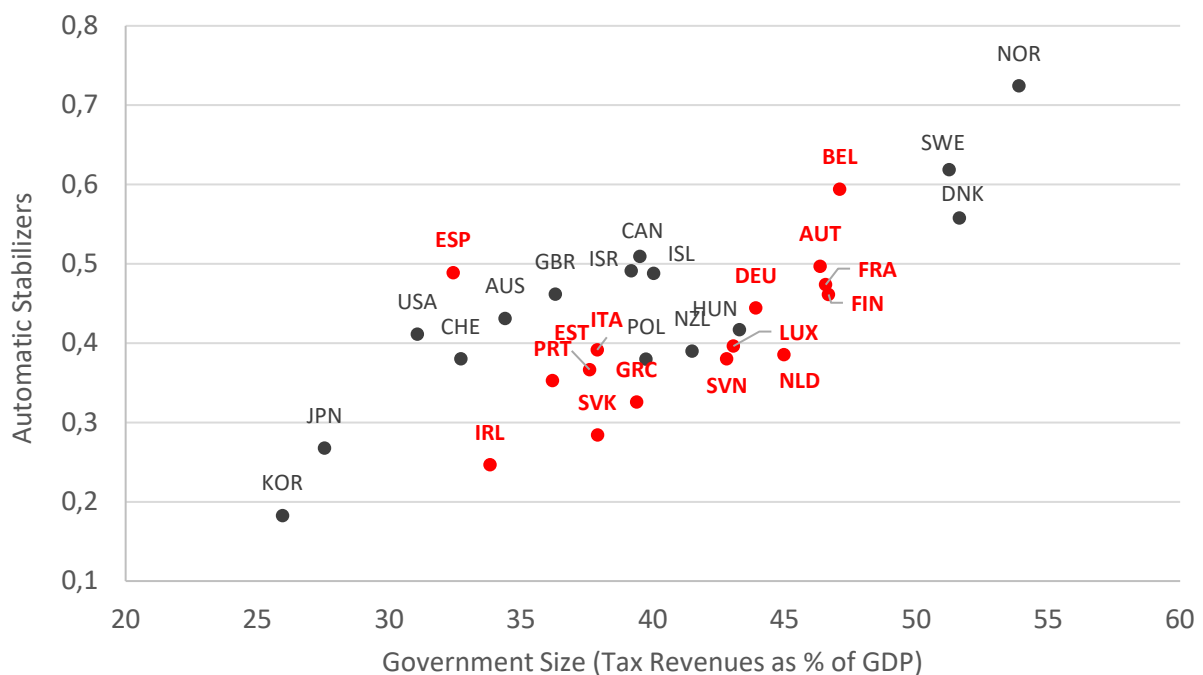
3.2 Automatic stabilisers and government size

Where is the cyclicality of the budget coming from? We have calculated separately the reaction of spending and revenues. Spending reacts positively to GDP but less than one to one, which means that government spending is less volatile than private spending. In the case of revenues, they seem to move proportionally to GDP with an elasticity close to 1. These results are consistent with the much more detailed analysis of disaggregated tax and spending elasticities for OECD countries of Price, Dang, and Botev (2015) that updates the earlier estimates of Girouard and Andre (2006). In their analysis, they find that the average elasticity of taxes for OECD countries is 1.05 (see their Table 9) while the elasticity of spending is very close to zero. Of course, these elasticities are about average response of revenues. Some components of the revenues more than proportionally change with GDP (such as income taxes) while others are much less elastic (VAT or social security charges).

Overall, our results and the disaggregated estimates of elasticities of Price, Dang, and Botev (2015) confirm that the benchmark case discussed earlier is a good description of an average advanced economy. Tax elasticities are close to one and government spending is mildly countercyclical or a-cyclical. As a result, the strength of automatic stabilisers is mostly coming from the size of the government – that's why the corresponding coefficients in Table 1 are not far from the average government size in these countries.

To confirm this important insight, we look at individual countries. We do this first by calculating for each country the cyclical elasticity of the automatic stabilisers part of the budget balance. We then compare this elasticity to the size of government, measured as total revenues as % of GDP, a measure of the strength of automatic stabilisers. The pattern is very clear: there is a strong correlation between the two and the size of automatic stabilisers almost perfectly match government size (see Figure 1). This is just another confirmation of our hypothesis that a-cyclical or less volatile government spending remains the main source of automatic stabilisers among Euro members (and OECD countries more generally).

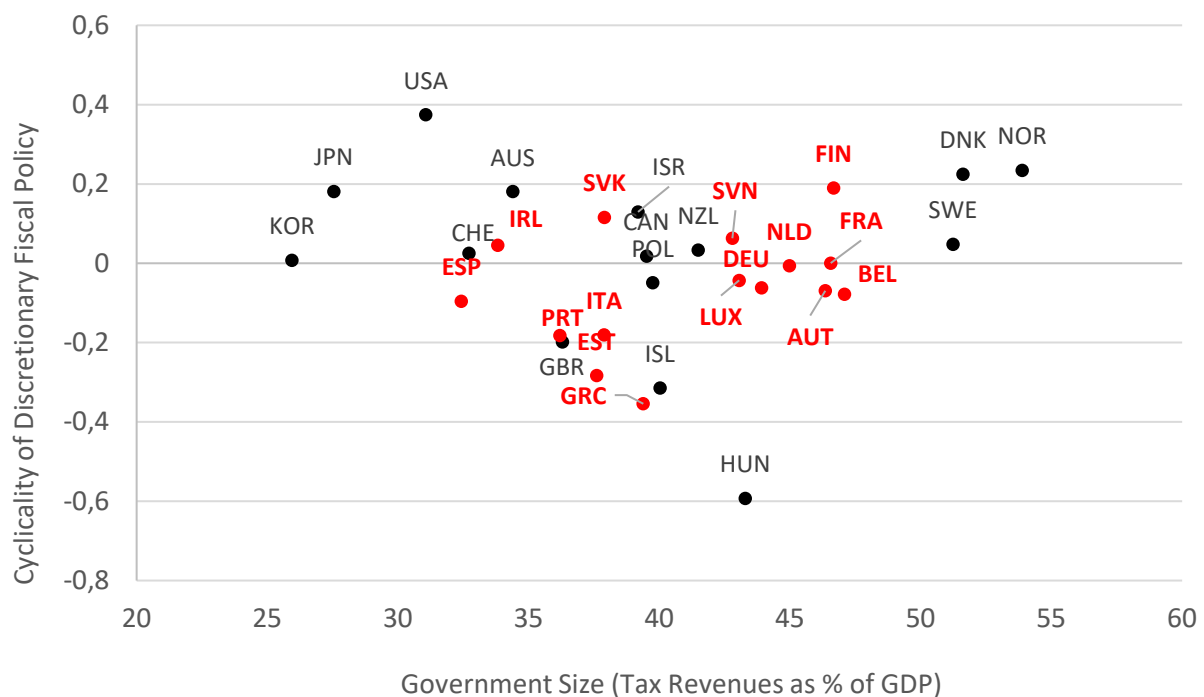**Figure 1:** Automatic Stabilisers and Government Size

Source: Author's calculations using OECD data. See Appendix. Euro members in red.

3.3 Automatic stabilisers and discretionary policy: substitutes?

Is discretionary policy used by governments as a complement to automatic stabilisers? Do countries with weaker automatic stabilisers act more aggressively? We have calculated for each country a measure of the aggressiveness of discretionary fiscal policy by looking at how the cyclically adjusted balance reacts to the cycle. We then compare this measure to the strength of automatic stabilisers captured by the size of government. Figure 2 displays the data and there is a weak negative correlation. We can see that some countries like the US or Japan have smaller governments, therefore weaker automatic stabilisers, and they compensate for that using countercyclical discretionary fiscal policy more aggressively. In the case of the US, we can see that the cyclicality of discretionary fiscal policy is very large (0.4). In fact, this coefficient is as large as the strength of automatic stabilisers in countries with large governments (which is about the size government as % of GDP). As a result, once you add the automatic stabilisers to discretionary fiscal policy, the overall fiscal policy stance is much more countercyclical in the US than in a typical European country.

Figure 2: Discretionary Fiscal Policy and Automatic Stabilisers (OECD)

Source: Author's calculations using OECD data. See Appendix. Euro members in red.

Among the Euro members the pattern is very different, as we observe a positive correlation. In particular, we have countries such as Greece, Italy, Portugal or Spain where the size of automatic stabilisers is relatively small and, in addition, discretionary fiscal policy is highly pro-cyclical. As a result, for the countries on this bottom left corner, fiscal policy is the least stabilizing one of the whole sample.

3.4 Fiscal policy in good and bad years: symmetry?

How does the behaviour of fiscal policy differ in good and bad years? In the case of automatic stabilisers there is very little change. Automatic stabilisers are symmetric by definition. The swings in the budget balance generated by automatic stabilisers are the result of the response of taxes that move proportionally to GDP and spending that is a-cyclical. As growth increases, tax revenues increase and

the automatic stabilizer part of the balance improves. When a recession arrives, tax revenues collapse and - as spending stays stable - the balance turns into a deficit.

When it comes to discretionary fiscal policy we know from our results that it is generally pro-cyclical and therefore might exacerbate the volatility of cycles.

In good times, procyclicality means that governments do not help building the necessary buffer (through surpluses or small deficits). This behaviour can have an effect on the sustainability of debt and also on the fiscal space left when a crisis arrives. And the lack of fiscal space can trigger a crisis of confidence by markets that puts pressure on governments' interest rates. From a macroeconomic point of view, procyclical policy in good times can also put pressure on inflation as the economy overheats.

Procyclicality during crisis means that governments do not provide enough support for demand and make recessions longer and deeper than what they need to be.

In many ways the argument looks symmetric but this apparent symmetry in pro-cyclicality goes away when one thinks about its consequences. Excessively pro-cyclical fiscal policy during good years is costly but less so than in bad years. The main reason is that fiscal policy multipliers tend to be higher in bad years. This means that the effects on growth, the additional volatility that pro-cyclical policy creates, will be much more costly in recessions than in booms.

As an illustration of how pro-cyclical fiscal policy can be in recessions, we now zoom on the response to the recent crisis. Automatic stabilisers worked as expected and, in addition, right after the crisis (in the years 2008 and 2009) discretionary fiscal policy was either neutral or even supportive.

However, in the two years that followed (2009-2010), fiscal policy changed. Not because of automatic stabilisers, that continued to operate as they were designed for (see Figure 3).

Figure 3: Automatic Stabilisers 2009-2011
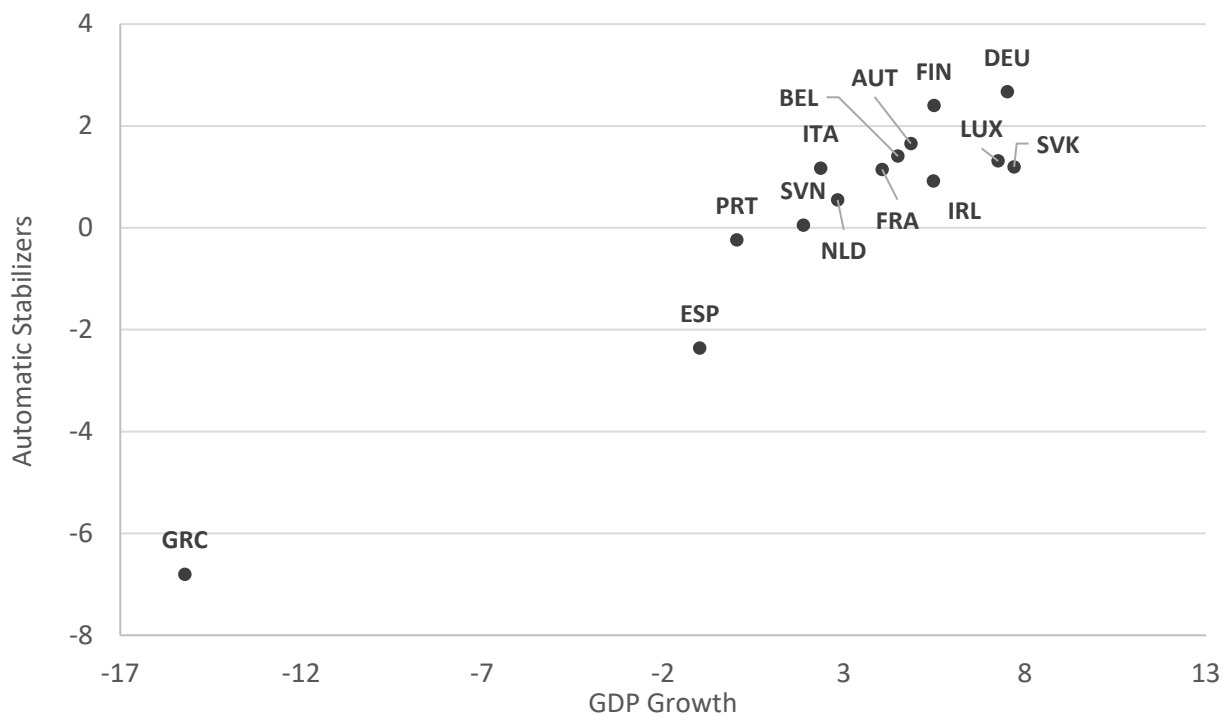
Source: Author's calculations using OECD data. See Appendix.
Note: Both Variables are measured as the cumulative change from 2009 to 2011.

When it comes to discretionary fiscal policy, there was a dramatic change. In response to the previous deficits and associated increases in debt, several countries engaged in contractionary fisc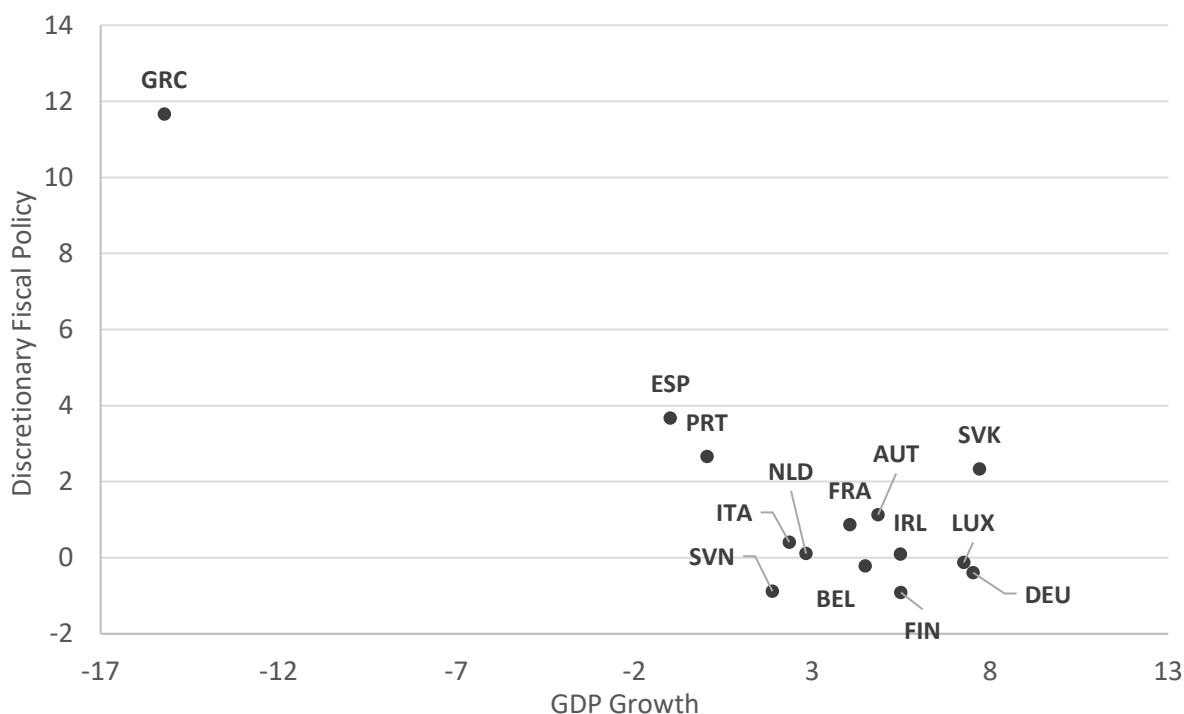al policy (austerity). And as we can see in Figure 4 policies were tighter in the countries were stabilization was mostly needed (Greece, Portugal, Spain). In fact, in those countries, the size of the fiscal contraction was large enough to undo the workings of automatic stabilisers.

Figure 4: Discretionary Fiscal Policy 2009-2011

Source: Author's calculations using OECD data. See Appendix.
Note: Both variables are measured as the cumulative change from 2009 to 2011.

Unfortunately, austerity continued in the two years that followed. To illustrate the persistence of these policies we look at a measure of discretionary policy that does not rely on estimates of potential output or the output gap. The European Commission produces a narrative measure of discretionary policy that is based on *actual* changes in tax and spending policies, which are not subject to the same measurement errors as the cyclically-adjusted balance. This is called the Discretionary Fiscal Effort indicator.

Figure 5 shows the discretionary fiscal effort according to the European Commission for the Euro area. The number measures the effect on the budget balance (as a % of GDP) caused by identifiable discretionary changes in taxes and spending on a given year. We first confirm the contraction in fiscal policy in 2010 and 2011 that we have seen in Figure 4, and we see that this contraction was extended and even accelerated during the two years that followed (2012 and 2013). These are the years where the Euro area was in a second recession, which means that we had highly pro-cyclical discretionary policy.

Figure 5: Discretionary Fiscal Effort Indicator 2010-17 (Average Euro area)
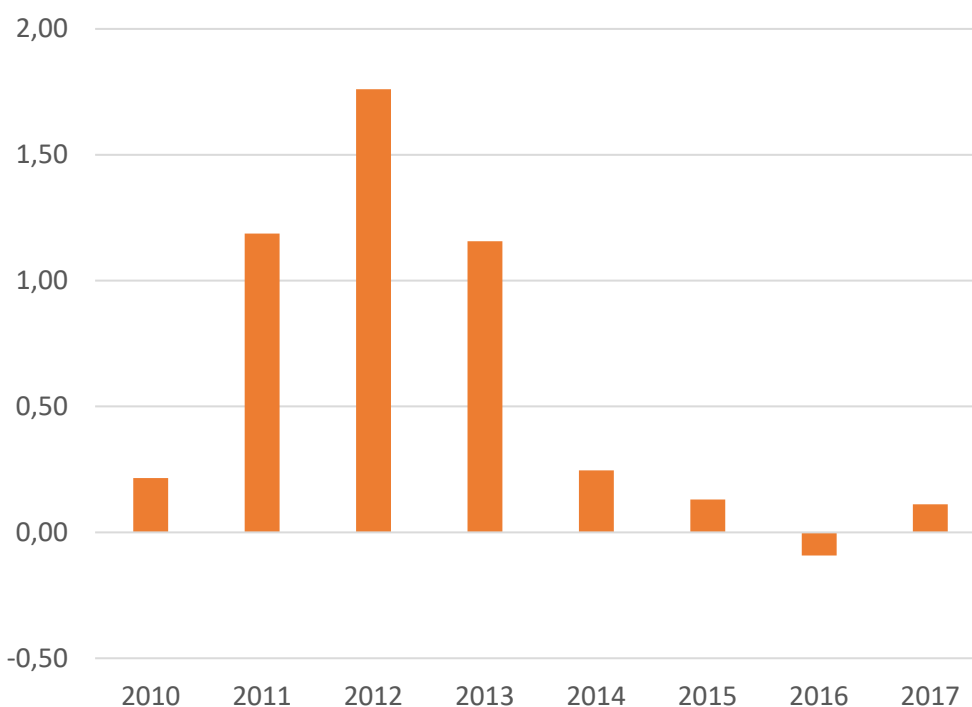
Source: AMECO Database. See Fatás (2018) for details of the calculation.

3.5 The consequences of getting fiscal policy wrong during crises

What we have shown so far is that during the last decade in the Euro area automatic stabilisers have played the role that was expected from them. But discretionary fiscal policy behaved in a pro-cyclical manner, so that the overall fiscal stance became contractionary in the recessionary years. While the effects of fiscal contractions during these years is a source of debate among academics, the empirical evidence strongly supports the idea that contractionary fiscal policy caused substantial damage to GDP growth (Blanchard and Leigh (2013)). That damage was very persistent and it is very likely that the effects were permanent via hysteresis effects (Fatas and Summers (2018)).

One of the reasons why fiscal policy remained pro-cyclical during these years is the unfounded pessimism that was built into estimates of potential output. This pessimism in times of low growth is an outcome of the way potential output estimates are calculated. As it has been documented many times before, potential output estimates tend to be highly pro-cyclical, they react quickly to changes in GDP (Coibion, Gorodnichenko, and Ulate (2018)). In the Euro are this effect became very large and persistent during the 2010-14 years. Figure 6 presents 2-year surprises in GDP growth and how they affected the perception of policy makers about potential output *in real time*. We can see how the negative surprises in GDP in 2008 and 2009 translated into almost a one-to-one change in estimates of potential output.

Figure 6: Forecast Errors over 2-year horizon. Euro aggregate
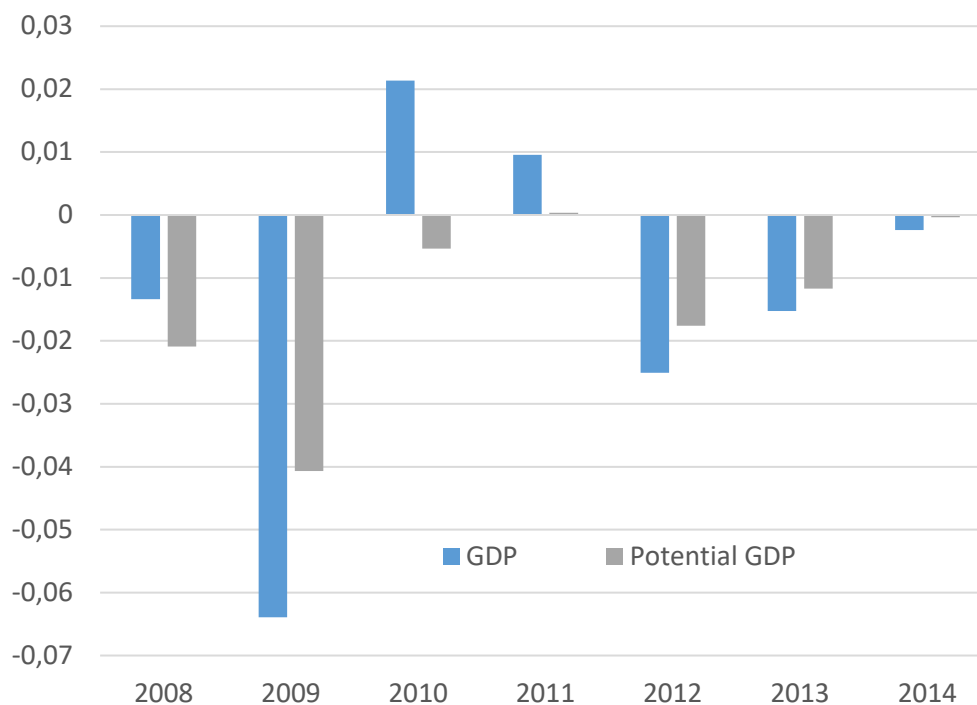
Source: IMF World Economic Outlook vintages. See Fatás (2018) for details of the calculation.

In other words, cyclical conditions were perceived to be structural. Because of our early discussion on sustainability, we know that if we anticipate GDP to be permanently lower, governments are required to adjust their balance to ensure sustainability of fiscal plans (i.e. they need to implement a fiscal consolidation). Or using different words: if potential output is revised downwards, our measures of structural balances (cyclically-adjusted balances) now look worse than they did before, and this also requires a fiscal consolidation to restore fiscal policy to the right stance. This logic is what Fatás (2018) calls the fiscal policy doom loop. Pro-cyclical fiscal policy leads to long-term pessimism in GDP (revisions to potential output) that set fiscal policy in future years to an even tighter stance. Unfortunately, the fiscal policy actions in the Euro area during the years 2010-14 matches quite well this vicious cycle. And discretionary fiscal policy completely eliminated the potential positive effects of automatic stabilisers.

4. POLICY RECOMMENDATIONS FOR THE NEXT CRISIS

We have shown how fiscal policy became highly pro-cyclical in the Euro area after the Global Financial Crisis. In the presence of rising government debt, governments rushed to adopt fiscal consolidation plans even if growth remained very weak. In addition, the interplay between fiscal policy, its consequences and real-time estimates of potential output generated a vicious cycle (a "fiscal policy doom loop") that exacerbated these dynamics and amplified the initial effects.

In the next downturn, it is very likely that the ECB will find itself out of traditional ammunition. If the next recession happens within the next 5 years, it is very unlikely that ECB interest rates will be far away from the 0% level.[8] This means that the burden of stabilization at the Euro level will fall again on fiscal policy (of course the burden of managing national business cycles always fall on fiscal policy in a monetary union). While there will always be concerns on debt sustainability and fiscal space, an environment of low interest rates for a prolonged period of time, such as the current one, means that government debt might not be as costly as previously thought (Blanchard (2019)). Therefore, governments should be able to make use of fiscal policy as a stabilizing tool. How do we get this done?

4.1 Strengthening automatic stabilisers

Automatic stabilisers continue to play the role they have always played and the empirical evidence is that they are as effective as they have always been. In addition, their automatic nature does not require the degree of political consensus that stimulus packages (discretionary fiscal policy) need. It is no surprise that a main lesson after the experience of the last 10 years is that we should work towards strengthening automatic stabilisers (Boushey, Nunn, and Shambaugh (2019),Furman (2016), Blanchard and Summers (2019) or Shambaugh (2019) in the context of the US economy).

In theory, strengthening automatic stabilisers is straight forward, as both spending and taxes could be made more countercyclical. In practice there are many complications, and these complications are not too different from the ones that we face when dealing with designing and implementing discretionary fiscal policy.

To start with, we need to remember that the current functioning of automatic stabilisers is the side effect of other goals. Size of government or progressivity of taxes are mostly serving political and social goals. Societies choose a large government because they believe governments should play a strong role in the provision of services, not because of the fact that a stable large government stabilizes economic fluctuations. It is not feasible to imagine governments changing these fundamental parameters just to strengthen automatic stabilisers.

What is needed is the creation of alternative automatic stabilisers that are not dependent on these fundamental variables and that are purely reacting to the business cycle (i.e. they average out to zero over the business cycle). We need to find ways in which government spending increases or taxes decrease automatically in the presence of a recession. But designing those automatic processes might lead to the same difficulties as the ones associated to the design and implementation of discretionary fiscal policy stimulus packages during a recession. And recent experience shows that we are not very good at managing discretionary fiscal policy.

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[8] As this paper is written (April 2019), the ECB is not forecasting an increase in interest rates any time soon and markets do not expect it either. Some are even pricing a move in the opposite direction, towards looser monetary policy.

To be specific, when designing these new and stronger automatic stabilisers we need to answer many questions:

- How exactly do we define a recession? What are the variables that trigger an increase in spending at the right time (high unemployment, low labour market participation rates, output gap?).

- What should be the elasticity of spending to each of these variables?

- What are the categories of spending that should be more reactive during these events?

- What happens if at the time when this additional spending is needed, a particular government faces difficulty in financial markets and its interest rates are increasing? Would there be a contingency to stop those additional spending plans?

All these questions make it clear that the a-cyclical spending that today constitutes the core of automatic stabilisers and it is praised as a good stabilizing tool is very different in nature from spending plans that are contingent on being triggered by a particular measure of cyclical conditions.

The most obvious recent proposal to strengthen automatic stabilisers is to increase the generosity and cyclicality of unemployment benefits (see, among many others, Furman (2016) or Dullien (2012)). The unemployment rate is one of the most common ways to measure cyclical conditions and deviations from potential output. Of course, it is not perfect, as there can be additional measures of slack in the labour market that provide a more complete picture (such as those including cyclical variations in the labour force participation). The main concern is that unemployment benefits will reach a small part of the population and might never have the necessary size to stabilize fluctuations.

An alternative proposal is to have a set of "shovel-ready" projects for government spending, ready to be activated during downturns (Blanchard and Summers (2019), Blinder (2016) or Auerbach (2017) among many others). But here is where we see the close parallel with discretionary fiscal policy. It seems very difficult to codify the spending plans in a way that triggers automatic increases without adding some discretion in both judging the extent of the crisis and the size of the projects. And what if those increases need financing and the government faces higher interest rates?

None of this should deter us from continuing investigating these avenues and moving in the direction of strengthening automatic stabilisers, but it is important to understand that it is not about making the current mechanisms larger, but about coming up with new ways to stabilize aggregate spending. And we need to be realistic and realize that it is unlikely that we will be able to design and implement a completely different set of automatic stabilisers by the time the next recession comes. Relying on discretionary policy might be the only solution.

4.2 Avoiding pro-cyclical discretionary policy

If automatic stabilisers cannot be strengthened, it will be up to discretionary fiscal policy to do most of the action. The first barrier here is reaching a consensus among policy makers that discretionary fiscal policy has a *fundamental* role to play during recessions, more so when monetary policy is constrained by the zero-lower bound. Evidence suggest that European countries have been reluctant to accept this premise. The European fiscal policy framework has been dominated by the notion of fiscal policy discipline as a requirement for a successful monetary union. Stabilization has been seen as a secondary objective. In addition, the idea of saving, as an almost-always optimal policy, has been the dominant ideology, pushing the region into the "paradox of thrift" (Keynes (1936)).

Compared to the US or Japan, European countries are much less aggressive in the use of discretionary fiscal policy. In fact, in these countries we observe a tendency for discretionary fiscal policy to be pro-cyclical. And this is quite visible in the years 2008-14, where the Euro area went through two almost consecutive recessions.

The second barrier is about a proper framework that makes stabilization and sustainability compatible. The current European fiscal framework is fundamentally built around the idea of sustainability. Yes, there is room for fiscal policy to stabilize the cycle, but this room is limited and the way cyclical conditions are measured, via potential output and the output gap, creates a large bias towards pro-cyclical policy during low-growth periods.

4.3 Is there a need for a European-wide fiscal policy?

In principle, fiscal policy is addressing national fluctuations and does not require a Euro-wide fiscal policy. Having said that, fiscal policy can have externalities on other countries, so coordination of economic policies is always welcome. In addition, the last crisis has shown that in the current environment, several of the Euro governments might face difficulty implementing expansionary fiscal policy when they are needed the most. In recessions, debt to GDP ratios increase and financial markets have doubts about the sustainability of governments' debt.

In this environment, building budgetary capacity at the Eurozone level can protect national governments from the pressure of financial markets and allow them to produce the correct fiscal policy stance. This could certainly apply to a Euro-wide system of automatic stabilisers (e.g. Euro-wide unemployment insurance, or a European budget to finance investment projects during recessions). But the logic also applies to the case of discretionary fiscal expansions financed by some form of Euro bonds. Of course, this involves a conscious decision to share risks across European or Euro-member countries, a decision that requires a certain level of political will and consensus that might not be there today.

And one should not forget the operational and logistical implications associated to some of these Euro-wide stabilization mechanisms. In particular, the issues associated to the definition of cyclical indicators and the rules about how transfers or spending react to them become very serious. We highlight these difficulties in the Box, by using as an example the creation of a European Unemployment Insurance Mechanism.

In conclusion, building a European budgetary capacity can help the functioning of fiscal policy, in particular during large crisis. But one cannot assume that there is an obvious and easy extension of the current national systems of automatic stabilisers (such as unemployment benefits) to the supranational level. And it might be that we need to complement the efforts to build strong European automatic stabilisers with European financing of discretionary fiscal policies. Focusing on automatic stabilisers only is unlikely to produce the necessary stabilization that fiscal policy will have to deliver in the next crisis.

Box: The Difficulties of Designing a European Unemployment Insurance Mechanism

The strengthening of automatic stabilisers via a European-wide system seems attractive, but its design and implementation might be a significant barrier to its adoption. The first fundamental issue is: which is the cyclical indicator that can trigger the transfers? We can think of indicators based on GDP (such as the cyclical component of GDP growth or the output gap). But both these indicators require an understanding of potential output, an economic variable that is difficult to measure, it is constantly subject to revisions and it will be difficult to explain to citizens. Unemployment is the obvious alternative. It has the advantage that it is easy to understand and transfers to those unemployed are clearly targeted to those who are potentially suffering the most during a crisis. However, labour market dynamics across countries are so different that what works well at the national level might not work well at the European level.

To illustrate this point, we plot below the evolution of the unemployment rate, as well as real GDP in the years 2007-2010 for Spain and Germany. Real GDP tells a very similar story for both countries. GDP falls by slightly more in Germany in 2009 although in 2010 it is the Spanish GDP that is slightly lower. The unemployment rate tells a very different story. Both start at the same level in 2007, but while in Germany unemployment actually decreases, in the case of Spain it more than doubles. A European unemployment insurance mechanism would generate transfers between the two countries that would be completely different from what a mechanism based on GDP or income fluctuations would produce.
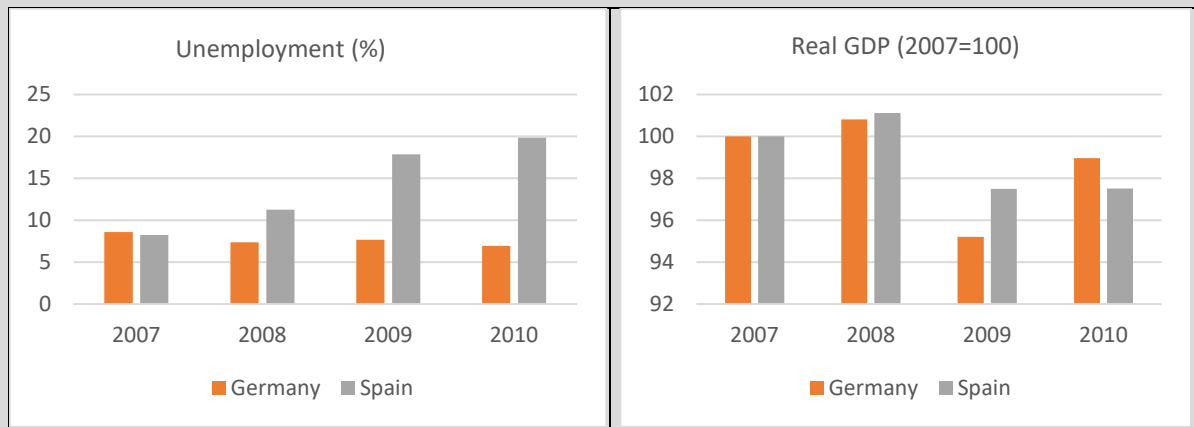
5. CONCLUSION

The dismal performance of the Euro area during the last decade suggests the need to build a strong set of stabilizing policies for the next recession. Conventional wisdom is that in the next crisis monetary policy is likely to be constrained by the zero-lower bound, so fiscal policy will have to play a strong role. Given the reluctance of European governments to engage in discretionary policies and given their record of pro-cyclicality, a natural conclusion is that the best way to prepare for the next crisis is to strength automatic stabilisers and avoid pro-cyclical discretionary fiscal policies.

We agree with that view. Automatic stabilisers work and there is no evidence that their effects are diminishing. But in our analysis, we end with a strong word of caution to those who think that strengthening automatic stabilisers would be straightforward. There is no easy recipe. In fact, most of the proposals to strengthen automatic stabilisers face the same difficulties as the ones associated to getting discretionary fiscal policy right. In both cases, getting fiscal policy right requires a good understanding of the most effective ways in which fiscal policy can stabilize demand, a consensus about the trade-offs between sustainability and stabilization (which are very different today, given the low level of interest rates) and an operational framework that does not rely on excessively pro-cyclical measures of potential output.

Our view is that just focusing on automatic stabilisers will not be enough, certainly not before the next crisis. Our advice is that we need to complement those efforts with a framework that can produce counter-cyclical discretionary fiscal policy, possibly supported with funding at the European level.

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6. APPENDIX

6.1 Definitions

We define the budget balance (BB) as $BB_t = T_t - G_t$

Where G_t is government spending T_t taxes (and other revenues). We use small letters to refer to variables as % of GDP (Y_t).

$$bb_t = \frac{BB_t}{Y_t} = \frac{T_t - G_t}{Y_t}$$

The cyclically adjusted balance (CAB) is

$$CAB_t = T(Y_t^p) - G(Y_t^p)$$

where $T(\cdot)$ and $G(\cdot)$ represent how revenues and spending depend on the level of economic activity and Y_t^p is potential GDP. And it can be expressed as a % of potential output

$$cab_t = \frac{CAB_t}{Y_t^p}$$

The automatic stabilisers are defined as the difference between the budget balance and the cyclically-adjusted balance

$$as_t = bb_t - cab_t = \frac{BB_t}{Y_t} - \frac{CAB_t}{Y^p}$$

And to think about the stabilization power of fiscal policy we can calculate the change in these balances from one year to the next

$$\Delta bb_t = \Delta cab_t + \Delta as_t$$

6.2 Regressions (for Table 1)

Our estimates of cyclicality of fiscal policy are calculated from a regression that looks like

$$FP_t = \alpha + \beta \ Cycle_t + \varepsilon_t$$

where FP_t is an indicator of fiscal policy and $Cycle_t$ is a measure of cyclical conditions. As indicator of fiscal policies we use the overall balance, the cyclically-adjusted balance, the automatic stabilisers, spending and revenues. As measures of the cycle we use both GDP growth and the output gap.

Table A2: Cyclicality of Overall Budget Balance

	OECD		EURO	
	(1)	(2)	(3)	(4)
	Δbb_t	bb_t	Δbb_t	bb_t
GDP Growth	0.255***		0.230***	
	(0.0307)		(0.0330)	
Output Gap		0.402***		0.311**
		(0.113)		(0.141)
Constant	-0.681***	-1.899***	-0.575***	-2.742***
	(0.0876)	(0.0737)	(0.0888)	(0.125)
Observations	1,238	944	617	461
R-squared	0.100	0.149	0.092	0.120
Countries	33	32	17	16

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A3: Cyclicality of Discretionary Fiscal Policy

	OECD		EURO	
	(1)	(2)	(3)	(4)
	$\Delta\, cab_t$	cab_t	$\Delta\, cab_t$	cab_t
GDP Growth	-0.152***		-0.188**	
	(0.0441)		(0.0628)	
Output Gap		-0.154		-0.227*
		(0.0965)		(0.118)
Constant	-1.673***	-0.0407	-2.283***	0.132
	(0.109)	(0.0592)	(0.140)	(0.0981)
Observations	897	898	401	415
R-squared	0.029	0.028	0.047	0.075
Countries	30	30	14	14

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A4: Cyclicality of Automatic Stabilisers

	OECD		EURO	
	(1)	(2)	(3)	(4)
	$\Delta\, as_t$	as_t	$\Delta\, as_t$	as_t
GDP Growth	0.383***		0.363***	
	(0.0266)		(0.0280)	
Output Gap		0.532***		0.525***
		(0.0172)		(0.0214)
Constant	-0.954***	0.281***	-0.828***	-0.0719***
	(0.0667)	(0.0110)	(0.0646)	(0.0188)
Observations	919	921	423	438
R-squared	0.662	0.778	0.786	0.975
Countries	31	31	15	15

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A5: Cyclicality of Spending and Revenues (Euro members)

	(1)	(2)	(3)	(4)
	$\dfrac{\Delta\, G_t}{G_t}$	$\Delta\, \dfrac{G_t}{GDP_t}$	$\dfrac{\Delta\, T_t}{G_t}$	$\Delta\, \dfrac{T_t}{GDP_t}$
GDP Growth	0.556***	-0.333***	1.088***	-0.103***
	(0.129)	(0.0414)	(0.0921)	(0.0213)
Constant	5.598***	1.029***	4.412***	0.454***
	(0.344)	(0.111)	(0.253)	(0.0573)
Observations	611	617	635	617
R-squared	0.059	0.172	0.287	0.071
Countries	17	17	17	17

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A6: Cyclicality of Fiscal Policy post-2008

	OECD	Euro	OECD	Euro	OECD	Euro
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Δbb_t	Δbb_t	$\Delta\,cab_t$	$\Delta\,cab_t$	$\Delta\,as_t$	$\Delta\,as_t$
GDP Growth	0.361***	0.334***	-0.107	-0.103	0.445***	0.412***
	(0.0465)	(0.0473)	(0.0697)	(0.0762)	(0.0480)	(0.0568)
Constant	-0.586***	-0.310***	-1.202***	-1.575***	-0.836***	-0.640***
	(0.0637)	(0.0433)	(0.0947)	(0.0601)	(0.0670)	(0.0514)
Observations	363	187	330	154	341	165
R-squared	0.136	0.151	0.012	0.014	0.773	0.841
Countries	33	17	30	14	31	15

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

6.3 Data sources

Data for all regressions come from the OECD Economic Outlook database. Variables used and their corresponding code: Real GDP (GDPV), Output Gap (GAP), Overall Balance as % of GDP (NLGQ), Cyclically-Adjusted Overall Balance as % of Potential GDP (NLGXQA), Government Spending as % of GDP (YPGTQ), and Total Receipts as % of GDP (YRGTQ).

Data for Figure 5 from AMECO database European Commission, variable: Discretionary Fiscal Indicator (as % of GDP).

Data for Figure 6 from IMF World Economic Outlook (different vintages) Variables: Real GDP and Potential GDP. See Fatás (2018) for methodology.

Data for Box on unemployment insurance from IMF World Economic Outlook (April 2019).

Since 2008, and as the result of central banks reaching the zero-lower bound, fiscal policy has come back as a potential, possibly primary, tool to stabilize business cycles. We present evidence that European countries have historically relied on automatic stabilisers for counter-cyclical policies, while discretionary fiscal policy has been pro-cyclical (unlike in the US). Pro-cyclical fiscal policies became so strong in the years 2010-14 that they completely eliminated the benefits of automatic stabilisers. Looking forward, there are calls to strengthen automatic stabilisers. We argue in this paper that without addressing the reasons behind the pro-cyclicality of discretionary policy, this cannot be a solution. Strengthening automatic stabilisers faces similar challenges and trade-offs as proposals to make discretionary policy more countercyclical. This document was provided by the Economic Governance Support Unit at the request of the ECON Committee.