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Public Finance

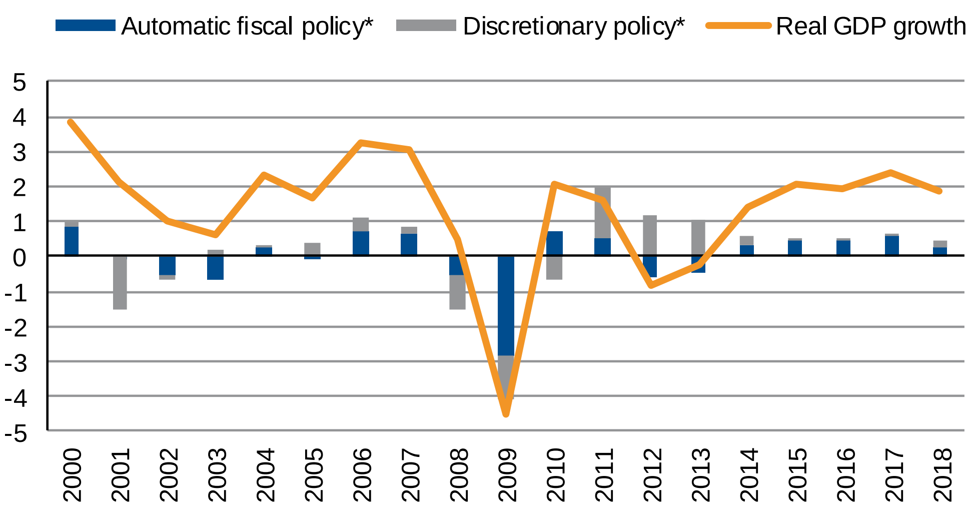
Scope Policy Insights: Automatic fiscal policy – stabilising the economy in a low interest rate environment

The moderation of growth in the euro area has reignited the debate over the role of fiscal policy as a stabilisation tool. In the euro area, automatic fiscal stabilisers vary widely in terms of size and effectiveness. This has considerable implications for the ability of these economies to withstand the next recession.

After 10 years of growth, the world economy has reached the peak of the growth cycle (see Scope's 2019 Sovereign Outlook). Compared with previous slowdowns, there is limited space for monetary policy to stabilise output growth, meaning fiscal policy will play a greater role. However, discretionary fiscal policies of euro area governments have had mixed results. Governments have consolidated too quickly (**Figure 1**) or stimulus packages were rolled back too late (if at all). Automatic fiscal stabilisers, such as unemployment benefits or progressive taxation systems, can be a more efficient and timely response to downturns, as some policy-makers have recognised, and will thus be particularly important in the next recession.

Figure 1: Automatic versus discretionary fiscal policy, euro area aggregate

%



*Calculated as year-on-year changes in the automatic and discretionary components of the budget balance

Source: European Commission (EC), Scope Ratings GmbH

The analysis highlights the following key take-aways:

- There are wide variations in the strength of automatic stabilisers among euro area countries. The cyclical components of the budget balances (automatic stabilisers) of Malta (A+/Stable), Latvia (A-/Stable) and Greece (BB-/Positive) are the least responsive to changes in growth conditions, whereas France (AA/Stable), Belgium (AA/Stable) and Germany (AAA/Stable) have the most elastic automatic stabilisers.
- Automatic fiscal policy has been more effective at stabilising the outputs of euro area countries compared with discretionary policy over the past two decades.
- Countries whose automatic stabilisers are less responsive to the business cycle could benefit from strengthening them. Possible measures include more progressive tax systems, better-designed social insurance systems (e.g. pensions and unemployment benefits), or even automatic infrastructure spending plans.
- Governments must weigh the benefits of stronger automatic stabilisers against public debt sustainability, as widening fiscal deficits during recessions may pose risks for highly-indebted sovereigns.

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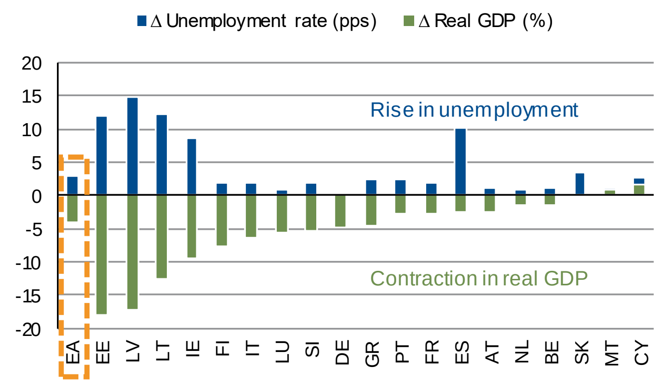
Economic crises: impacts and policy responses

The great financial crisis had severe and long-lasting consequences

The Great Financial Crisis (GFC) had severe consequences for euro area economies. From year-end 2007 to 2009, aggregate real GDP in the euro area contracted by a total 4.1% (**Figure 2**). Over the same period, labour markets deteriorated significantly: unemployment rose from 7.3% to 10.1%.

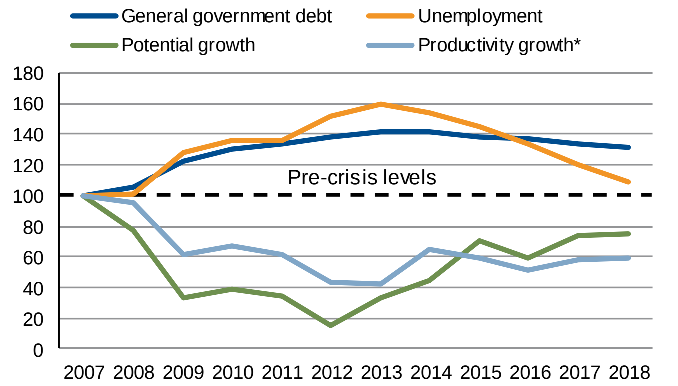
More than a decade has passed since the 2008 crisis and yet its impact in terms of potential growth, productivity and debt levels (among other areas) are still being felt by countries worldwide[1]. Euro area unemployment is only now returning to pre-crisis levels (**Figure 3**). Consequences on the supply side were also long-lasting, with labour productivity growth (as a five-year moving average) now 40% lower than it was before the crisis, weighing on the growth potential of euro area countries. Finally, public debt levels increased sharply as governments struggled with crisis-era fiscal deficits with the euro area aggregate public debt ratio 31% higher in 2018 than it was in 2007.

Figure 2. Short-term impact of the GFC, 2007-09
pps, %



Source: Eurostat, Scope Ratings GmbH.

Figure 3. Euro area still recovering from the GFC
2007=100



* 5-year average GDP per person employed N.B.
Based on euro area aggregate figures
Source: Eurostat, EC, Scope Ratings GmbH.

Another economic downturn is inevitable

The GFC was not the first downturn, nor will it be the last. Recessions are inevitable and entail high costs for individuals, businesses and governments. After 25 consecutive quarters of growth, the euro area is starting to show signs of slowing down amid persistent trade tensions, uncertainty surrounding Brexit and worries about global growth. The question is not if, but when the next recession will hit and whether governments are equipped to limit its impact.

A mix of fiscal and monetary actions to cushion the economy

Governments often enact bold policies to stabilise the economy and mitigate the effects of downturns. Following the onset of the 2008 crisis, euro area countries implemented a mix of monetary and discretionary fiscal policies to cushion their economies and support the recovery. Between September 2008 and May 2009, the ECB lowered the refinancing rate and deposit rate by 325bps and 300bps respectively. National governments stepped in with a range of fiscal stimulus measures while the European Commission launched the European Economic Recovery Plan aimed at providing a short-term budgetary impulse to stimulate demand[2].

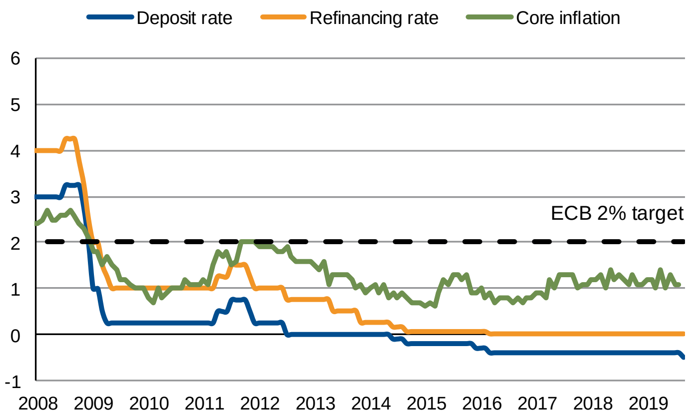
Limited monetary policy space raises the need for fiscal policies

Monetary policy is typically the first line of defence in an economic downturn. However, the ECB's policy rates are currently at historic lows with the refinancing rate at 0% and the deposit rate at -0.5% (**Figure 4**). At the same time, inflation remains well below the 2%

[1] See IMF (2018), The Global Economic Recovery 10 years after the Financial Meltdown, in: World Economic Outlook: Challenges to Steady Growth.
[2] A EUR 200bn coordinated fiscal stimulus package. See: European Commission (2010), Euro area fiscal policies and the crisis.

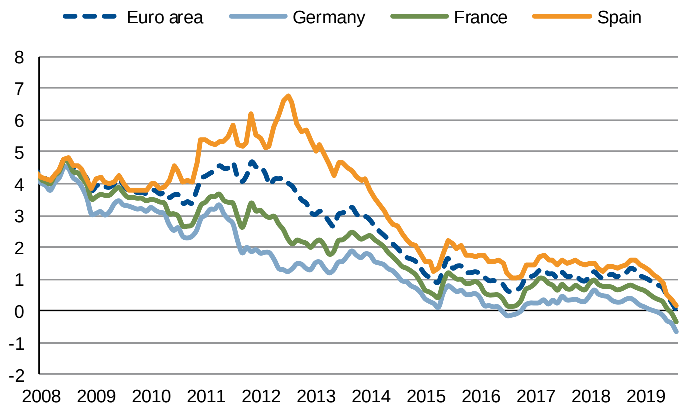
target and the 10-year government bonds of most euro area countries are trading at negative yields (**Figure 5**). These conditions constrain the ECB's ability to provide timely monetary stimulus compared to in previous crises – especially after re-launching quantitative easing, extending forward guidance and cutting interest rates further in September. Monetary policy also has its limits in the currency union as it focuses on the aggregate and does not account for country-specific economic developments. Furthermore, previous empirical research shows that fiscal policy has a greater positive impact when interest rates are low[3]. Thus, the need for fiscal policy, if economic conditions in the euro area were to worsen significantly, becomes ever-more salient.

Figure 4. ECB policy rates and euro area inflation
%



Source: Eurostat, Scope Ratings GmbH.

Figure 5. Selected euro area 10-year sovereign bond yields
%



Source: ECB, Scope Ratings GmbH

Automatic stabilisers constitute a timely and temporary stimulus

On top of monetary policy and discretionary fiscal stimulus, automatic stabilisers – the decreases in revenues and/or increases in expenditure which automatically set in when the economy weakens – can play a crucial role in reducing the impact of crises. In contrast to discretionary policy, well-designed automatic stabilisers are not subject to the decision and implementation lags, which would otherwise undermine the policies' effectiveness. They are also designed to reverse once the economy recovers. Discretionary policy, on the other hand, can be rolled back either too early (not providing the necessary support) or too late (raising public debt sustainability concerns).

Assessing the strength of automatic fiscal stabilisers in the euro area

Assessing automatic stabilisation is relevant

In this context, assessing the strength of fiscal stabilisers for euro area countries is relevant; it gives an indication of the level of automatic support to income and consumption that can be expected when the next recession hits. This is economically important as a *timely* countercyclical impulse in a downturn can lower GDP volatility considerably and support growth in the medium to long term. Automatic stabilisers also have implications for discretionary fiscal policies as governments typically implement discretionary policy when automatic stabilisation is unable to smooth demand in the case of large economic shocks. The European Commission has emphasised that discretionary fiscal interventions should be used only "in the case of a *clear* need and sufficient fiscal space"[4]. Mario Draghi also

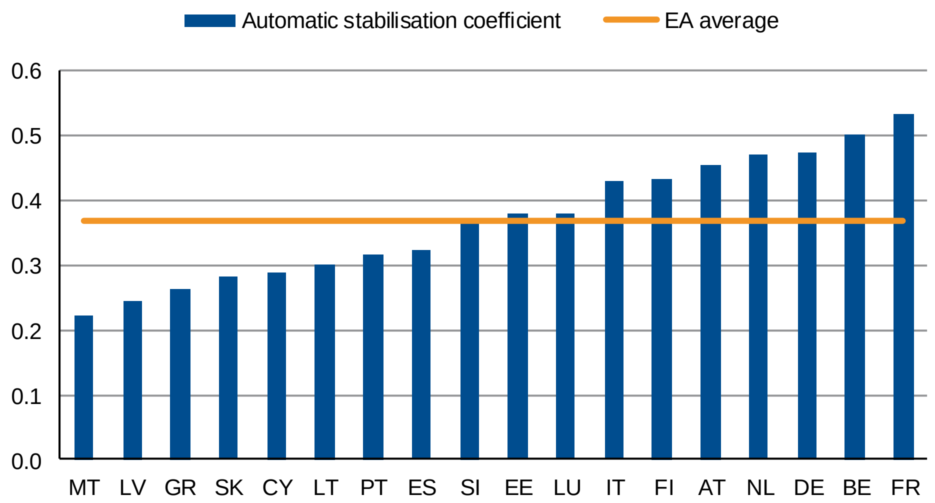
[3] Mckay & Reis (2016), The Role of Automatic Stabilisers in the US Business Cycle; Boubaker, Nguyen & Paltalidis (2018), Fiscal policy interventions at the zero-lower bound.
[4] European Commission (2019), Automatic Fiscal Stabilisers in the EU: Size and Effectiveness.

pointed to the importance of automatic stabilisers in supporting monetary policy in his 12 September press conference[5].

A regression-based analysis using AMECO data

To examine and compare the size and effectiveness of automatic stabilisation in the euro area, we propose an econometric approach, in line with previous empirical studies[6]. We ran a series of simple regressions to assess how automatic and discretionary components of the budget balance respond to changes in the business cycle. We use AMECO data (which break down public finance indicators into cyclical and non-cyclical components) as proxies for automatic and discretionary fiscal policies. Our analysis covers the 1996-2018 period for 18 euro-area countries[7].

Figure 6. The "strength" of automatic stabilisers in the euro area



N.B. The coefficients above result from the regressions presented in Annex.
Source: Scope Ratings GmbH

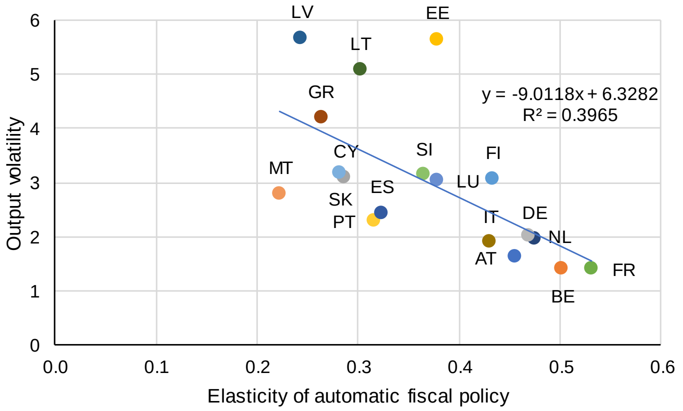
The results of the regressions along with the outline of the econometric model are presented in the **Annex**. The coefficients presented in **Figure 6** reflect the cyclicality of automatic stabilisers for euro area countries. This allows us to draw the following conclusions:

- Automatic fiscal policy has been consistently countercyclical for every euro area member state, with all coefficients being positive and highly significant (at the 1% statistical level).
- Discretionary policies in the euro area are mostly acyclic, as the coefficients were not statistically significant in most instances. However, discretionary policy seems to be undesirably procyclical in Italy (BBB+/Stable) and Estonia (A+/Stable), with negative coefficients for both countries, which are significant at the 10% and 1% statistical levels respectively.
- The responsiveness (or "strength") of automatic stabilisers varies widely among the euro area countries. The automatic component of the budget balance in countries such as Malta, Latvia, Greece or Slovakia (A+/Stable) deteriorates (or improves) by only 0.2-0.3pps following a 1pp decrease (or increase) in real growth. This figure rises to around 0.5pps for France, Belgium and Germany.

[5] ECB press conference, 12 September 2019, https://www.ecb.europa.eu/press/pressconf/2019/html/ecb.is190912~658eb51d68.en.html
[6] A similar approach can be found in Fatás and Mihov (2012), Fiscal Policy as a Stabilization tool.
[7] We exclude Ireland from the analysis as it experienced large swings in GDP over the sample period with little connection to real economic activity which distorts the results.

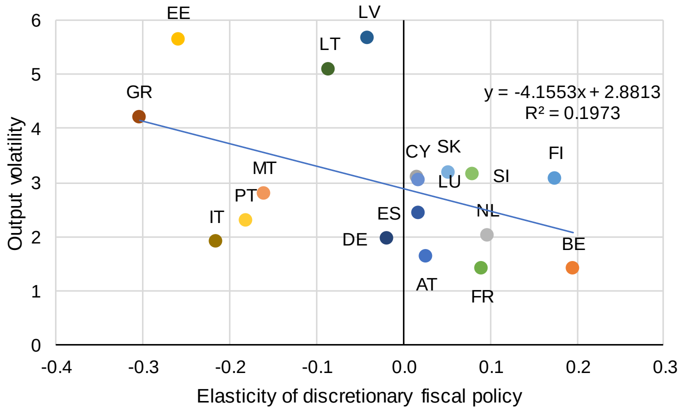
We have thus determined to what extent automatic fiscal policies move with (or rather *against*) the economic cycle. Unsurprisingly, the automatic component of the budget balances of all euro area countries is countercyclical, though at varying degrees. We therefore ask: are more reactive fiscal stabilisers better at reducing economic volatility?

Figure 7. Automatic stabilisation



N.B. Output volatility is measured over the 1996-2018 period
Source: Scope Ratings GmbH.

Figure 8. Discretionary stabilisation



N.B. Output volatility is measured over the 1996-2018 period
Source: Scope Ratings GmbH.

Strong link between automatic stabilisation and output volatility

Figure 7 plots the coefficients (or semi-elasticities) obtained for the automatic component of fiscal policies against the output volatility of euro area countries over the 1996-2018 period[8]. This shows a clear link between how strongly the cyclical component of the budget balance reacts to changes in output and how volatile an economy is. We also note that this relationship is weaker for discretionary policy (**Figure 8**)[9]. While this is purely descriptive and does not prove causality, numerous empirical studies have supported the claim that automatic stabilisers are effective at reducing volatility[10].

Proposals to strengthen automatic stabilisers

Increasing macroeconomic stability through…

The role of automatic stabilisation has become ever-more salient in the face of the next global recession. Given that monetary policy is constrained, and that implementation lags and distortions are often observed with discretionary policy, the strength of automatic stabilisers in euro area countries can determine how strongly the next downturn will ripple through their economies. Our analysis shows that the strength of automatic stabilisers varies widely among euro area countries, and we recognise that government size plays a large role. Nevertheless, countries can make automatic stabilisers more reactive through several measures.

…more progressive tax schedules…

One proposal is to increase the progressivity of tax systems. For instance, Estonia, Latvia and Lithuania (A-/Stable) all have a flat personal income tax rate. While flat tax systems can improve tax administration and compliance (among other areas), they also reduce the ability of budgets to automatically respond to changes in economic conditions. Germany, Slovakia, Slovenia (A/Stable) also have less progressive tax systems (**Figure 7**). Improving the progressivity of tax schedules could not only have redistributive and equity benefits[11] but also strengthen the effectiveness of automatic stabilisers for these countries.

…stronger unemployment insurance schemes…

Another area for improvement could be to increase the generosity and cyclicality of unemployment insurance schemes. Of all euro area countries, the Baltic states spent on

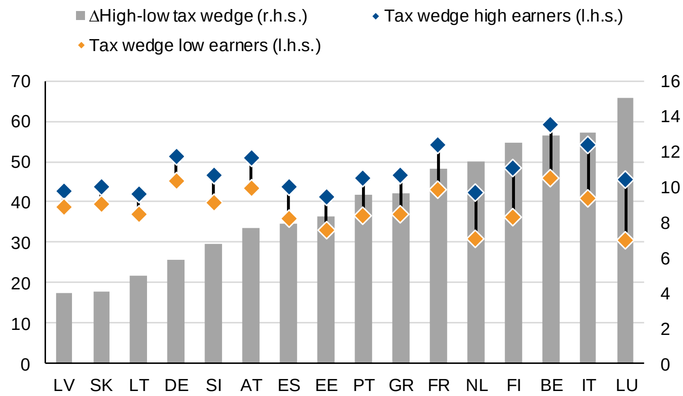
[8] We take the standard deviation of real GDP growth over the sample period as a measure of output volatility.
[9] This figure is presented purely for comparative purposes as we recall that the coefficients are non-significant in almost all instances.
[10] See Fatás and Mihov (2001), Government size and Automatic Stabilizers: International and Intranational Evidence; Dolls et al. (2012), Automatic stabilization and discretionary fiscal policy in the financial crisis; McKay and Reis (2016), The Role of Automatic Stabilizers in the US Business Cycle.
[11] See Barrios et al. (2018), Progressive tax reforms in flat tax countries, European Commission Working Papers.

average the least on unemployment benefits per unemployed person over 2000-15, (**Figure 8**). Slovenia as well as other euro area periphery countries also spend little in this area. Strengthening social security nets in these countries would help to increase the cyclicality of automatic stabilisers and protection against poverty. A euro-area-wide unemployment insurance scheme could also strengthen automatic stabilisers in the monetary union (see previous Scope research). These potential gains must be weighed, however, against their implications for return-to-work incentives and public debt sustainability.

…pension systems…

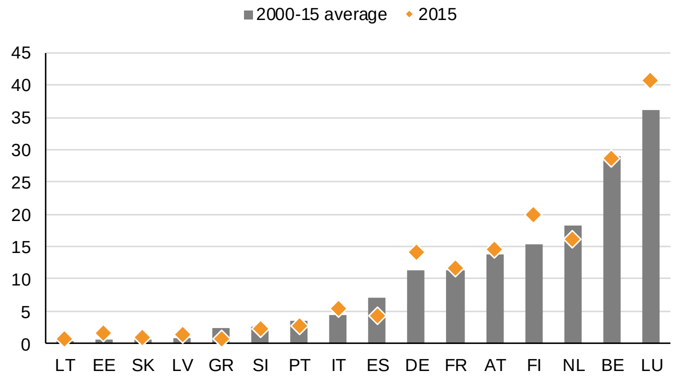
Pension systems can also help to increase the elasticity of automatic stabilisers. Countries with low pension replacement rates (for instance, below 50% of the former salary in the Baltic region)[12] often force elderly people into either continuing with part-time work or being financially dependent on family members after retirement. More contributions to private and or public pension schemes during the working life would result in higher replacement rates, which could also help to smooth the economic cycle in a recession, making fewer people vulnerable to downturns.

Figure 7. Progressivity of income tax[13], 2018
%



N.B. The tax wedges are for a single person with no children.
Source: OECD, Scope Ratings GmbH

Figure 8. Public unemployment expenditure
EUR '000s/unemployed person



N.B. Includes benefits and pension expenditure for unemployed persons
Source: OECD, Scope Ratings GmbH

…or automatic infrastructure spending programmes

Another novel proposal is for the government to pre-approve infrastructure spending plans that would be automatically triggered during a downturn[14]. Infrastructure development allows for the employment of both skilled and unskilled labour, contributes to real economic activity and increases the capital stock of an economy. It is also typically procyclical. Automatic infrastructure spending programmes could not only provide an additional fiscal impulse but also address issues with infrastructure investment gaps. However, this may also incentivise the private sector to withhold investments, as they know the government will subsidise their operations in a downturn. Governments should consider the potential for crowding-out private investment when contemplating these programmes.

[12] European Commission (2018), The 2018 Pension Adequacy Report: Current and future income adequacy in old age in the EU.
[13] We look at the difference between the tax wedge for individuals earning 67% of the average wage and individuals earning 167% of the average wage, which provides an indication of the progressivity of labour income taxation. See EC (2018), Tax policies in the European Union: 2018 Survey.
[14] Haughwout (2019), Infrastructure Investment as an Automatic Stabilizer, In: Recession Ready: Fiscal Policies to Stabilize the American Economy.

Concluding remarks

Ability to stabilise the economy impacts sovereign creditworthiness

As outlined in this report, the euro area will face significant challenges in withstanding the next downturn. The impact of a deep recession would be significant in terms of euro area countries' long-term growth potential and, by extension, their public debt sustainability. Given the elevated levels of public indebtedness across the region, the ability of countries to effectively mitigate the impact of the downturn and stabilise their economies will have considerable consequences for their sovereign creditworthiness.

Reinforcing automatic stabilisers is warranted

With limited scope for further monetary policy support, and mixed results in terms of discretionary policy implementation, the strength and effectiveness of automatic stabilisers will be central to euro area economies' resilience to economic shocks. Countries with weaker stabilisers should be aware of the risk this entails and contemplate policies to address outstanding weaknesses. The consideration of the above proposals could help reinforce automatic stabilisers as well as the resilience of these economies and the monetary union as a whole.

Shock vulnerabilities and incentives to establish fiscal stabilisers

In view of the results presented above, we note that countries face different shock vulnerabilities independent of their ability to stabilise the cycle. Automatic fiscal stabilisers tend to work better in large, diversified economies than in small, open economies with sectoral concentrations. In general, the latter are more prone to fluctuations in output due to their economic structure and have smaller fiscal multipliers due to their higher level of imports. Large economies, on the other hand, are more likely to produce and consume domestically and are more resilient to external developments. In other words, smaller countries would find it harder to address an external shock with automatic fiscal stabilisers.

Small, open economies thus face a difficulty. The higher probability of more pronounced (external) shocks should increase incentives to implement stronger automatic stabilisers; however, their limited effectiveness, given the relatively small fiscal multiplier, could also lower the motivation to do so.

Public debt sustainability considerations should not be ignored

Finally, it is important to consider the amount of fiscal space available to governments in designing and implementing automatic stabilisers. The more sensitive the budget is to fluctuations in economic output, the higher the risks of widening deficits during the next crisis. Countries with high public debt levels should carefully weigh the costs and benefits of having more responsive fiscal stabilisers to preserve public debt sustainability. It thus becomes essential to build up fiscal buffers during good economic times to allow automatic stabilisers to fully pay off when the next crisis hits.

Annex: Results from the country-specific regressions

Country	Automatic fiscal policy			Discretionary fiscal policy		
	Coefficient	P-value	R^2	Coefficient	P-value	R^2
Austria	0.455***	4.46E-09	0.87	0.026	8.93E-01	0.00
Belgium	0.502***	4.17E-09	0.88	0.195	3.69E-01	0.05
Cyprus	0.287***	3.54E-05	0.64	0.015	9.48E-01	0.00
Estonia	0.378***	3.85E-10	0.91	-0.260***	8.85E-04	0.49
Finland	0.432***	4.60E-07	0.78	0.174	7.40E-02	0.18
France	0.531***	1.09E-10	0.92	0.090	4.56E-01	0.03
Germany	0.474***	2.00E-16	0.99	-0.020	9.01E-01	0.00
Greece	0.263***	2.69E-05	0.66	-0.304	1.17E-01	0.14
Ireland	0.118*	1.63E-02	0.29	0.152	5.61E-01	0.02
Italy	0.430***	1.84E-09	0.89	-0.216*	2.82E-02	0.25
Latvia	0.243***	1.67E-06	0.75	-0.041	3.44E-01	0.05
Lithuania	0.302***	9.58E-08	0.82	-0.086	2.73E-01	0.07
Luxembourg	0.378***	4.05E-08	0.84	0.017	8.69E-01	0.00
Malta	0.223***	1.29E-04	0.59	-0.161	3.24E-01	0.06
Netherlands	0.468***	2.65E-07	0.80	0.097	4.74E-01	0.03
Portugal	0.316***	1.72E-05	0.67	-0.182	5.04E-01	0.03
Slovakia	0.282***	2.64E-08	0.85	0.051	7.72E-01	0.01
Slovenia	0.365***	4.65E-08	0.83	0.080	7.38E-01	0.01
Spain	0.323***	9.74E-05	0.60	0.018	9.24E-01	0.00

*Significant at the 10% level, ***Significant at the 1% level

Source: Scope Ratings GmbH

The figures presented above are the result of simple regressions run individually for each country. For simplicity, we only present the coefficients, p-values and goodness-of-fit indicators. The specification, based on a previous study by Fatás and Mihov (2012)[15], is as follows:

$$\Delta Fiscalbalance = \propto + \beta \cdot RealGDPgrowth + \epsilon$$

Where Δ*Fiscalbalance* represents the year-on-year change in the cyclical component (i.e. the automatic component) of the budget balance in terms of GDP or the cyclically adjusted budget balance (i.e. discretionary component) as a percentage of GDP. *RealGDPgrowth* is the real annual growth rate of the economy. All data is sourced from AMECO. A simple OLS estimation technique was employed. The resulting coefficients can be interpreted as the semi-elasticities of the two components of the budget balance.

[15] Fatás and Mihov (2012), Fiscal Policy as a Stabilization tool.

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