Assessment of the fiscal stance appropriate for the euro area in 2019

Thygesen, N.; Beetsma, R.; Bordignon, M.; Duchêne, S.; Szczurek, M.

Publication date
2018
Document Version
Final published version

European Fiscal Board

Assessment of the fiscal stance appropriate for the euro area in 2019

18 June 2018

Composition of the European Fiscal Board

Niels THYGESEN
Chair
Professor Emeritus of International Economics at the University of Copenhagen and former adviser to governments and international institutions, Denmark

Roel BEETSMA
Member
Professor and Vice-Dean of the Faculty of Economics and Business at the University of Amsterdam, The Netherlands

Massimo BORDIGNON
Member
Professor and former Director of the Department of Economics and Finance at the Catholic University of Milan, Italy

Sandrine DUCHÊNE
Member
General Secretary of AXA France, France

Mateusz SZCZUREK
Member
Former Finance Minister, teacher at Warsaw University, and EBRD Associate Director, Poland

More information about the European Fiscal Board is available at:
https://ec.europa.eu/european-fiscal-board

This report was written under the responsibility of the European Fiscal Board with the support of its secretariat. Comments on the report should be sent to:

Secretariat of the European Fiscal Board
European Commission
Rue de la Loi 170
Office CHAR 13/49
B-1000 Brussels
Email: EFB-SECRETARIAT@ec.europa.eu

Cut-off date: 31 May 2018

CONTENTS

Prof. Niels Thygesen
Chair of the European Fiscal Board

FOREWORD

This is the second report of the European Fiscal Board assessing the fiscal stance appropriate for the euro area as a whole. The assessment is built on an appraisal of both macroeconomic and institutional developments in the single currency area.

As we write, the euro area is about to record its twenty-first quarter of consecutive growth. The recovery, initially slow and fragile, has become increasingly robust and has turned into a solid expansion. In 2017, the level of economic activity in the single currency area advanced by 2.4 %, with all sectors and demand components contributing to growth. If current forecasts for 2018 and 2019 hold true, real GDP per inhabitant in the euro area will surpass by around 7 % the level recorded in 2007, the year before the Great Recession hit the world economy and Europe.

Despite these encouraging facts, some observers remain hesitant. The shocks the euro area economies experienced after 2007 were exceptionally profound both economically and socially. Too many individuals, families and firms endured unprecedented hardship. It is therefore understandable if some observers still associate elements of caution to the good news. However, expecting a complete return to pre-crisis conditions in all aspects of the euro area economy may not necessarily be realistic. Since the 1970s, every major economic recession in Europe has left marks that have remained visible well into the subsequent expansion phases, thus signalling structural rather than cyclical issues.

A year ago, the Board supported a neutral fiscal stance for the euro area when economic slack was projected to narrow significantly. We also called for faster debt reduction should conditions turn out better than expected. Barring major surprises in the second half of this year, our overall assessment has been vindicated. At the same time, current estimates suggest fiscal policy makers are not taking advantage of improving economic conditions.

We have now reached a point where available evidence leaves little doubt about the strength and breadth of the ongoing expansion. True, very recent readings of high-frequency indicators were less encouraging than expected. However, they remain at comfortable levels and a slowdown of growth at this stage of the expansion is not unusual. The latest forecasts by international institutions not only expect growth to continue at a solid pace in 2019; they also expect actual output to exceed its potential level.

The Board is well aware of the uncertainty surrounding real-time output gap estimates. In fact, this report includes a special focus on how to assess such uncertainties. It argues that even if we apply the necessary pinch of salt to real-time output gap estimates, the overall assessment of the current short-term outlook is favourable.

One of the most woeful and recurring lessons of fiscal policy is that governments rarely take advantage of economic good times to prepare public finances for the future; opportunities are wasted. To a considerable extent, this is due to an entrenched tendency of underrating the strength of prevailing economic conditions. In plain words: good times are wasted because budgets are rarely predicated on the assumption of good times. The years preceding the post-2007 crises are a particularly telling case in point. With hindsight there is no doubt that the euro area was booming, but back then the budgetary plans of many euro area Member States assumed a residual degree of economic slack.

It is time for fiscal policy makers to stay clear of the missteps of the past. The current expansion offers a clear opportunity to create fiscal buffers.

Especially Member States with a high government debt-to-GDP ratio need to do more than simply let automatic stabilisers do their work. They had insufficient fiscal buffers when the post-2007 crisis started and they still have some way to go before safer grounds are reached. Recent market jitters underscore remaining vulnerabilities.

The Board shares the widespread consensus that fiscal policy should not be used to fine tune aggregate demand. Most Member States have significant automatic fiscal stabilisers where cross-country differences are the evident expression of national preferences. We have not been overly critical of the degree of flexibility with which the Commission has applied the fiscal rules in much of the post-crisis period to allow for some contribution from national fiscal policies to sustain demand while the recovery was still fragile. But we are no longer in this period.

With its current assessment, the Board is not advocating an abrupt shift in the fiscal stance for the euro area as a whole. We are rather making the qualitative, but still important point that the adjustment requirements for 2019 should factor in the solid pace of economic expansion. To safeguard the credibility of the Pact, its flexibility provisions should be applied in a symmetric way, not only when the economy goes south or is weak. Overall, the current outlook warrants a somewhat restrictive orientation of fiscal policy for the euro area in 2019.

The current expansion is also an opportunity to make progress with plans to complete the euro area governance framework. Starting with the Five Presidents' report of June 2015 ([1]), policy documents published by the European Commission, but also by other entities, have highlighted the need for a central fiscal stabilisation instrument. In last year's Annual Report, we expressed the view that an appropriately designed central fiscal capacity has the potential to improve the resilience of the euro area.

Our sympathy for a well-designed central stabilisation function goes beyond our view of how a complete Economic and Monetary Union (EMU) should ideally look. It is also rooted in the observation that the European Central Bank (ECB) is unlikely, by the time the next crisis hits, to have had the opportunity to raise interest rates sufficiently to have room for the monetary easing that will then have become necessary. This adds to the urgency of making progress with the fiscal architecture of the EMU.

The Board supports the Commission's recent proposal to establish a European Investment Stabilisation Function. The proposal goes in the right direction, but the road ahead of us is a long one. Due to current political and budgetary constraints, the size of the proposed instrument is very modest and some of the suggested design aspects will weigh on its effectiveness.

Moreover, the Commission's initiative faces opposing views about the right balance between risk reduction and risk sharing. The Board believes that the viability of any new element of risk sharing, such as the European Investment Stabilisation Function, will very much hinge on whether, in parallel, progress is made with risk reduction including simpler and stronger EU fiscal rules. Simpler, more enforceable rules are a complement to a joint stabilisation effort.

([1]) Juncker, J.-C., Tusk, D., Dijsselbloem, J., Draghi, M. and Schulz, M. (2015), 'Completing Europe's Economic and Monetary Union', European Commission.

1. MACROECONOMIC OUTLOOK IN THE EURO AREA

Economic activity in the euro area is expanding at a robust pace. Euro area real GDP increased by 2.4 % in 2017 and is projected to grow by the same order of magnitude in 2018, well above both earlier forecasts and current estimates of potential growth. The ongoing expansion is underpinned by foreign and domestic demand, with particularly strong growth in investment supported by high levels of business confidence and capacity utilisation. Private consumption is also projected to remain robust, thanks to noteworthy improvements in the labour market, consumer confidence and the financial position of households (Graph 1.1).

Leading indicators are softening but remain at high levels. The Commission's Economic Sentiment Indicator and the Business Climate Indicator peaked in December 2017, at higher levels than those measured in the pre-crisis period (Graph 1.2). While both indicators confirm that the euro area is expanding at a robust pace, their receding level since the beginning of 2018 signals a deceleration of growth. This outlook is consistent with the latest information from the euro area composite purchasing managers' index, which has declined since the start of 2018 due in part to exceptional factors, while still signalling a reasonable growth rate. A decline in industrial production since December 2017, partly driven by Germany, confirms slower growth ahead but is not taken to foreshadow a turning point at this time.

In 2019, real GDP growth is projected to slow somewhat but to remain solid. Forecasts by international institutions and market participants point, across the board, to a continuation of the ongoing economic expansion in the euro area. In light of the latest reading of confidence indicators, growth is expected to moderate slightly but to remain solid and above current estimates of potential output. In its 2018 spring forecast, the Commission projects euro area GDP to grow at 2.0 % in 2019, broadly in line with the forecasts of the IMF and the OECD. Domestic demand is expected to remain the main driver of the growth momentum.

Risks to the euro area outlook are broadly balanced, with external and political risks becoming more prominent. Compared to a year ago, economic activity in the euro area has clearly surprised on the upside. In 2017, real GDP growth turned out three quarters of a percentage point higher than projected, and current forecasts for 2018 and 2019 have also been revised upward. Domestic risk factors appear broadly balanced at this stage, although some prominent political uncertainties have emerged recently. By mid-2018, this has translated again into rising government bond spreads in some Member States. The balance of external risks is increasingly tilted to the downside. Global economic growth remains robust, supported among others by the fiscal stimulus in the United States and solid growth in China. However, the uncertainty surrounding the impact of the withdrawal of the United Kingdom from the EU is compounded by new risks to global trade stemming from new protectionist measures, and the possible impact on global financial conditions of a faster-than-expected tightening of monetary policy in the United States.

Labour market and inflation

Unemployment is returning to pre-crisis levels. Following a protracted period of sizeable slack in the labour market, the unemployment rate is projected to decline from 9.1 % in 2017 to 7.9 % in 2019, returning to pre-crisis levels and to the current estimates of its 'natural' rate. The turnaround in the labour market, as measured by the number of unemployed people in percent of the labour force, stands in clear contrast to what typically happened in the wake of previous recessions in the euro area. Starting in the 1970s, the rate of unemployment

exhibited an underlying upward trend; in recoveries it typically stalled at a level above the one recorded before the economic downturn (this is known as the 'ratchet effect').

Some labour market features defy received wisdom. Broader indicators of unemployment, including involuntary part-time workers and discouraged workers remain high though not far from pre-crisis levels (Graph 1.3). At the same time, in 2017 total hours and average hours worked were still below the levels recorded 10 years earlier by 2 % and 4 % respectively. While declining average hours are part of a long-term trend in the euro area, their current low level is definitely at odds with the concomitant and sharp increase in employment in 2017.

A growing skills mismatch is likely to weigh on job creation. Since the post-2007 financial and economic crises, the Beveridge Curve, which captures the negative relationship between the vacancy rate and the rate of unemployment, has significantly shifted outward in the euro area (Graph 1.4). Based on the pre-crisis relationship, the current level of unemployment would be associated with a much lower number of vacancies. The shift in the Beveridge Curve suggests a substantial skills mismatch in the labour market. For instance, excess unemployment in sectors most affected by the post-2007 crises, such as construction, has not been absorbed by other economic sectors. In particular, the gap in unemployment between high-skilled and low-skilled workers is significantly higher than in 2007, pointing to persistent labour market segmentation.

Wages are expected to accelerate somewhat, after many years of subdued growth. Nominal compensation per employee is set to increase significantly in 2018, by around 2.5 %, up from 1.6 % in 2017 (Graph 1.5). This development follows the progressive tightening of the labour market conditions coupled with a cyclical improvement in labour productivity and important wage agreements in some key Member States. The outlook for 2019 is less dynamic than in 2018, yet wage growth is forecast to remain above the low levels observed in the recent past.

Core inflation picks up as capacity constraints become more binding. Headline inflation, as measured by the Harmonised Index of Consumer Prices (HICP), was 1.5 % in 2017 and is projected to remain broadly stable at that rate in 2018 and 2019, still somewhat below the ECB 'target' (Graph 1.6). However, the projected pace of economic growth, coupled with a progressive tightening of labour market conditions, is expected to lead to a gradual build-up in underlying price pressures. In its 2018 spring forecast, the Commission expects core inflation, which excludes energy and seasonal food prices, to increase from 1.1 % in 2017 to 1.4 % in 2018 and 1.6 % in 2019. The ECB and the Survey of Professional Forecasters also expect acceleration, although at a slightly more moderate pace.

Credit and monetary conditions

Credit to the private sector is normalising. Growth in lending to households and to non-financial corporations continues to increase, gradually returning to pre-crisis levels (Graph 1.7). Improvements in credit demand reflect the progressive strengthening of the economic cycle: in particular, while lending for house purchases remains substantially below its exceptional pre-crisis levels, consumer credit is particularly buoyant, driven by steady improvements in households' disposable income. Credit supply has also improved, as euro area banks made further progress in cleaning up their balance sheets. The share of non-performing loans decreased to 5.4 % in the third quarter of 2017, from 6.9 % a year earlier.

Monetary and financial conditions remain exceptionally accommodative. The EONIA rate remains in negative territory, as the ECB charges a rate of -0.4 % on banks' excess liquidity (2). Furthermore, in October 2017, the

(2) EONIA is short for Euro OverNight Index Average. The EONIA rate is the 1-day interbank interest rate for the euro

ECB extended its Asset Purchase Programme (APP) until September 2018, albeit halving the pace of monthly net purchases to €30 billion, starting from January 2018. This exceptional degree of monetary policy accommodation, via both standard and non-standard measures, has helped keep interest rates at a historically low level for all maturities. Throughout 2017, an upward drift in the yield curve reflects expectations of higher growth and inflation in the euro area (Graph 1.8).

Monetary policy to remain accommodative, while markets expect rate increases in 2019. In its recent guidance, the ECB has clarified that the APP will continue until the Governing Council sees a sustained adjustment in the path of inflation consistent with its mandate. It also stated that key policy rates will remain at their present levels for an extended period of time, and well past the horizon of net asset purchases. Against this backdrop and in light of the current macroeconomic outlook, a growing number of financial market participants expect the ECB to increase policy rates for the first time only in the second half of 2019.

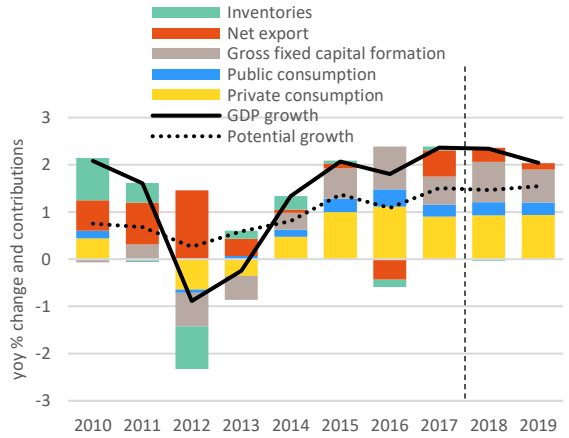
Cyclical conditions

The euro area economy is projected to operate above potential in 2019. In the first quarter of 2018, the rate of capacity utilisation for the industrial sector, as measured by Eurostat, stood at 84.5 %, a level comparable to the pre-crisis peak observed in 2007. Economic growth has consistently outstripped its potential since the end of 2013. As a result, the output gap of the euro area is now estimated to close in 2018 and to turn positive in 2019. While point estimates differ across forecasters, the IMF and the OECD share the assessment of the European Commission that the output gap of the euro area is moving into positive territory (Graph 1.9). This assessment is confirmed when taking into account financial variables which played a prominent role in the past downturn and weighed on the recovery.

The assessment of cyclical conditions has been improving. While real-time output gaps are surrounded by a considerable degree of uncertainty, estimates for the euro area in 2018 and 2019 have been revised upwards. Compared to the Commission's 2017 autumn forecast, the output gap estimate of the euro area for 2019 has been revised up to 0.9 % of potential GDP (Graph 1.10). This revision is consistent with past experience whereby output gaps tend to be underestimated in real time (see Box 1). Therefore, the output gap estimates for 2019 may well be further revised upward in subsequent forecasts.

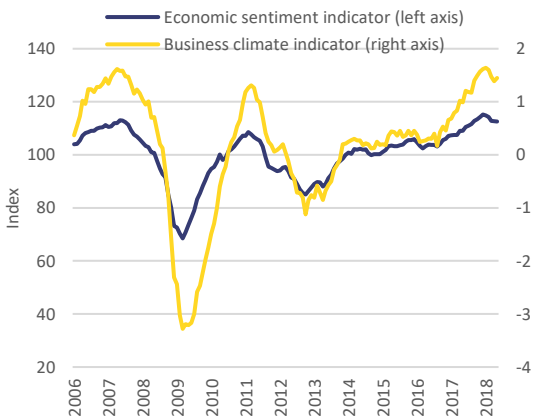
area. In other words, it is the rate at which banks provide loans to each other for 1 day.

Graph 1.1: GDP growth and contributions, euro area



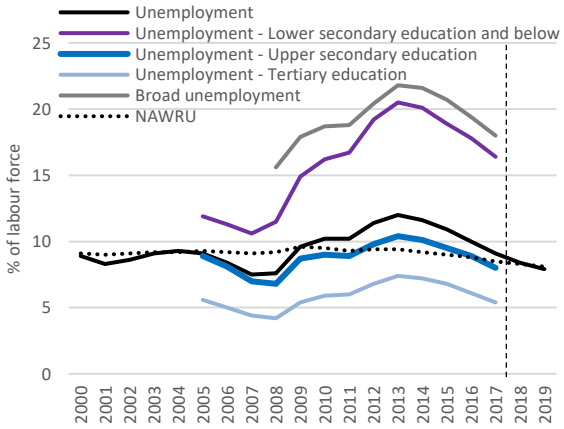
Source: European Commission.

Graph 1.2: Survey indicators, euro area



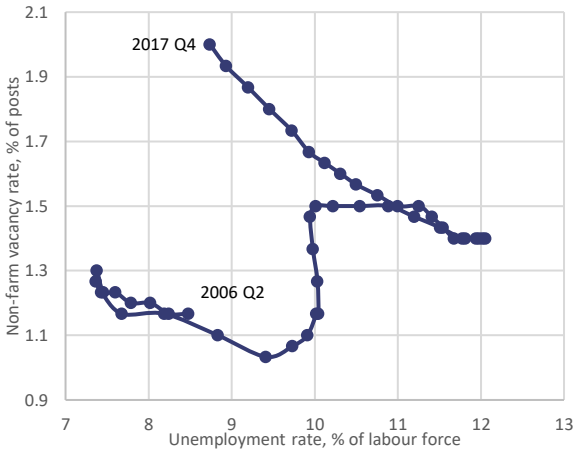
Source: European Commission.

Graph 1.3: Unemployment rate, euro area



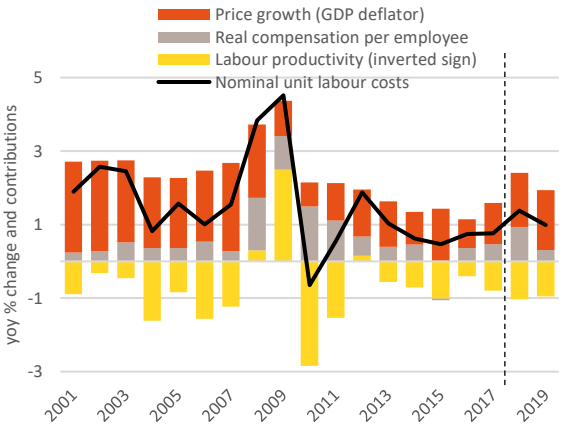
Source: European Commission. ***Note:*** Broad unemployment includes underemployed part-time workers, persons seeking work but not immediately available and persons available to work but not seeking.

Graph 1.4: The euro area Beveridge curve



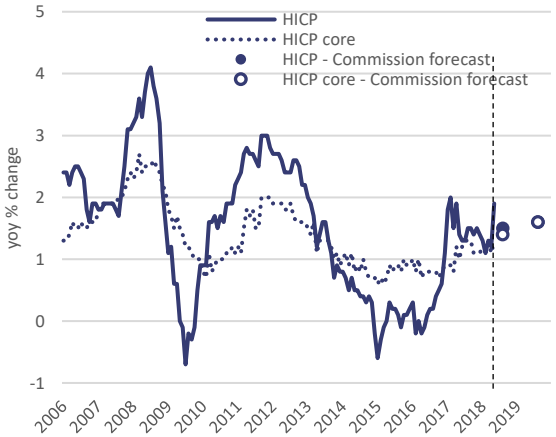
Source: European Commission. ***Note:*** 3-period centred moving average of the vacancy rate used.

Graph 1.5: Contribution to the growth of unit labour costs, euro area



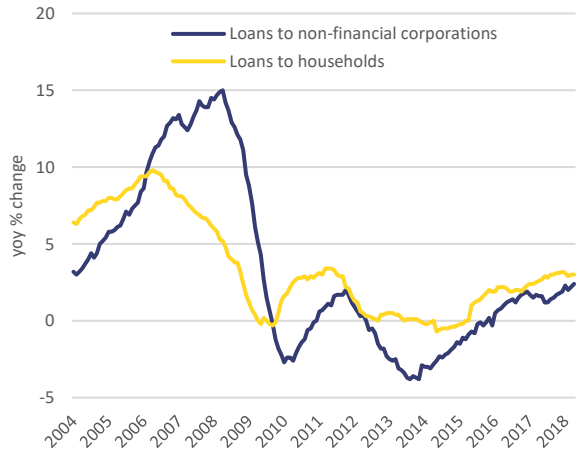
Source: European Commission. ***Note:*** Nominal unit labour costs are the ratio between nominal compensation per employee and output per employee; nominal compensation is the product of real compensation and the GDP deflator.

Graph 1.6: Inflation rate, euro area



Source: European Commission and ECB. ***Note:*** Core HICP excludes energy and unprocessed food.

Graph 1.7: Lending to households and non-financial corporations, euro area

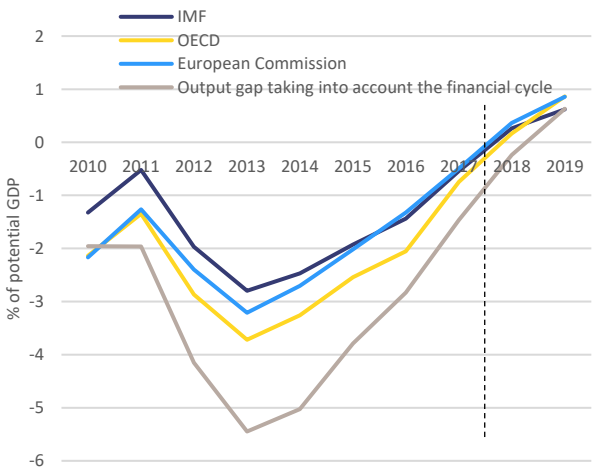


Source: ECB.

Graph 1.8: Euro area spot yields for AAA-rated bonds

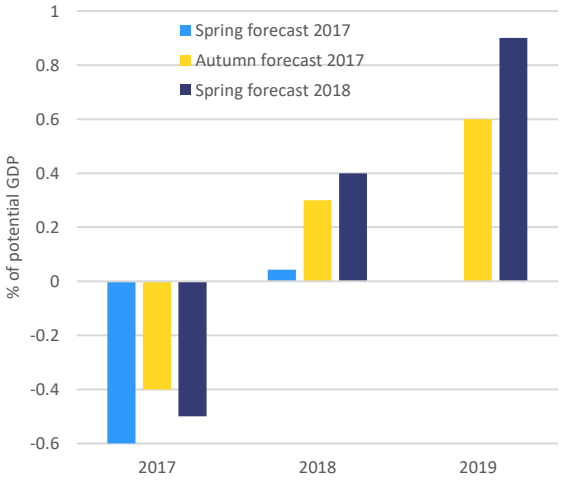
Source: ECB.

Graph 1.9: Output gap, euro area



Source: European Commission, IMF, OECD, and European Fiscal Board calculations.
Note: The output gap taking into account the financial cycle is derived from an extended HP filter which takes into account short-term real interest rates, credit growth and house price inflation. For more details, see Berger, H., T. Dowling, S. Lanau, L. Weicheng, M. Mrkaic, P. Rabanal, and M.T. Sanjani (2015), 'Steady as She Goes — Estimating Potential Output During Financial Booms and Busts', *IMF Working Papers*, 15/233.

Graph 1.10: Output gap across vintages, euro area



Source: European Commission.

2. MACROECONOMIC OUTLOOK ACROSS MEMBER STATES

In 2019, growth is expected to be more broad-based than in the past. Under the Commission's 2018 spring forecast, all euro area Member States are set to benefit from the ongoing economic expansion. The degree of dispersion between the fastest and the slowest growing Member States is projected to reach the lowest level since the introduction of the single currency (Graph 2.1). Italy would be the slowest growing euro area country in both 2018 and 2019, while Ireland and Malta are projected to record the fastest growth rate of real GDP. Although there are still differences across countries, more in-depth analysis presented in Box 3 suggests that most euro area countries are in a mature stage of recovery.

Cyclical conditions are more homogeneous, too. The cross-country dispersion of output gap estimates for 2019, as measured by its average absolute deviation, is also the lowest since the introduction of the euro (Graph 2.2). This marks a significant change compared with the recent past, when negative and positive rates of economic growth co-existed. It also marks an improvement compared with pre-crisis years, when some peripheral economies were growing well above their potential. Despite more homogeneous cyclical conditions, some differences stand out: the Greek economy is expected to remain significantly below potential in 2019, while large positive output gaps, of at least 2 % of potential GDP, are expected in the Baltics, Cyprus, Slovenia and Spain.

The rebalancing of competitiveness is still ongoing. The internal adjustment process in the euro area is not yet complete. Member States which experienced the largest losses in price and cost competitiveness in the pre-crisis years are still expected to exhibit below average rates of inflation and unit labour costs growth (Graph 2.3). In an environment of lower inflation, the adjustment process is more difficult and has pushed prices and wage dynamics to exceptionally low levels in a number of Member States. Moreover, these low rates of inflation adversely affect the debt dynamics of some Member States which are facing the largest challenges to the sustainability of public finances.

Trade imbalances have been corrected in 'deficit countries' but remain in 'surplus countries'. Since 2011, sizeable trade deficits have been eliminated in euro area Member States that were particularly hard hit by the post-2007 crises. The same has not happened in the surplus countries whose trade surplus has actually increased compared to the pre-crisis years (Graph 2.4). This asymmetry resulted in a significant increase in the current account balance of the euro area as a whole which reached 3.5 % of GDP in 2017, compared to an average value of 0.2 % of GDP prior to the crisis. The current account surplus of the euro area is expected to remain broadly stable at an exceptionally high level in 2019.

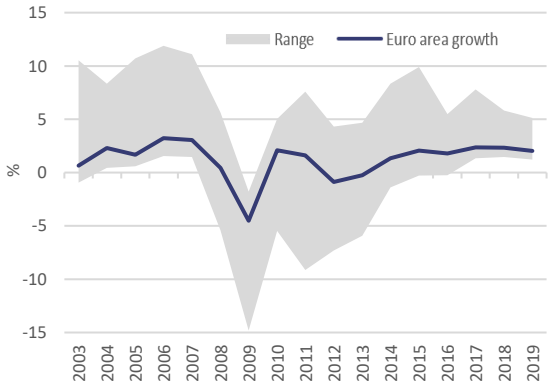
Heterogeneity in unemployment mostly reflects structural factors. Despite the considerable convergence in economic growth, unemployment rates are expected to diverge substantially across the euro area in 2019, from less than 4 % of the labour force in Germany and the Netherlands to more than 18 % in Greece. Most of the heterogeneity seems structural, as evidenced by large differences in the NAWRU — the non-accelerating wage rate of unemployment — which is consistent with stable wage growth (Graph 2.5). The NAWRU has declined in most euro area countries since the early days of the post-2007 crisis. However, in some countries, notably Greece, Spain, Italy and Cyprus, the structural rate of unemployment is estimated to have further increased (Graph 2.6).

Further economic convergence requires an additional reform effort. Increasing rates of potential growth and declining rates of structural unemployment in many euro area Member

States reflect the headway made so far with the structural reform agenda. Nonetheless, the Commission has observed that, despite progress with reforms to improve the adjustment capacity of labour markets, significant differences persist across the euro area, which continue to challenge its smooth functioning ([3]). In a recent proposal, the European Commission has established a reform support programme in the 2021-2027 multiannual financial framework to foster convergence.

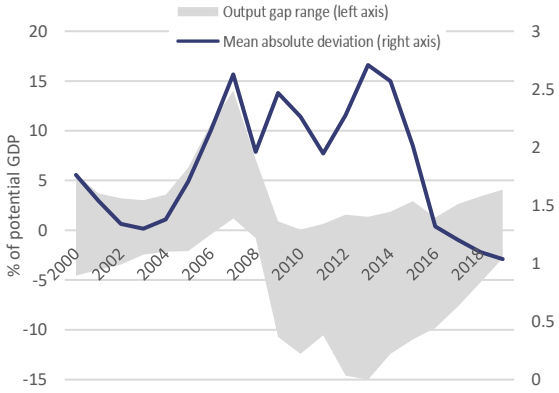
([3]) Commission Recommendation for a Council Recommendation on the economic policy of the euro area, COM(2017) 770 final.

Graph 2.1: GDP growth across Member States



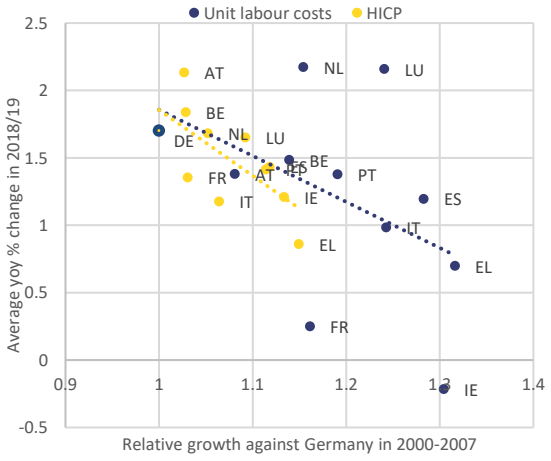
Source: European Commission. ***Note:*** The range is the difference between the highest and lowest growth rates.

Graph 2.2: Output gap across Member States



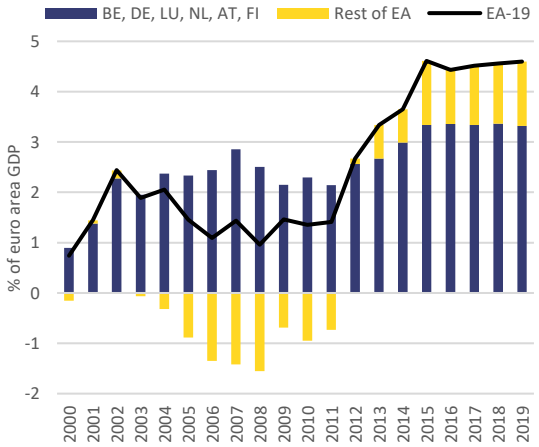
Source: European Commission.

Graph 2.3: The rebalancing of prices and costs in EA-12



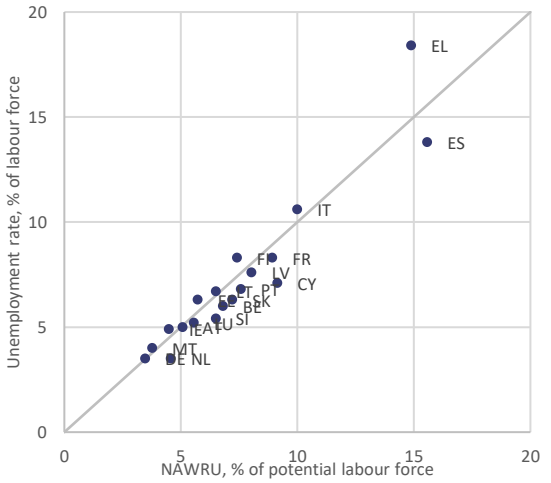
Source: European Commission.

Graph 2.4: Trade balance in euro area countries



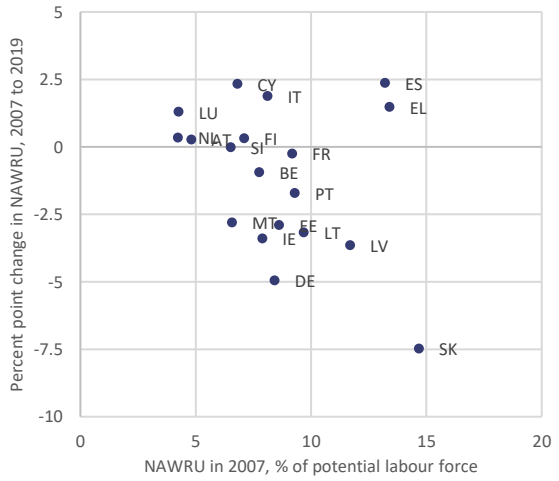
Source: European Commission.

Graph 2.5: Unemployment and NAWRU across Member States in 2019



Source: European Commission. ***Note:*** The NAWRU is the non-accelerating wage rate of unemployment.

Graph 2.6: Change in structural unemployment since 2007



Source: European Commission. ***Note:*** The NAWRU is the non-accelerating wage rate of unemployment.

3. FISCAL POLICY DEVELOPMENTS

The budget deficit of the euro area is heading to a record low. In 2017, the last year for which notified public finance data are available, the budget deficit of the euro area as a whole was 0.9 % of GDP, a level not observed since 2007 and down from 6.3 % of GDP in 2009. According to the Commission's 2018 spring forecast, the deficit is expected to continue falling to reach 0.6 % of GDP in 2019, its lowest level since 2000 when the euro area economy was at the peak of the ICT boom ([4]). By country, only Spain still had a budget deficit in excess of 3 % of GDP in 2017 as opposed to 16 countries in 2009; it is expected to bring it below the 3 % of GDP reference value in 2018.

The expected improvement in 2018-2019 is cyclical, not the result of new policy measures. The projected improvement of government budget balances across the euro area is the result of favourable cyclical conditions and, in particular in 2018, of a further decline in interest payments; discretionary fiscal policy measures are actually pushing in the opposite direction (Graph 3.1). Higher economic growth and declining interest payments were also the drivers of the budgetary improvements in 2015-2017, when the fiscal stance was on average broadly neutral (Graph 3.2). This marks an important shift from 2011-2014, when the deficit reduction was mainly the result of discretionary fiscal consolidation, including during the euro area recession of 2012-2013.

Declining expenditure-to-GDP ratios are coupled with slower revenue growth. According to the Commission's 2018 spring forecast, for the euro area as a whole most government expenditure items are expected to decline as a share of GDP in 2018-2019, although less markedly than in 2015-2017 (Graph 3.3). In particular, the ongoing economic expansion is leading to an automatic decrease in social transfers. Only public investment is expected to edge up, after stabilising in 2015-2017. Overall, in 2018 and 2019 government expenditure is expected to trim the nominal deficit by one percentage point of GDP. In parallel, government revenues are also expected to grow less rapidly than output, with a cumulative negative impact on the headline balance of 0.5 percentage points of GDP. This mainly reflects discretionary cuts in social contributions. In the initial phase of budgetary adjustment up to 2014, consolidation was mainly driven by tax hikes.

A closer look at expenditure trends confirms the lack of structural improvement. Total government expenditure includes items that are not under the direct control of governments. Based on the Commission's 2018 spring forecast, net government expenditure ([5]) in the euro area as a whole is projected to grow by 2 % each year in 2018-2019, significantly faster than medium-term potential output (Graph 3.4). This result substantiates the conclusion highlighted above: the projected reduction of the nominal expenditure-to-GDP ratio is not of a structural nature, and its impact on the budget balance is partly offset by revenue measures.

The euro area fiscal stance is expected to be moderately expansionary. After increasing by 0.1 percentage points to 1.4 % of GDP in 2017, the structural primary surplus of the euro area is expected to halve by 2019, with fiscal expansions of 0.4 % of GDP each year. This projection incorporates the effects of all policy measures that had been credibly announced with a sufficient degree of detail by the cut-off date (23 April 2018) of the Commission's 2018

([4]) The figure for 2019 does not yet include the governments' budgetary plans for that year.

([5]) Net government expenditure (i) excludes interest spending, expenditure on EU programmes fully matched by EU funds revenue, cyclical elements of unemployment benefits, and one-off measures, (ii) smooths investment expenditure over four years, and (iii) is corrected for the impact of revenue measures. It is the aggregate used under the expenditure benchmark of the Stability and Growth Pact.

spring forecast ([6]). The projected fiscal expansion in 2018 is broad-based: nearly all Member States are expected to contribute, although to a varying degree (Graph 3.5). Of note, much of the expansion, especially in 2019, is expected to originate in high-debt countries (Graph 3.6).

Higher interest rates and rising costs of ageing will end the current declining trend of debt ratios. The total amount of gross government debt of euro area countries has declined in percent of GDP since 2015. Supported by solid growth and a still very favourable interest rate environment, government debt is expected to attain slightly more than 84 % of GDP in 2019, down from close to 89 % of GDP 2 years earlier (Graph 3.7). However, policy makers face important challenges in the medium and long term. Under current policies, the Commission's latest debt sustainability analysis concluded that, in the baseline scenario, the aggregate debt ratio of the euro area would stabilise at just below 80 % of GDP in the second half of the 2020s ([7]). Hence, unless new measures are taken, the aggregate debt ratio is projected to remain well above the 60 % of GDP reference value for the foreseeable future.

Government debt levels differ significantly across countries. In the current EU fiscal framework, budgetary policies are implemented at national level. As a result, the sustainability of public finances largely remains a country-specific issue. Only 7 out of the 19 euro area Member States are expected to have a gross government debt level below 60 % of GDP in 2018; they account for less than 10 % of euro area GDP. Two countries, Germany and Finland, are projected to join the group in 2019. This will push the share of euro area countries with a debt below 60 % of GDP to 40 % of euro area GDP. At the same time, government gross debt is expected to remain above 100 % of GDP in four countries representing more than 20 % of the euro area economy and one third of total euro area gross government debt.

Despite recent improvements, sustainability challenges remain in some Member States. Based on the Commission's sustainability analysis, which does not include the assessment of political developments, no country appears to be at risk of fiscal stress in the short term. A dedicated analysis of contingent liabilities related to the banking sector indicates that possible short-term risks are concentrated in very few countries ([8]). In the medium term, notable challenges persist in some Member States to reduce their debt level towards the 60 % of GDP reference value within 15 years. Countries with high debt levels are also more vulnerable to changes in the macroeconomic environment, in particular if nominal interest rates normalise faster than currently expected. In the long term, the main challenge to fiscal sustainability stems from the budgetary costs of population ageing. Analysis carried out by the Commission and the Ageing Working Group of the ECOFIN Council concluded that additional reforms of the pension and/or health-care systems are necessary in some countries such as Luxembourg and Slovenia to ensure the long-term sustainability of public finances ([9]). The age-related expenditure ratio in these countries is projected to increase by more than 5 percentage points of GDP by 2070 (Graph 3.8).

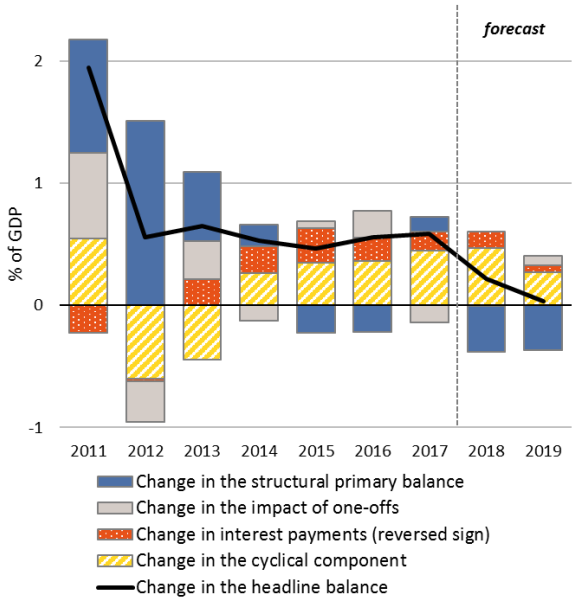
([6]) The latest OECD and IMF projections also point to a moderately expansionary fiscal stance in 2018, yet anticipate a return to a more neutral orientation in 2019 because of the institutions' practice of taking into account announced policy targets.

([7]) The Commission's baseline scenario assumes that long-term market interest rates converge to 3 % in real terms — a relatively high level by historical standards — by 2028 and annual average inflation to 2 % by 2021. An even stronger increase in market interest rates by 1 percentage point on a permanent basis would revert part of the decline in the debt ratio and bring it back to close to 85 % of GDP in the late 2020s.

([8]) European Commission (2018), *Debt Sustainability Monitor 2017*, European Economy – Institutional Paper 071.

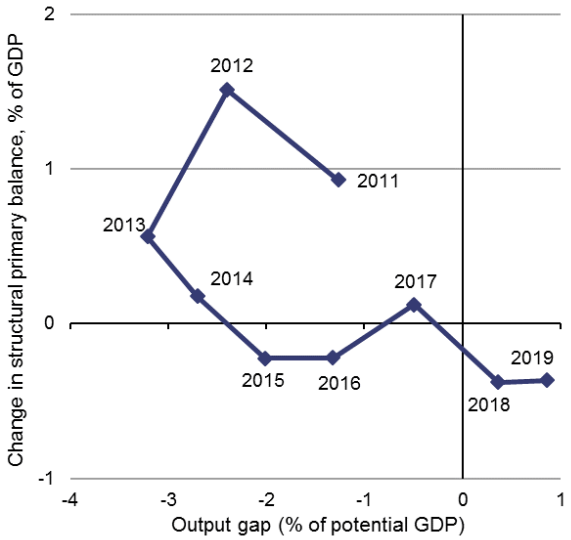
([9]) See European Commission (2018), *The 2018 Ageing Report*, European Economy – Institutional Paper 079.

Graph 3.1: Drivers of the change in the headline balance; euro area aggregate



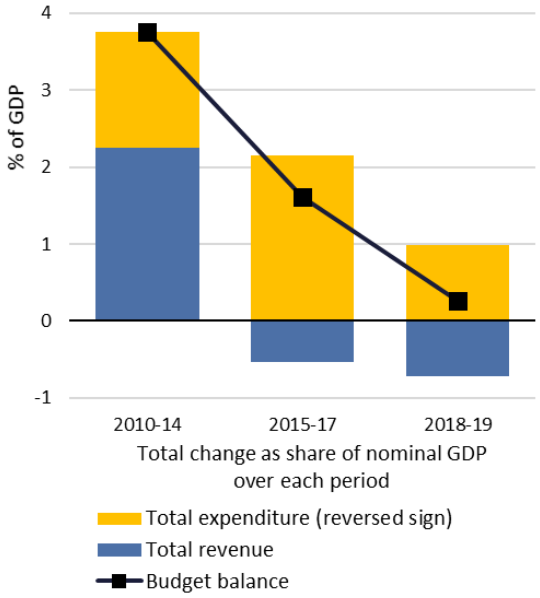
Source: European Fiscal Board calculations and European Commission.
Note: The forecast for 2019 does not yet include the draft budgetary plans of euro area Member States. A decrease in interest payments is shown as an improvement in the headline balance.

Graph 3.2: Fiscal stance in the euro area



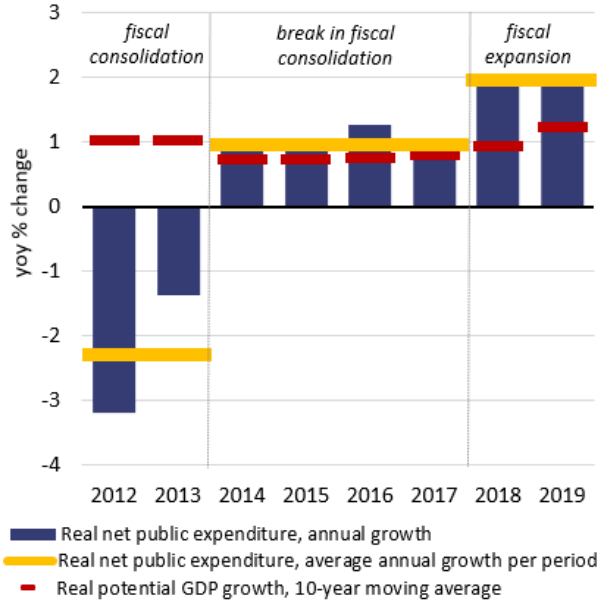
Source: European Fiscal Board calculations and European Commission.
Note: The forecast for 2019 does not yet include the draft budgetary plans of euro area Member States.

Graph 3.3: Government revenue and expenditure; euro area aggregate



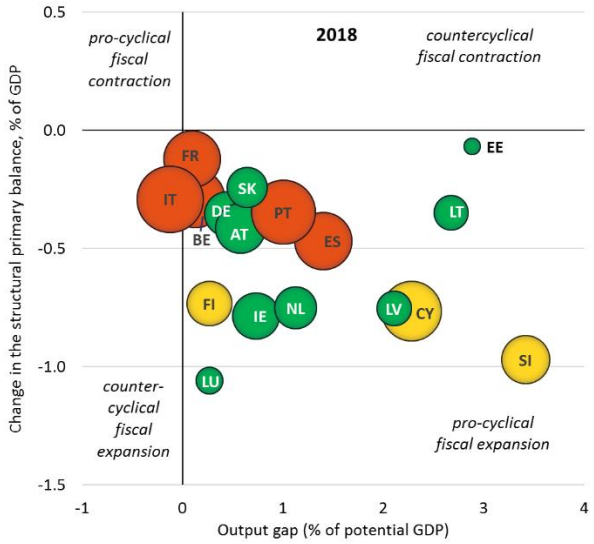
Source: European Fiscal Board calculations and European Commission.
Note: The forecast for 2019 does not yet include the draft budgetary plans of euro area Member States.

Graph 3.4: Net government expenditure growth; euro area aggregate



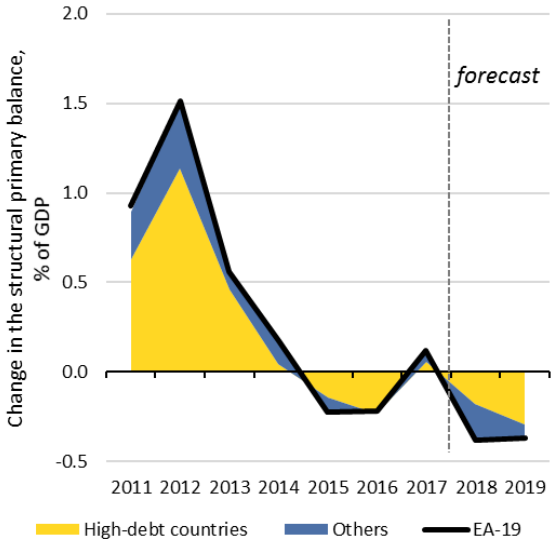
Source: European Fiscal Board calculations and European Commission.
Note: The forecast for 2019 does not yet include the draft budgetary plans of euro area Member States.

Graph 3.5: Fiscal stance, cyclical conditions and sustainability in euro area Member States in 2018



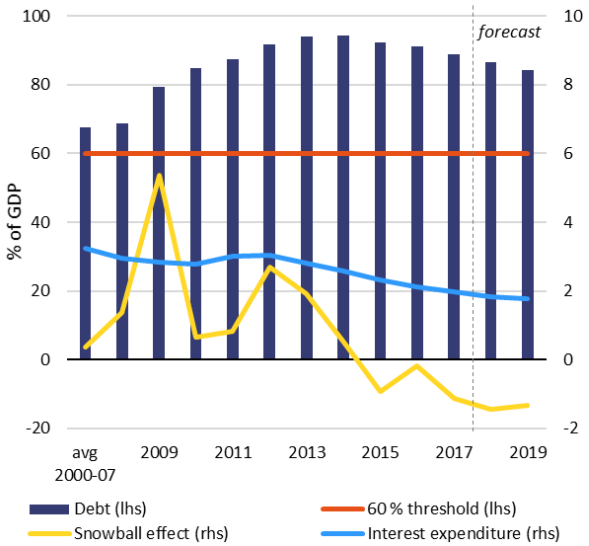
Source: European Fiscal Board calculations and European Commission.
Note: The size of bubbles reflects the ratio of government debt to GDP. The colours indicate medium-term sustainability risks: red = high; yellow = medium; green = low, as measured by the Commission's S1 indicator and debt sustainability analysis. Malta: output gap: 1.0; change in SPB: -3.1. Greece: output gap: -5.2; change in SPB: -1.4.

Graph 3.6: Contributions of countries to the aggregate fiscal stance



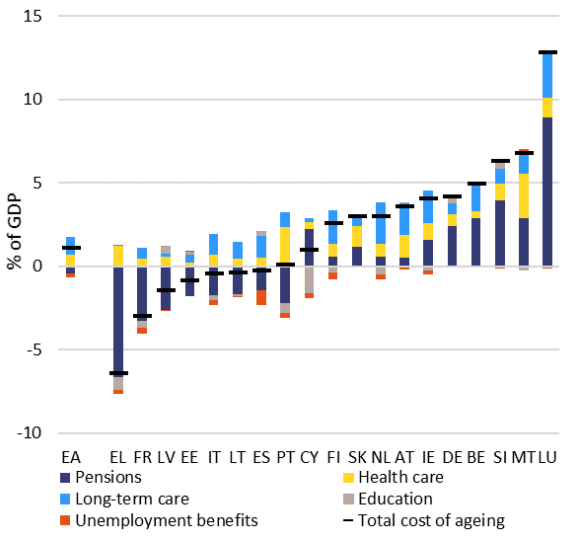
Source: European Fiscal Board calculations and European Commission.
Note: High-debt countries: Belgium, Ireland, Greece, Spain, France, Italy, Cyprus and Portugal. Others: the remaining countries of the euro area.

Graph 3.7: Government debt developments; euro area aggregate



Source: European Fiscal Board calculations and European Commission.
Note: The forecast for 2019 does not yet include the draft budgetary plans of euro area Member States. The snowball effect measures the combined effect of interest expenditure and nominal GDP growth on the debt-to-GDP ratio.

Graph 3.8: Projected change in age-related expenditure as % of GDP (2016-2070)



Source: European Commission.

4. INSTITUTIONAL DEVELOPMENTS

A central fiscal capacity is an integral part of a complete Economic and Monetary Union (EMU). The ability to actually implement a fiscal stance appropriate for the euro area depends on the governance framework. The post-2007 crises clearly showed that, in particularly difficult circumstances, the aggregation of national fiscal policies does not ensure a smooth functioning of the single currency area. While views across Member States diverge about how much additional fiscal integration is desirable from the national perspective, there is little doubt that, from an economic perspective, an effective stabilisation function at the central level is needed to complete the EMU. This insight has underpinned the many successive policy documents put forward by the Commission and other institutions in the past several years.

The Commission has recently tabled a first concrete legislative proposal. In May 2018, the Commission adopted a number of legal proposals preparing the ground for a central stabilisation function as part of the 2021-2027 multiannual financial framework (MFF) ([10]). The proposal follows through on the plans outlined in December 2017 and aims at establishing a European Investment Stabilisation Function (EISF), to be used in the event of large asymmetric shocks. Over the seven-year period of the next MFF, the new instrument would draw on up to €30 billion to provide loans to Member States, coupled with a grant component to subsidise interest costs. The proposal also envisages a future expansion of the instrument to include a voluntary insurance fund based on contributions from Member States and additional lending by the European Stability Mechanism.

The effectiveness of a future central stabilisation function crucially depends on its design. A central fiscal capacity encompasses many aspects of governance, operations and funding which all affect the overall effectiveness of the instrument. Three questions deserve particular attention: (i) what should be the size of a central stabilisation function to become an effective tool for the euro area? (ii) How should the stabilisation function be triggered? (iii) Who should be eligible to benefit from the stabilisation function? We will address these questions in turn in the light of the new Commission proposal.

A central stabilisation function should address both symmetric and asymmetric shocks. The appropriate size of a central stabilisation function is determined by two main considerations: (i) whether the instrument should address both area-wide and country-specific shocks or only one of the two, and (ii) what degree of smoothing the instrument should achieve. An assessment of growth shocks in the euro area indicates that country-specific shocks account for a smaller share of the economic cycle than area-wide shocks (Graph 4.1). This suggests that a relatively small EISF could provide meaningful stabilisation for country-specific shocks but would leave the more important part of instability unaddressed. Recent experience has unequivocally shown the risks of large area-wide shocks. Hence, the Board finds exclusive focus on asymmetric shocks too narrow.

A central stabilisation function should address large shocks only. With respect to the degree of smoothing, some have proposed a central stabilisation function that intervenes in the event of all downturns ([11]), while others

([10]) http://europa.eu/rapid/press-release_IP-18-3972_en.htm

([11]) See Arnold, N., Barkbu, B., Ture, E., Wang, H. and Yao, J. (2018) 'A Central Fiscal Stabilization Capacity for the Euro Area', *IMF Staff Discussion Notes* 18/03.

consider only the mitigation of large shocks ([12]). There are at least two reasons why a central stabilisation function should not attempt to fine-tune aggregate demand. First, the uncertainty surrounding the assessment of cyclical conditions in real time is significant. Second, existing national and common policy instruments should be used first. Monetary policy is the primary stabilisation tool, aided by domestic automatic fiscal stabilisers. Joint efforts of fiscal stabilisation will therefore be useful only in the event of large shocks, when automatic fiscal stabilisers and standard monetary policy reach their limits.

Stronger private risk sharing is important but not sufficient. The private sector can partly absorb country-specific shocks via two separate channels: cross-border income, from either capital or labour, and borrowing through credit markets. The private sector accounts for only 24 % of shock absorption in the euro area ([13]) against 62 % in the United States ([14]). By contrast, national automatic fiscal stabilisers in euro area countries provide about twice the amount of shock absorption of fiscal transfers in the US ([15]). Completing the Banking Union and establishing a Capital Market Union, both necessary steps towards a complete the EMU, will certainly strengthen private shock absorption however the process would take a long time. Moreover, this channel breaks down during severe downturns ([16]): under such circumstances, fiscal instruments play a crucial role.

An effective central stabilisation function requires *at least* cumulative funds of ½ % of euro area GDP. Proposals to address large country-specific and area-wide shocks involve relatively modest annual contributions that over time would accumulate to a significant size. However, should large shocks hit euro area countries before sufficient resources have been accumulated, borrowing against future contribution is also considered. Beblavý et al. (2017) ([17]) propose a scheme where Member States provide quarterly contributions of 0.1 % of their GDP, until a total size of 0.5 % of euro area GDP is reached. Similarly, Carnot et. al. (2017) ([18]) propose average annual contributions of approximately 0.1 % of euro area GDP which, during a large downturn, could disburse payments of about 0.5 % of euro area GDP. Arnold et al. (2018) ([19]) propose constant annual gross contributions of 0.35 % GDP which, based on past economic fluctuations, and assuming the build-up would have started in 1990, would have accumulated around 1 ½ % of euro area GDP in 2007. Table 4.1 provides an illustration of the trade-off between the degree of smoothing of the business cycle and the size of a central stabilisation function, in terms of annual gross contributions.

Automaticity may be simple but might not be effective. There are essentially two ways to design a trigger: automatically by relying on predefined statistical benchmarks, or by using economic judgement. In the ongoing debate, automaticity is often preferred, to exclude partisan interference and assure a timely deployment of funds. However, automaticity

([12]) See Bénassy-Quéré, A., Brunnermeier, M., Enderlein, H., Farhi, E., Fratzscher, M., Fuest, C., Gourinchas, P.-O., Martin, P., Pisani-Ferry, J., Rey, H., Schnabel, I., Véron, N., Weder di Mauro, B. and Zettelmeyer, J. (2018) 'Reconciling risk sharing with market discipline: A constructive approach to euro area reform', *CEPR Policy Insight*, No. 91, and European Commission (2017) 'Communication from the Commission to the European Parliament, the European Council, the Council and the European Central Bank – New budgetary instruments for a stable euro area within the Union framework', COM(2017)822 Final, December.

([13]) European Commission (2007) 'Cross-border risk sharing: has it increased in the euro area?', *Quarterly Report on the Euro Area,* 6(3).

([14]) Asdrubali, P., Sorensen, B. and Yosha, O. (1996) 'Channels of interstate risk sharing: United States 1963-1990', *Quarterly Journal of Economics*, 111: 1081–1110.

([15]) Alcidi, C. and Thirion, G. (2017) 'Fiscal risk sharing and resilience to shocks: lessons for the euro area from the US', *CEPS Working Document*, No. 2017/07.

([16]) Furceri, D. and Zdzienicka, A. (2015) 'The Euro Area Crisis: Need for a Supranational Fiscal Risk Sharing Mechanism?', *Open Economies Review*, 26(4): 683-710.

([17]) Beblavý, M. and Karolien L. (2017) 'Feasibility and Added Value of a European Unemployment Benefits Scheme', *CEPS Papers* No. 12230.

([18]) Carnot, N., Kizior, M. and Mourre, G. (2017) 'Fiscal stabilisation in the euro area: A simulation exercise', Université Libre de Bruxelles *Working Papers CEB*, 17-025.

([19]) See footnote 10.

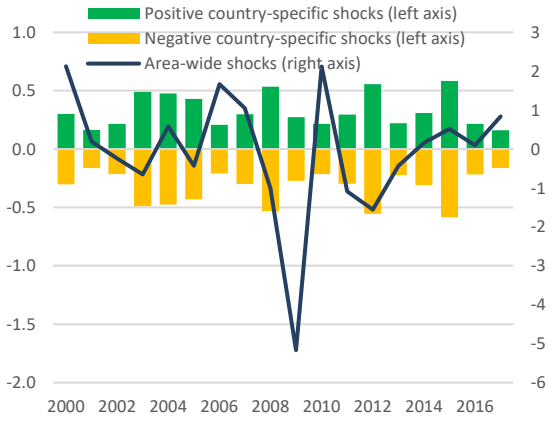
comes with a serious downside: it will not differentiate between temporary shocks that can be stabilised and more permanent shocks that cannot. Such a distinction is crucial to avoid both moral hazard and the ineffective use of resources. If access is granted in the presence of persistent shocks, incentives to undertake reforms to resolve the underlying economic problem will weaken. Moreover, to the extent that joint resources are to be triggered only in the event of large shocks and after the first lines of defence have been deployed, timeliness may be less pressing than generally argued.

There is no convincing alternative to discretion based on economic judgement. Macroeconomic shocks do not come with a label, and they exhibit important idiosyncrasies which even the most sophisticated economic or statistical models are not able to capture or predict. That is one of the main reasons why the recourse to economic judgement is pervasive in economic policy making. Even the bulk of the so-called domestic automatic stabilisers is enabled by a decision to issue new debt to finance spending in the face of a shortfall of government revenues during downturns. The decision is based on an explicit or implicit judgement that the shortfall is temporary. If decision makers come to the conclusion that a revenue shortfall is not temporary, automatic stabilisers are constrained or offset by fiscal consolidation.

Independent judgement is needed to address governance issues. For the reasons mentioned above, genuinely unconstrained automaticity plays no role in macroeconomic policy making. The canonical response to the risk of political interference is the involvement of a non-partisan or independent assessment. All euro area Member States have established independent fiscal institutions to deal with the pervasive problem of fiscal policy making that responds to particular interests rather than to economic considerations. Independent assessment and advice can and should be applied at the central level in relation to a central stabilisation function or more generally to a central fiscal capacity. The ultimate decision must be taken by the political level; but independent assessment and advice will arguably increase the quality of the decisions taken.

Better EU fiscal rules are needed to make a central stabilisation function work. There is a very broad consensus among experts and policy makers that access to joint stabilisation resources should be subject to well-defined conditions. Most proposals consider compliance with EU fiscal rules or the broader economic surveillance framework. If access were unconditional, Member States would become fiscally less prudent. However, although conceived as a rules-based system, the Stability and Growth Pact has over the years turned into a complex system that lacks transparency and is perceived to no longer ensure an even-handed implementation across Member States. For this reason, the establishment of the EISF and its extensions should be complemented by a broader review of the EU fiscal framework, aimed at simplifying and strengthening the current set of fiscal rules and enhancing transparency. Without such a reform, ex-ante conditionality for joint stabilisation resources will share the fate of sanctions under the Stability and Growth Pact. It is therefore unfortunate that the currently envisaged roadmap puts the review of the fiscal framework at the end of the process. In its Annual Report 2018 the Board will put forward a proposal for a simpler and stronger Stability and Growth Pact.

Graph 4.1: Euro area growth shocks
(percent of GDP)



Source: European Fiscal Board calculations.
Note: Country growth shocks, as share of euro area GDP, are the residual of the regression $Y_{i,t} = a_i + \alpha_i Y_{i,t-1} + \beta_i Y_{i,t-2} + \varepsilon_{i,t}$, where $Y_{i,t}$ is GDP growth of country i in year t. The area-wide component and the country-specific component of the country growth shocks are derived from the regression $\varepsilon_{i,t} = \gamma_i \sum_i \varepsilon_{i,t} + u_{i,t}$.

Table 4.1: Stabilisation needs and size of the central stabilisation function (CSF)

Share of growth shocks to be smoothed (minimum shock size as % of GDP)		CSF size
Area-wide shocks	Country-specific shocks	(% of EA GDP)
100% (0.0)	100% (0.0)	1.24
25% (1.1)	50% (0.6)	0.83
25% (1.1)	25% (1.2)	0.64
0%	100% (0.0)	0.45
10% (2.9)	25% (1.2)	0.43
10% (2.9)	10% (2.0)	0.35

Source: European Fiscal Board calculations.
Note: Area wide shocks and country-specific shocks are computed as in Graph 4.1, using output gap estimates between 2000 and 2016. CSF size refers to the constant annual gross contributions which allow to (i) finance the operation of automatic stabilisers in the year when the shock occur and (ii) finance a discretionary fiscal stimulus to offset the shock in the following year, assuming a fiscal multiplier of 0.8.

5. OVERALL ASSESSMENT

The ongoing economic expansion offers an opportunity to build fiscal buffers. Although fiscal positions have improved, they are currently not solid enough to withstand future challenges, that is, to absorb future downturns and the budgetary costs of ageing populations. The latest projections and indicators point to very favourable economic conditions in 2018 and 2019 which provide an important window of opportunity to create fiscal buffers, particularly in view of still high government debt levels. While there is no need to tighten the fiscal stance abruptly, the ongoing solid economic expansion justifies an extension of the limited fiscal retrenchment initiated in 2017.

We need to learn from past experience. Analysis presented in Box 1 of this report reveals how policy makers tend to underestimate economic good times while they happen and, as a consequence, to waste important opportunities. The run-up to the Great Recession was a particularly clear case in point: boom years were assessed to be fairly ordinary and windfalls were not used to build up fiscal buffers, on the contrary. During the subsequent downturn, the lack of fiscal space turned into a major handicap. Keeping this lesson in mind, current output gap estimates for 2018 and 2019 are a sign of good times that should not be wasted.

In 2018, the budgetary outturns are set to clash with last year's advice. Based on the most recent projections, national budgetary policies in the euro area are set to produce an aggregate fiscal expansion of 0.4 % of GDP in 2018, the largest fiscal expansion since 2010 (Graph 5.1). If confirmed, such an outcome would be pro-cyclical and in conflict with the advice the European Fiscal Board issued on 20 June 2017 ([20]). The differentiation by country would also diverge from the Board's view (Graph 5.2 and Graph 5.3). At the time, taking into account the projected improvement in economic conditions together with a careful assessment of the sustainability of public finances in the euro area Member States, the Board called for a neutral fiscal stance in 2018. It also encouraged Member States to use possible windfall gains from higher-than-expected growth in 2018 to reduce debt levels.

In 2019, a somewhat restrictive fiscal stance is appropriate for the euro area. Since fiscal fine-tuning is ineffective, the Board does not want to set a specific quantitative target for 2019 but a general indication. For practical purposes, the difference between a 'neutral' and 'somewhat restrictive' fiscal stance may seem small. Still, for clarity, the Board believes that at the current juncture it is preferable to switch to 'restrictive' as opposed to 'broadly neutral'. The Commission and the Council have repeatedly used 'broadly neutral', with the notable exception of 2017. While the qualification 'broadly neutral' may be justified to describe a situation ex post to account for measurement uncertainties, it is rather fuzzy when it comes to guidance. 'Broadly neutral' covers a wide range from 'slightly restrictive' to 'slightly expansionary'. By calling for a somewhat restrictive fiscal stance, the Board wishes to make it clear that times are ripe for creating additional buffers.

A fiscal stance appropriate for the euro area in 2019 requires corrections of current policies. The Commission's latest projections, which incorporate policy plans made available with a sufficient degree of detail by the end of April, amount to a deterioration of the structural primary budget balance of the euro area of 0.4 % of GDP in 2019. While around a third of this deterioration is a statistical artefact linked to tax changes in France ([21]), current policies are

([20]) https://ec.europa.eu/info/publications/2017-annual-report-european-fiscal-board_en

([21]) In 2019, a temporary tax credit for hiring low-skilled workers will be replaced by a permanent cut of social security

not expected to give rise to a restrictive fiscal stance. Most worryingly, the expected fiscal loosening in 2019 mainly results from unchanged policies of countries with higher sustainability risks (Graph 5.2 and Graph 5.3). Therefore, adjustments will be needed to achieve an overall orientation of fiscal policy that the Board considers appropriate for the euro area as a whole.

Compliance with the Stability and Growth Pact would ensure an appropriate fiscal stance in 2019. Implementing the adjustment required by the Pact in the countries that are not yet at their MTO would lead to a somewhat contractionary fiscal stance. In particular, the structural primary budget balance of the euro area would improve by an order of magnitude of a quarter of a percentage point of GDP (Graph 5.1). Such an outcome can be considered appropriate for the euro area as a whole. If implemented, it would underscore an important point, namely that following the EU rules may at times be consistent with achieving appropriate outcomes at the aggregate level. In fact, the tensions between the national and the aggregate level observed in the recent past were the result of an economic crisis that was deeper than envisaged at the time when the Pact was designed. These symptoms have ebbed as we leave the crisis behind us.

Compliance with the Stability and Growth Pact has very different implications across countries. Although the ongoing expansion has lifted all boats, the situation of public finances still varies significantly across euro area Member States. Such differences are also reflected in the adjustment requirements under the Stability and Growth Pact which take into account cyclical conditions and sustainability issues. It is now estimated that, at the beginning of 2018, the structural balances of 10 euro area countries stood at or above the MTO ([22]), while the other countries still need to adjust towards it.

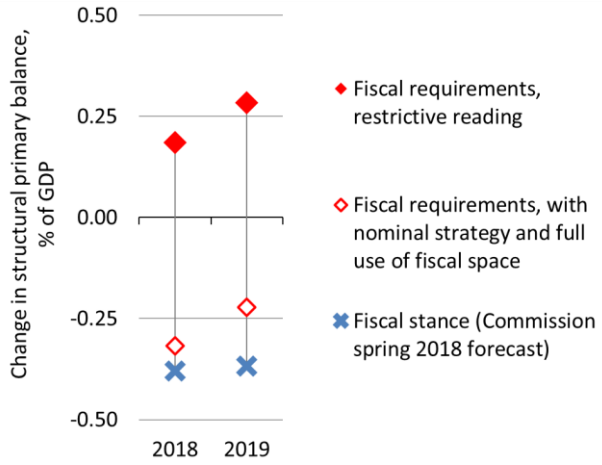
The fiscal architecture of the euro area needs to be completed. While current economic conditions are very favourable, it is a matter of time before the next shock hits the euro area or substantial parts of it. The key question is whether the current architecture of economic governance can handle such shocks. Traditionally, the response to recessions is a combination of fiscal expansion and accommodative monetary policy. However, with policy rates still at the zero lower bound, the ECB's capacity to respond to new negative shocks is likely to be constrained for quite some time, and the building up of national fiscal buffers will not happen overnight. A well-designed central fiscal capacity would strengthen the resilience of the euro area.

The recent Commission proposal goes in the right direction but key elements merit a careful review. In May 2018, as part of the legislative proposals for the next multiannual financial framework (MFF), the Commission has tabled a plan to set up a European Investment Stabilisation Function. The Board supports the initiative of the Commission. But while we are aware of the current political and budgetary constraints, the proposed size falls clearly short of what is needed for an effective instrument to address large shocks, especially if they affect several countries. In addition, the instrument is aimed at country-specific shocks, while empirical evidence suggests that symmetric shocks are more important. The Board also firmly believes that an automatic trigger will not ensure the new instrument is effective. Past experience clearly shows that not all shocks can or should be smoothed by propping up demand. Moreover, the Board is also of the view that a central stabilisation function should be complemented by a reform of the EU fiscal rules making them simpler and stronger, while allowing a greater role for independent analysis and advice.

contributions. For purely statistical reasons, both the tax credit of 2018 and the cut in social contributions of 2019 are recorded in the budget of 2019. Therefore, although the economic impact of the switch should be neutral, it significantly affects France's structural primary budget balance in 2019.

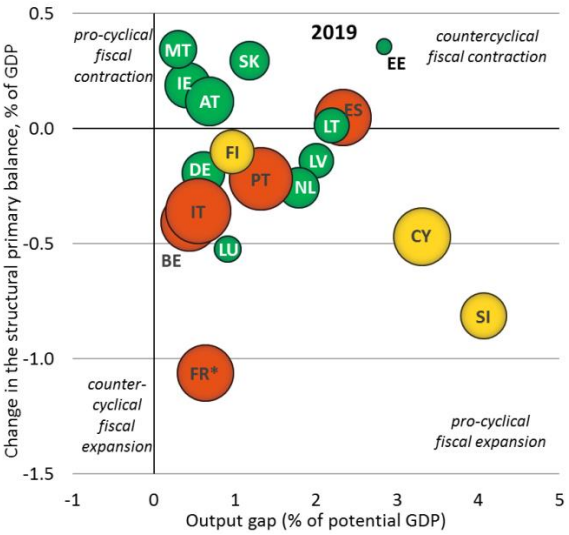
([22]) Taking into account a margin of uncertainty of 0.25 % of GDP.

Graph 5.1: Euro area fiscal stance – current projections and Stability and Growth Pact requirements



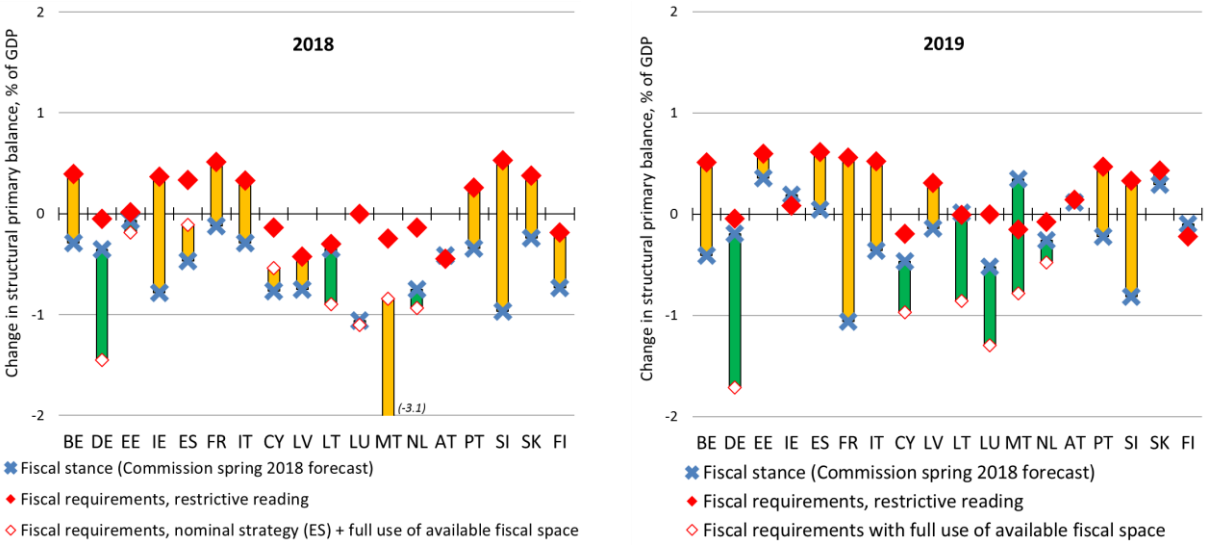
Source: European Fiscal Board calculations and European Commission.
Note: Restrictive reading of fiscal requirements: Member States implement the structural adjustment required under the Stability and Growth Pact, including the leeway granted under the flexibility clauses in the preventive arm. Member States that have over-achieved their MTO keep their structural balance unchanged. Fiscal requirements with nominal strategy and full use of fiscal space: same as above for Member States in the preventive arm which are not at their MTO, while Member States with fiscal space entirely use it and countries in the corrective arm adopt a 'nominal strategy', i.e. they comply with nominal targets set by the Council, which in an economic upturn is less demanding than complying with the structural requirement.

Graph 5.2: Fiscal stance, cyclical conditions and sustainability across euro area Member States in 2019



Source: European Fiscal Board calculations and European Commission.
Note: The size of bubbles reflects the ratio of government debt to GDP. The colours indicate medium-term sustainability risks: red = high; yellow = medium; green = low, as measured by the Commission's S1 indicator and debt sustainability analysis. Greece: output gap: -2.8; change in SPB: -0.8.
* For France, the projected fiscal stance includes the statistical treatment of tax changes, see Footnote 21.

Graph 5.3: Expected national fiscal stances and Stability and Growth Pact requirements



Source: European Fiscal Board calculations and European Commission.
Note: Restrictive reading of fiscal requirements: Member States implement the structural adjustment required under the Stability and Growth Pact, including the leeway granted under the flexibility clauses in the preventive arm, while Member States that have over-achieved their MTO keep their structural balance unchanged. Less restrictive reading of Stability and Growth Pact: Member States with fiscal space entirely use it and countries in the corrective arm adopt a 'nominal strategy', i.e. they comply with nominal targets set by the Council, which in an economic upturn is less demanding than complying with the structural requirement. The green bars indicate that the expected fiscal stance is in line with the required change in the structural balance, the yellow bars indicate that it is not. For France, the projected fiscal stance in 2019 includes the statistical treatment of tax changes, see Footnote 21.

Box 1: **Real-time assessment of the cycle as risk management**

This box looks at the assessment of cyclical conditions in real time as a risk management exercise. Real-time estimates of the output gap play a key role for countercyclical fiscal policy but are surrounded by a high degree of uncertainty. As a result, policymakers regularly face the risk of making incorrect decisions: they may not intervene to stabilise the economy when cyclical conditions actually warrant an intervention (false negative or Type I error) or, conversely, they may intervene when cyclical conditions do not warrant action (false positive or Type II error). Implicitly or explicitly, fiscal policy makers decide which type of error is more costly.

Countercyclical fiscal policy can be broadly characterised as follows. Policymakers should not contemplate any discretionary fiscal stimulus when economic activity is assessed to be close to its potential. Conversely, they can consider measures to stabilise the economy if aggregate demand is too weak, or if the economy is assessed to overheat. For the sake of this analysis, economic activity is taken to be close to potential if output gap estimates are within the interval of ±0.5 % of potential GDP. Any output gap estimate outside this interval is assumed to signal either weak demand or possible risks of overheating.

Policymakers are well aware that real-time output gap estimates are generally different, sometimes very different, from their 'true' value, which can be measured with an acceptable degree of accuracy only *ex post*. Figure 1.1 shows the distribution of the one-year-ahead forecast error of the output gap of all EU countries in 2003-2016. The distribution exhibits a bias towards a negative assessment of cyclical conditions in real time ([23]).

When making a decision in real time, policymakers can typically draw upon past patterns, that is, past differences between the assessment of the cycle in real time and *ex post*. In particular, they can identify a level or threshold of the real-time output gap τ which minimises the costs associated with making Type I and Type II errors, depending on their preferences over the two types of errors.

Decision theory can be used to help calculate such thresholds. We start with the assumption that policymakers want to minimise the costs associated with policy mistakes. In particular, we assume that a correct assessment of the cycle in real time comes with no costs, while any incorrect assessment in real time comes with a cost which doubles if the real-time assessment confuses good times for bad times, or vice versa. The resulting loss function for the government is:

Ex-post / Ex-ante	$OG_t \leq -0.5$	$-0.5 \leq OG_t \leq +0.5$	$OG_t \geq +0.5$
$OG_t^R \leq \tau_1$	L = 0	L = $\theta(1-\gamma)$	L = $2\theta(1-\gamma)$
$\tau_1 \leq OG_t^R \leq \tau_2$	L = $(1-\theta)\gamma$	L = 0	L = $(1-\theta)(1-\gamma)$
$OG_t^R \geq \tau_2$	L = $2\theta\gamma$	L = $\theta\gamma$	L = 0

OG_t^R and OG_t are respectively the real-time and the *ex post* estimates of the output gap in year t, θ is the weight (between 0 and 1) attached to Type I errors as opposed to Type II errors. A higher weight indicates a less interventionist government, in the sense that it attaches higher costs to interventions that may turn out not to have been warranted. Conversely, γ is the weight (between 0 and 1) attached to a downside risk, i.e. the possibility that the *ex post* output gap will be worse than expected in real time.

Figure 1.2 shows the results of our analysis. Taking into account past mistakes, a government with a balanced preference over Type I and Type II errors (θ= 0.5) and attaching a balanced weight to downside and upside risks ($\gamma = 0.5$) may consider fiscal tightening when the real-time output gap is above -0.7 % of GDP. It may consider expansionary measures when the real-time gap is below -1.3 % GDP. It will not consider stabilisation measures in between these values. That a 'rational' government may consider fiscal tightening with a negative real-time output gap estimate reflects the apparent downward bias shown in Figure 1.1.

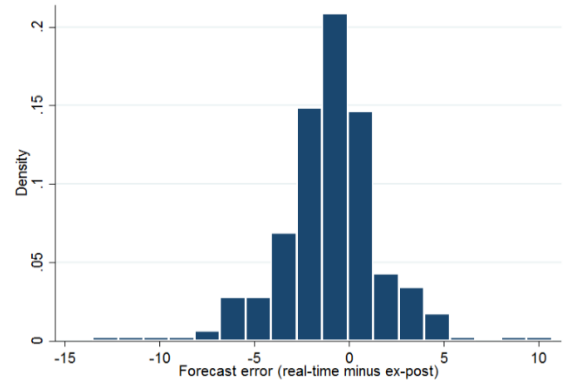
A less interventionist government, i.e. one which assigns a 0.75 weight to Type I errors, because it does not want to

([23]) This pattern is consistent with the finding of Jonung and Larch (2006) and Frankel and Schreger (2013). Both papers find a tendency to overestimate future growth which translates in an overly pessimistic assessment of cyclical conditions in real time. Jonung, L. and Larch, M. (2006) 'Improving fiscal policy in the EU: the case for independent forecasts', *Economic Policy*, 21(47): 491-534. Frankel, J, and Schreger, J. (2013) 'Over-optimistic official forecasts and fiscal rules in the eurozone', *Review of World Economics*, 149(2): 247-272.

run the risk of taking unnecessary discretionary measures, will abstain from stepping in for a much broader range of real-time output gap estimates. It will consider fiscal tightening only if the real-time estimate of the output gap exceeds +0.6 % of GDP, and will contemplate a fiscal expansion only when the real-time output gap estimate falls below -2.8 % of GDP. By contrast, a less cautious government, which does not want to run the risk of failing to stabilise the economy, will always consider stabilisation measures for any real-time output gap estimate different from -0.9 % of GDP.

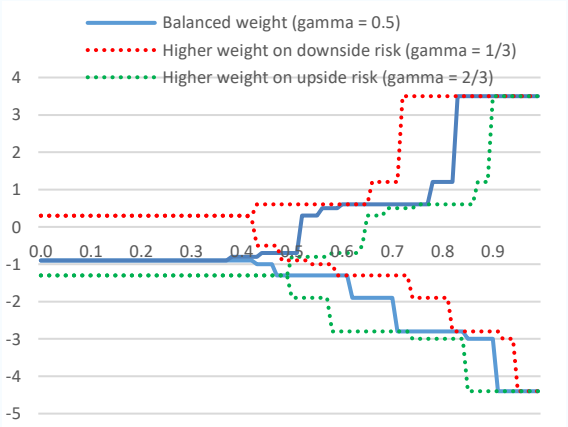
There is a possible lesson to be drawn from this exercise for the current juncture. With real-time output gap estimates moving into positive territory, it stands to reason that even a cautious government would start contemplating fiscal tightening.

Figure 1.1: Distribution of output gap forecast errors



Note: Forecast errors refer to the difference between the Commission autumn forecast in year t-1 for year t and the *ex post* estimate of the same year t from the Commission 2017 autumn forecast, for EU countries between 2003 and 2016.

Figure 1.2: Loss-minimising thresholds of real-time output gap estimates for considering fiscal stabilisation



Source: European Fiscal Board calculations.
Note: The x-axis shows the weight θ attributed to Type I errors. γ is the weight attached to downside risk.

Box 2: **Assessing the strength of recoveries**

The aim of this box is to provide a data-based analysis that identifies different types of recoveries. It develops a two-step analysis. The first step is to differentiate, among the euro area Member States, economies that are in recovery from those that have entered an expansionary phase. A recovery is defined as the period between the last year of a recession and the year when the output gap closes, including cases of double-dip recessions. The second step is to assess, for the countries that are in a recovery, what type of recovery they are experiencing.

This could be useful when discussing how the European Commission has applied discretion in assessing compliance with fiscal requirements in 2018. In the spring of 2017, the Commission announced its intention to apply a margin of discretion when assessing compliance with the structural adjustment required in 2018 for countries under the preventive arm of the Stability and Growth Pact ([24]). In principle, the required adjustment is defined using a matrix of requirements which considers both the cyclical conditions, as measured by the output gap, and debt sustainability considerations. Allowing for a margin of discretion in 2018 means that the Commission assesses the cyclical conditions using a broader set of indicators. If it finds that a country is in an atypical and still fragile economic recovery, the Commission can decide to reduce the adjustment effort required, unless there are risks to fiscal sustainability in the short term.

This box focuses on the countries that the Commission already scrutinised when assessing draft budgetary plans for 2018. When considering whether to apply the margin of discretion, the Commission examined countries in the preventive arm that (i) were expected not to have reached their medium-term budgetary objective, (2) had a fiscal adjustment requirement of at least 0.5 % of GDP in 2018, and (3) were found to be at risk of non-compliance with this fiscal requirement, according to the Commission's assessment of the draft budgetary plan. The list included Belgium, France, Italy, Portugal and Slovenia ([25]).

To analyse the type of recovery in these five economies, a cluster analysis of all past recoveries of the euro area countries in 1970-2017 is carried out. Considering years of recovery one by one, this approach groups together observations in which economic indicators used to characterise a country behave similarly, making it possible to outline types of recoveries. The analysis uses five categories of variables: domestic demand, external demand, prices, the labour market and financial conditions.

The analysis produces four distinct clusters of recoveries (see Technical annex). The first one groups most of the early years of a recovery since the 1990s, as indicated by the more negative values of the output gap. The second cluster encompasses the later years of these recoveries, as shown by the closing output gaps. The third cluster includes recoveries from the 1970s and 1980s in mostly Southern euro area countries experiencing high inflation and an accommodative policy mix. Finally, the last cluster corresponds to economies characterised by a very dynamic labour market coupled with strong private domestic demand, as in catching-up economies.

The recent recoveries of nearly all euro area countries fall into the first two clusters. In the early years of the recovery, domestic demand is particularly low, in a context of a weak labour market, coupled with little support from fiscal and monetary policy. The recovery in those years appears to have been mostly driven by net exports. This cluster can be considered as describing weak or fragile recoveries, as only few of them directly lead to an expansion, that is, a positive output gap. In most cases, the upturn went on, this time moving to the cluster of the later years of a recovery. In that cluster, domestic demand picks up, especially investment, and becomes the main driver of economic growth while net exports are weaker. This goes along with an improvement on the labour market. Strikingly, both inflation and interest rates are lower in the later years, although for different reasons in the 1990s than in the 2010s.

The observations for the five countries mentioned above in 2018 all fall in the cluster grouping later years of a recovery. This is an indication that, although protracted, the recoveries have reached a fairly mature stage.

([24]) https://ec.europa.eu/info/sites/info/files/2017-european-semester-country-specific-recommendations-commission-recommendations-communication.pdf , see also Box 1 of https://ec.europa.eu/info/sites/info/files/economy-finance/com-2017-800-en.pdf and Annex 19 of the Vade mecum on the Stability and Growth Pact – 2018 edition, https://ec.europa.eu/info/publications/economy-finance/vade-mecum-stability-and-growth-pact-2018-edition_en.

([25]) It did not include Greece, which is subject to a macroeconomic adjustment programme; Spain, which is under the corrective arm of the SGP; Luxembourg, which has already achieved its medium-term budgetary objective; nor Finland, for which the Commission did not find that the draft budgetary plans for 2018 showed risks of non-compliance for that year.

Key indicators for the euro area

Output		LTA[(1)]	2014	2015	2016	2017	17Q1	17Q2	17Q3	17Q4	18Q1
Economic sentiment	*Indicator*	100.6	100.9	103.7	104.1	110.7	107.3	109.5	111.8	114.4	114.1
Gross domestic product	*% ch. on prev. period*						0.6	0.7	0.7	0.7	0.4
	% ch. on prev. year	1.6	1.4	2.0	1.8	2.5	2.1	2.4	2.7	2.8	2.5
Labour productivity	*% ch. on prev. period*						0.1	0.3	0.3	0.4	--
	% ch. on prev. year	0.8	0.8	1.0	0.5	0.9	0.5	0.8	1.0	1.2	--
Private consumption		**LTA[(1)]**	**2014**	**2015**	**2016**	**2017**	**17Q1**	**17Q2**	**17Q3**	**17Q4**	**18Q1**
Consumer confidence	*Balance*	-11.9	-10.1	-6.2	-7.8	-2.5	-5.5	-2.7	-1.5	-0.2	0.5
Retail confidence	*Balance*	-7.4	-4.0	1.0	0.3	2.1	0.7	1.8	2.0	3.9	2.8
Private consumption	*% ch. on prev. period*						0.5	0.5	0.3	0.2	--
	% ch. on prev. year	1.3	0.9	1.8	2.0	1.8	1.7	1.9	1.9	1.5	--
Retail sales	*% ch. on prev. period*						0.4	0.8	0.4	0.4	-0.2
	% ch. on prev. year	0.9	1.3	2.9	1.6	2.3	1.9	2.6	2.5	1.9	1.3
Investment		**LTA[(1)]**	**2014**	**2015**	**2016**	**2017**	**17Q1**	**17Q2**	**17Q3**	**17Q4**	**18Q1**
Capacity utilisation	*Level (%)*	81.2	80.6	81.3	81.7	83.1	82.4	82.5	83.2	84.2	84.7
Production expectations (manufacturing)	*Balance*	6.7	7.7	8.0	7.7	15.3	12.9	13.6	16.2	18.4	16.8
Gross fixed capital formation	*% ch. on prev. period*						0.1	2.0	-0.3	1.2	--
	% ch. on prev. year	1.6	1.9	3.1	4.5	3.3	4.1	3.5	2.5	3.0	--
- equipment investment	*% ch. on prev. period*						0.9	2.1	2.0	2.3	--
	% ch. on prev. year		4.6	5.1	5.5	5.5	3.6	4.4	6.2	7.6	--
- construction investment	*% ch. on prev. period*						1.5	1.1	0.2	0.7	--
	% ch. on prev. year		-0.4	0.3	2.4	3.6	3.2	4.0	3.5	3.6	--
Change in stocks	*Contrib. to GDP (pp)*	0.0	0.3	0.0	-0.1	0.0	-0.1	0.3	0.1	-0.2	--
Labour market		**LTA[(1)]**	**2014**	**2015**	**2016**	**2017**	**17Q1**	**17Q2**	**17Q3**	**17Q4**	**18Q1**
Employment expectations (manufacturing)	*Balance*	-9.6	-4.2	-2.3	-1.3	6.7	3.8	5.3	7.2	10.7	10.5
Employment expectations (services)	*Balance*	5.6	1.0	5.8	8.1	10.8	10.0	10.4	11.4	11.5	13.7
Employment	*% ch. on prev. period*						0.5	0.4	0.4	0.3	--
	% ch. on prev. year	0.8	0.6	1.0	1.3	1.6	1.6	1.6	1.7	1.6	--
Employment (000)	*abs. ch. on prev. period*		904	1510	2027	2480	789	640	599	415	--
Compensation of employees	*% ch. on prev. period*						0.4	0.5	0.5	0.7	--
(per head, nominal)	*% ch. on prev. year*	2.1	1.5	1.6	1.5	1.9	1.7	1.9	2.0	2.1	--
Unemployment rate	*% of lab. force*		11.6	10.9	10.0	9.1	9.5	9.1	9.0	8.7	8.5
Unemployment (000)	*abs. ch. on prev. period*		-659	-1518	-1139	-1587	-405	-509	-273	-400	-258
International transactions		**LTA[(1)]**	**2014**	**2015**	**2016**	**2017**	**17Q1**	**17Q2**	**17Q3**	**17Q4**	**18Q1**
World trade	*% ch. on prev. period*						1.4	0.6	1.4	1.1	
	% ch. on prev. year		2.8	2.0	1.5	4.5	3.9	4.3	5.2	4.6	--
Export order books	*Balance*	-17.6	-12.8	-10.7	-11.4	-1.6	-6.4	-2.6	-0.3	3.1	3.8
Trade balance	*Billion EUR*		182.1	238.6	265.0	233.6	42.9	60.7	62.3	67.8	49.4
Exports of goods and services	*% ch. on prev. period*						1.4	1.2	1.7	2.2	
	% ch. on prev. year	5.0	4.6	6.2	3.4	5.4	4.8	4.5	5.8	6.6	--
Imports of goods and services	*% ch. on prev. period*						0.3	1.8	0.7	1.6	--
	% ch. on prev. year	4.7	4.8	6.5	4.8	4.5	4.7	4.5	4.5	4.4	--
Prices		**LTA[(1)]**	**2014**	**2015**	**2016**	**2017**	**17Q1**	**17Q2**	**17Q3**	**17Q4**	**18Q1**
Headline inflation (HICP)	*% ch. on prev. year*		0.4	0.0	0.2	1.5	1.8	1.5	1.4	1.4	1.2
Core inflation	*% ch. on prev. year*		0.7	0.9	0.9	1.2	1.1	1.2	1.2	1.2	1.2
Monetary and financial indicators		**LTA[(1)]**	**2014**	**2015**	**2016**	**2017**	**17Q1**	**17Q2**	**17Q3**	**17Q4**	**18Q1**
Nominal interest rates (3-month)	*Level*		0.21	-0.02	-0.26	-0.33	-0.33	-0.33	-0.33	-0.33	-0.33
Nominal interest rates (10-year)	*Level*		1.42	0.63	0.18	0.43	0.40	0.37	0.49	0.45	0.67
ECB repo rate	*Level*		0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bilateral exchange rate EUR/USD	*Level*		1.33	1.11	1.11	1.13	1.06	1.10	1.17	1.18	1.23
	% ch. on prev. period						-1.3	3.5	6.6	0.2	4.4
	% ch. on prev. year		0.1	-16.5	-0.3	2.1	-3.4	-2.4	5.2	9.1	15.4
Nominal effective exchange rate	*% ch. on prev. period*						-0.7	1.6	3.4	0.1	1.0
	% ch. on prev. year		0.4	-9.5	2.9	2.4	0.2	0.9	3.9	4.4	6.2

Sources: European Commission, ECB, CPB Netherlands Bureau for Economic Policy Analysis.
(1) LTA = Long-term average.

GLOSSARY

Automatic fiscal stabilisers: Features of the tax and spending regime which react automatically to the economic cycle and reduce its fluctuations. As a result, the budget balance in percent of GDP tends to improve in years of high growth, and deteriorate during economic slowdowns.

Discretionary fiscal policy: Change in the budget balance and in its components under the control of government. It is usually measured as the residual of the change in the budget balance after the budgetary impact of automatic stabilisers and interest payments have been excluded (see also Fiscal stance).

Fiscal stance: A measure of the direction and extent of discretionary fiscal policy. In this document, it is defined as the annual change in the structural primary budget balance. When the change is positive, the fiscal stance is said to be restrictive; when the change is negative, it is said to be expansionary.

Expenditure benchmark: A mechanism applied under the preventive arm of the Stability and Growth Pact imposing an upper limit on the growth rate of government primary expenditure net of discretionary revenue measures. The objective of the benchmark is to ensure that a country stays at its MTO or on the adjustment path towards it.

Margin of discretion: A new interpretation of existing EU legislation of how to assess compliance with the requirements under the preventive arm of the Stability and Growth Pact. Under certain conditions, the European Commission may find that the fiscal adjustment in a Member State is adequate even if falls short of the recommended adjustment. The Commission indicated that it would apply the margin of discretion only in 2018.

Medium-term budgetary objective (MTO): According to the Stability and Growth Pact, stability programmes and convergence programmes present a medium-term objective for the budgetary position. It is country-specific, to take into account the diversity of economic and budgetary developments and fiscal risks to the sustainability of public finances. It is defined in structural terms (see Structural balance).

Output gap: The difference between actual output and estimated potential output at a particular point in time. A business cycle typically includes a period of positive output gaps and a period of negative output gaps. When the output gap is closed, the economy is in line with its potential level (see Potential GDP). Observations indicate that a standard business cycle usually lasts up to 8 years, suggesting that the output gap is normally expected to close roughly every 4 years.

Potential GDP: The level of real GDP in a given year that is consistent with a stable rate of inflation. If actual output rises above its potential level, constraints on capacity begin to bind and inflationary pressures build; if output falls below potential, resources are lying idle and inflationary pressures abate (see also Production function approach and Output gap).

Production function approach: A method to estimate the sustainable level of output of an economy compatible with stable inflation based on available labour inputs, the capital stock and their level of efficiency. Potential output is used to estimate the output gap, a key input in the estimation of the structural balance.

S0 indicator: A composite indicator published by the European Commission to evaluate the extent to which there might be a fiscal stress risk in the short term, stemming from the fiscal, macro-financial and competitiveness sides of the economy. A set of 25 fiscal and financial-competitiveness variables proven to perform well in detecting fiscal stress in the past is used to construct the indicator.

S1 indicator: Medium-term sustainability indicator published by the European Commission. It indicates the additional adjustment, in terms of change in the structural primary balance, required over 5 years to bring the general government debt-to-GDP ratio to 60 % in 15 years' time, including financing for any future additional expenditure arising from an ageing population.

S2 indicator: The long-term sustainability indicator of the European Commission. It shows the upfront adjustment to the current structural primary balance required to stabilise the debt-to-GDP ratio over the infinite horizon, including financing for any

additional expenditure arising from an ageing population.

Stabilisation: Economic policy intervention to bring actual output closer to potential output. In the Economic and Monetary Union (EMU), this is expected to be achieved, in normal economic times, through the ECB's monetary policy (for common shocks) and national automatic fiscal stabilisers (for country-specific shocks). When this is not sufficient, discretionary fiscal policy can also play a role.

Structural balance: The headline budget balance corrected for the impact of the economic cycle and net of one-off and other temporary measures. The structural balance gives a measure of the underlying trend in the budget balance.

Structural primary balance: The structural budget balance net of interest payments.

Sustainability of public finances: The ability of a government to service its debt. From a purely theoretical point of view, this basically assumes that the government debt level does not grow faster than the interest rate. While conceptually intuitive, an agreed operational definition of sustainability has proven difficult to achieve. The European Commission is using three indicators of sustainability with different time horizons (S0, S1 and S2) which are complemented by a debt sustainability analysis including sensitivity tests on government debt projections and alternative scenarios.

Zero lower bound (ZLB): When the short-term nominal interest rate is at or near zero, the central bank is limited in its capacity to stimulate economic growth by lowering policy rates further. To overcome the constraint imposed by the ZLB, alternative methods to stimulate demand are generally considered, such as asset purchase programmes. The root cause of the ZLB is the issuance of paper currency, effectively guaranteeing a zero nominal interest rate and acting as an interest rate floor. Central banks cannot encourage spending by lowering interest rates, because people would hold cash instead.

TECHNICAL ANNEX

BOX 1: Real time assessment of the cycle as risk management

The decision problem faced by the government, and the derivation of the optimal thresholds, are as follows.

The economy is assumed to be in 'bad times' when the output gap is less than -0.5 % of potential GDP, in 'good times' when the output gap is above +0.5 % and in 'normal times' for intermediate values of the output gap. The optimal countercyclical reaction function of the government, $r(OG_t)$, is to implement a fiscal stimulus in bad times and a fiscal consolidation in good times. The government however does not know OG_t, but it observes the real-time estimate OG_t^R. Based on past observations, the government knows the conditional probability $P(OG_t^R|OG_t)$ and the prior probability $\pi(OG_t)$.

The government real-time decision is: $d(OG_t^R) = \begin{cases} \text{countercyclical} & \text{if } OG_t^R < \tau_1 \\ \text{neutral} & \text{if } \tau_1 \leq OG_t^R \leq \tau_2 \\ \text{countercyclical} & \text{if } OG_t^R > \tau_2 \end{cases}$

This real-time decision $d(OG_t^R)$ may be different from the optimal reaction $r(OG_t)$: whenever this happens, the government suffers a loss:

$$L(d(OG_t^R), r(OG_t))$$

For a given state of the economy OG_t, the expected loss (i.e. the risk) associated with a particular decision function $d(OG_t^R)$ is:

$$R(d, OG_t) = E\left[L\left(d(OG_t^R), r(OG_t)\right)\right] = \sum_{\forall OG^R} L\left(d(OG_t^R), r(OG_t)\right) P(OG_t^R|OG_t)$$

The optimal decision function (i.e. the optimal real-time thresholds (τ_1, τ_2)) is the decision function with the lowest expected risk:

$$d^* = \arg\min_d E[R(d, OG_t)] = \sum_{\forall OG} R(d, OG_t)\,\pi(OG_t) = \sum_{\forall OG}\sum_{\forall OG^R} L\left(d(OG_t^R), r(OG_t)\right) P(OG_t^R|OG_t)\pi(OG_t)$$

BOX 2: Assessing the strength of recoveries

Data

The sample covers all euro area countries (West Germany until reunification) in 1968-2019. There is one observation per country per year of recovery. Source: European Commission.

Variable	Unit
Output gap	Percent of real potential GDP
DOMESTIC DEMAND:	
Private final consumption (constant prices)	Annual percentage change
Final consumption expenditure of general government (constant prices)	Annual percentage change
Gross fixed capital formation (constant prices)	Annual percentage change
EXTERNAL TRADE:	
Net exports of goods and services (current prices)	Annual change
Balance on current transactions with the rest of the world (current prices)	Percentage of GDP
World exports (current prices)	Annual percentage change
PRICES:	
GDP deflator	Annual percentage change
Consumer price index	Annual percentage change
LABOUR MARKET:	
Unemployment rate (percent of active population)	Annual change
Employment	Annual percentage change
Total hours worked	Annual percentage change
Real compensation per employee	Annual percentage change
Total factor productivity	Annual percentage change
INTEREST RATES:	
Real short-term interest rates	Percentage

Note: Due of data availability, it was not possible to include consistent financial variables such as credit growth without downsizing the sample.

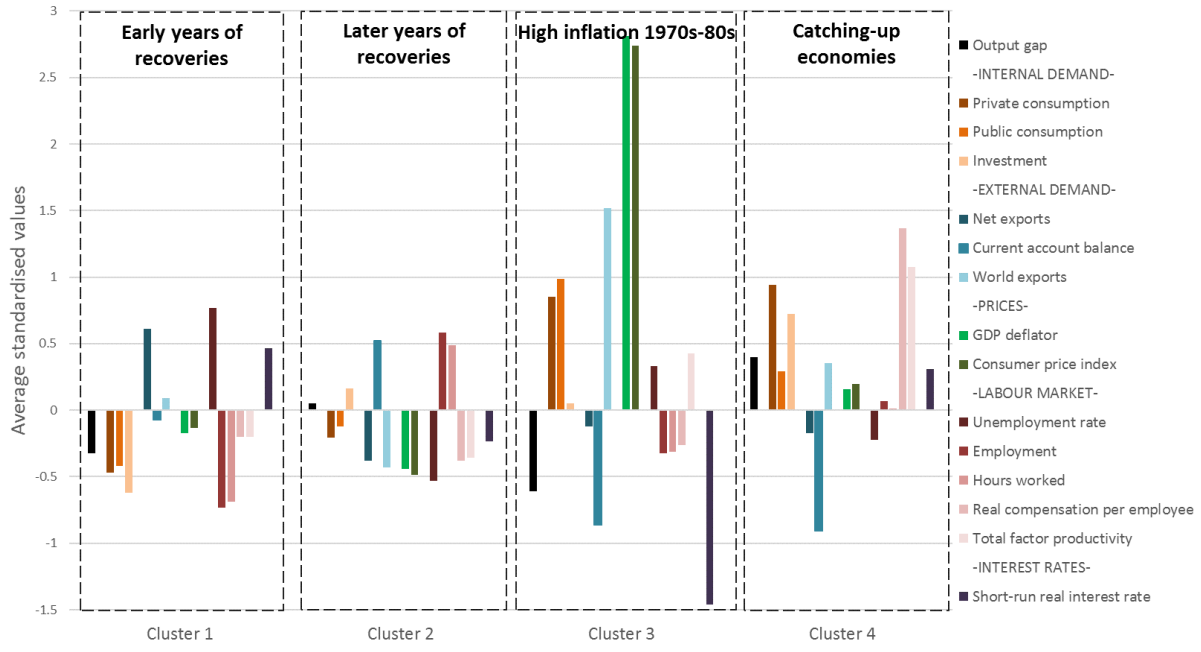
Methodology

All variables have been standardised with an average of zero and a variance of one.

Clustering consists in grouping similar observations without any prior. It assigns each country-year observation to a specific cluster in such a way that observations in the same group, or cluster, are closer to each other than to those in other clusters. Each cluster is defined by its centroid, which is the point at which the sum of the distances from all the objects in the cluster is minimised.

How to read the graph

Each bar shows the average value of the variable in the cluster. As the variables have been standardised, it does not indicate the actual value but it tells how it compares with the whole sample and also with the other clusters. For instance, the output gaps in the cluster named 'High inflation 1970s-80s' are, on average, the lowest in the sample.



Source: European Fiscal Board.

Contents of clusters

Early years of recoveries 93 observations		Later years of recoveries 72 observations		High inflation 16 observations		'Catching-up economies' 34 observations	
Belgium	1977-1979, 1982-1984, 1986, 1994, 1996, 2013	Belgium	1985, 1987-**1988**, 1995, 1997-**1999**, 2010-2012, 2014-2017			Belgium	1976, 1980
Germany	1984-**1989**, 1994-1998, 2004-**2006**, 2010-**2011**	Germany	1983, **1999**			Germany	**1976**
Estonia	2010	Estonia	2011	Estonia	1996	Estonia	1997-1998, 2000-**2001**, **2012**
Ireland	1984-1988, 2010-2011	Ireland	2012-2013			Ireland	1989-**1990**, **2014**
Greece	**1994**, 2014	Greece	2017	Greece	1984-1986	Greece	**1988**
Spain	1982-1985, 1994, 2010	Spain	1986, 1995-**1999**, 2014-2017			Spain	**1987**
France	1977, 1994-1997, 2012-2013, 2015	France	1998-**1999**, 2010-2011, 2014, 2016-2017			France	1976, **1978**
Italy	1994-1996, 2011, 2014	Italy	1997-**2000**, 2010, 2015-2017	Italy	1976-**1979**		
Cyprus	2010	Cyprus	2015-**2017**			Latvia	2012, 2014-**2015**
Lithuania	2000, 2010	Lithuania	2012-**2014**			Lithuania	2001-**2003**, 2011
		Latvia	2011, 2013				
		Luxembourg	2010-2011, 2013-2017				
		Malta	2010-**2014**				
Netherlands	2010	Netherlands	1983-**1988**, 2011, 2014-**2017**				
		Austria	2010-**2011**				
Portugal	1994, 2004-2006, 2010	Portugal	2014-**2017**	Portugal	1976-**1980**, 1985-1986, 1988	Portugal	1987, **1989**, 1995-**1997**, 2007
Slovenia	2010-2011	Slovenia	2014-**2017**			Slovakia	2001-**2005**, 2010
Slovakia	2000, 2012-2013	Slovakia	2011, 2014-**2017**				
Finland	1994, 2010, 2015	Finland	1995-**1997**, 2011, 2016-2017				

Source: European Fiscal Board.
Note: The dates in bold and underlined indicate last years of completed recoveries. This excludes recoveries immediately followed by a second recession.