

# **Relevant Factors Influencing Debt Developments in Italy**

**February 2017**



Ministero dell'Economia e delle Finanze



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## KEY POINTS

- Italy's gross public debt ratio has nearly stabilized in the past two years despite continuing deflationary pressures. The government expects the debt ratio to decline from 132.4 percent of GDP in 2015, and an only slightly higher level in 2016, to around 132 percent this year (net of banking system support) and 123.5 percent by 2020.
- Since 2012, Italy's budget balance has fulfilled the deficit rule thanks to persistent primary surpluses and declining interest payments. It fell from 3.0 percent in 2014 to 2.6 percent in 2015 and 2.4 percent or less in 2016. Including the effects of forthcoming budget adjustments, the deficit is projected to drop to 2.1 percent of GDP this year.
- The forthcoming 2017 Stability Program will chart a path towards budget balance for the next three years according to which by 2018 the debt-reduction rule would be satisfied on a forward-looking basis. The projected decline in the debt ratio is predicated on higher nominal GDP growth, larger primary surpluses, significant privatisation revenues and lower interest payments.
- This report discusses the relevant factors that in the opinion of the government should be considered when assessing Italy's compliance with the Stability and Growth Pact. The first is the persistence of deflationary pressures. Italy's inflation rate averaged -0.1 percent in 2016, and only turned slightly positive in the final months of the year. Core inflation fell to a historical low of 0.5 percent. Consistent with virtual price stability, nominal GDP growth has been weak, hindering a significant reduction in the public debt ratio. The decline in bond yields supported debt stabilisation, but Italy's implicit interest cost declined only gradually due to a high financial duration of public debt.
- Looking forward, worldwide excess capacity and strong competitive pressures are still bearing down on prices. Oil and commodity prices have recovered some ground, but euro area growth remains low by historical standards, the impact of euro exchange rate depreciation is tapering off, and protectionist risks for European exports are looming. On balance, nominal growth seems likely to remain low in the short to medium term. Given this outlook, the government judged it appropriate to aim for gradual deficit reduction in 2017 while targeting faster consolidation in 2018-2020.
- The second key factor is that Italy's output gap is grossly underestimated. Despite a sharp output loss compared to 2008, an unemployment rate of 11.6 percent and virtual stability in wages and prices, the Commission estimates that Italy's output gap will shrink to a mere 0.8 percentage points of GDP in 2017 and zero in 2018.
- This report presents alternative output gap estimates based on the 'commonly agreed methodology, which suggest the gap remains close to 3 percent in 2017 and, crucially, will close more gradually than suggested by the Commission over the coming years.
- Thirdly, Italy's reform effort continues. The effect of recent reforms is estimated at 2.2 percentage points of GDP by 2020, 3.4 points by 2025 and 8.2 in the long run.
- Other highly relevant factors include Italy's track record of fiscal discipline and the budgetary impact of the ongoing immigration wave and of the recent earthquakes.



## OVERVIEW

Reducing the public debt-to-GDP ratio is a key economic policy goal of the Italian government. The past two years have seen a near stabilisation in the public debt ratio and a decline is expected in 2017 net of likely disbursements for banks' recapitalisation. While the outlook is not immune from risks, the government expects that the fall in the debt ratio will gain momentum in the next three years thanks to improving macroeconomic conditions and continuing fiscal consolidation.

The government believes that its fiscal policy strategy should take into account deflation risks and should not undermine Italy's productive capacity and employment. The pace of fiscal consolidation should be economically and socially sustainable.

Italy continues to comply with the deficit rule. Having fallen from 3.0 percent in 2014 to 2.6 percent of GDP in 2015, the general government deficit is estimated to have further declined to at most 2.4 percent of GDP in 2016. The government wishes to point out that official estimates for 2016 public deficit, debt and GDP will become available by March 1<sup>st</sup> and a more informed assessment of budget ratios will be possible after that date. Be as it may, the existing Stability Program, as updated in the 2017 Draft Budgetary Plan (DBP), envisages reducing the deficit to 1.2 percent of GDP in 2018 and 0.2 percent in 2019.

As for the debt rule, in its 126.3 Report on Debt Developments in Italy of May 2016 the Commission argued that there was a *prima facie* evidence that the debt criterion as defined in the Treaty was not fulfilled in 2015 and that there was also a risk of noncompliance in 2016<sup>1</sup>. In the November 2016 Opinion on the 2017 DBP, the Commission stated that the debt rule was not expected to be fulfilled in 2016 and 2017<sup>2</sup>.

The estimates presented in Paragraph III.2 of this Report suggest that the debt rule may not be fully complied with even in 2017. However, based on the projections reported in the 2017 DBP, the gap versus the debt rule in forward-looking configuration would be small (1.8 percentage points of GDP) and the measures being announced alongside this report will reduce this gap. Moreover, the government will base the 2018-2020 Stability Program on the goal of complying with the debt rule in the forward-looking configuration.

In terms of the preventive arm of the Stability and Growth Pact (SGP), the Commission's Opinion on the 2017 DBP was that the 2016 budget outturn was likely to be broadly compliant provided the allowance of 0.75 percentage points of GDP for structural reforms and public investment was confirmed *ex post* and the budget plan was amended in order to be SGP-complaint. Indeed, the Opinion also argued that the 2017 DBP was at risk of non-compliance given a deficit target of 2.3 percent of GDP for this year.

The Commission recently followed up on the 2017 DBP Opinion with a letter addressed to Italy's Economy and Finance Minister in which it argued that an additional structural effort of 0.2 percent of GDP would be needed in order to reduce the gap to broad

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<sup>1</sup> European Commission, *Report prepared in accordance with Article 126(3) of the Treaty*, 18 May 2016.

<sup>2</sup> European Commission, *Opinion on the Draft Budgetary Plan of Italy*, 16 November 2016.

compliance in 2017<sup>3</sup>. Concurrent with the release of the present report, the government has identified a package of budget measures to achieve the required structural adjustment. The computations presented in Paragraph III.1 of this Report confirm that a 0.2-percent-of-GDP improvement in the structural balance compared to the 2017 DBP would indeed ensure broad compliance with the preventive arm of the SGP.

The remainder of this chapter summarises the factors that in the opinion of the government are relevant in assessing Italy's compliance with the debt criterion according to article 126.3 of the European Treaty and article 2(3) of Council Regulation 1467/1997.

## **1. Regaining competitiveness in a deflationary environment**

Euro-area inflation was again close to zero in 2016. Thanks to a moderate recovery in oil and commodity prices, it edged up in the final months of the year, yielding an annual average of 0.2 percent following a reading of zero in 2015. Core inflation barely budged in 2016, averaging 0.86 percent versus 0.83 percent in 2015.

Italy continued to experience a below-average inflation rate, as it posted a reading of -0.1 percent for the headline index and 0.5 percent for the core index. This outcome is consistent with Italy's subpar growth performance and lower degree of resource utilisation compared to the euro-area average. (Italy's average unemployment rate in 2016 was 11.6 percent, versus 10.1 percent in the Eurozone and 4.2 percent in Germany<sup>4</sup>.)

A lower price (and wage) dynamic is necessary for Italy to regain competitiveness vis-à-vis European trading partners. In the presence of low inflation even in the cyclically stronger member states (headline inflation in Germany in 2016 averaged 0.4 percent, core inflation 1.1 percent), Italy must indeed endure a prolonged phase of wage and price stability if it is to regain a high degree of price competitiveness<sup>5</sup>. The duration and depth of the adjustment depend in part on the degree of flexibility of the labour market and of competition in product and service markets. But even with the improvements that have been accomplished in these fields, regaining competitiveness within a monetary union is inevitably a multi-year process and, at the current juncture, it involves near-deflationary conditions.

In turn, ultra-low inflation entails slow progress on reducing the public debt-to-GDP ratio. The inflation differential remains unfavourable to Italy (in terms of relative nominal growth) even when we turn our attention to the GDP deflator. In the eight quarters to Q3 2016, Italy's GDP deflator growth averaged 0.8 percent, while Germany's recorded a 1.8 percent average growth rate and the Eurozone's 1.0 percent.

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<sup>3</sup> Letter from Commissioners Valdis Dombrovskis and Pierre Moscovici dated 17 January 2017  
[http://www.mef.gov.it/inevidenza/article\\_0259.html](http://www.mef.gov.it/inevidenza/article_0259.html)

<sup>4</sup> Eurostat data for the first eleven months of 2016.

<sup>5</sup> According to ISTAT, in the first eleven months of 2016 Italy achieved a trade surplus of 11.6 billion euros versus EU countries and 34.2 billion versus non-EU countries. This is the highest level on record in nominal terms. However, the trade surplus has been boosted by moderate oil prices. A stronger contribution from net trade looks necessary if Italy's growth is to accelerate enough to absorb a still-high unemployment while fiscal policy remains in consolidation mode.



## 2. Deflation and the debt-reduction rule

Low inflation and nominal GDP growth make it harder for a high-debt country to rapidly reduce its debt-to-GDP ratio. The debt-reduction rule that was introduced in 2011 in order to strengthen Euro area fiscal governance is extremely penalizing for high-debt countries in times of low nominal growth.

As we argued in the previous Report on Relevant Factors<sup>6</sup>, it can be shown that a member state that has reached a balanced structural budget position will fail to satisfy the debt rule if nominal GDP growth falls below a certain threshold. In Italy's case, given a debt-to-GDP ratio of 132.4 percent (in 2015), the debt rule is more stringent than running a balanced structural budget whenever nominal GDP growth is lower than 2.73 percent. Since the 2008 global financial crisis Italy has never achieved a nominal GDP growth rate of that magnitude. In the last two years, nominal GDP growth has picked up, but it was only 1.0 percent in 2014, 1.4 percent in 2015 and an estimated 1.9 percent in 2016.

Compliance with the debt rule is achieved with a balanced structural budget as long as nominal growth is high and accelerating. However, it can be virtually impossible in times of low or negative nominal growth. So far, the complex fiscal architecture of the Euro area has failed to address this shortcoming.

Our concerns about the debt rule under conditions of near-deflation seem to be shared by the Commission and the European Central Bank (ECB). In its recent reply to the Report of the European Court of Auditors, the Commission argued that the debt rule does not adequately take into account the possibility of prolonged periods of ultra-low inflation<sup>7</sup>. An article in the ECB Bulletin similarly concluded that negative inflation and growth surprises can make the debt rule exceedingly demanding<sup>8</sup>.

## 3. Sticky funding costs despite QE

It is widely believed that the quantitative easing (QE) policy of the ECB, by driving down bond yields and sovereign spreads, has particularly benefited high-debt countries like Italy. But while the ECB's monetary accommodation has indeed provided vital support to the Euro area economy, such view misses an important point: global deflationary pressures worsen Italy's nominal GDP growth much more rapidly than falling bond yields bring down the government deficit, for two fundamental reasons.

First, over the last twenty years Italy has reduced its exposure to interest rate risk by lengthening the financial duration of the stock of outstanding government securities. These efforts have been stepped up since 2013. The share of instruments with maturity larger or equal to ten years has risen from around 16 percent of total issuance in 2014, to 24 percent in 2015. This policy has reduced sensitivity of interest payments to market shocks. The downside, though, is that with the current structure of debt it takes years for the drop in bond yields to significantly reduce the average cost of funding.

Secondly, the downward shift caused the QE has not been uniform along the government yield curve. Since January 2015, when the QE decision was announced, the

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<sup>6</sup> Ministero dell'Economia e Finanze, *Relevant Factors Influencing Debt Developments in Italy*, May 2016.

<sup>7</sup> European Commission, *Reply to the Report of the Court of Auditors*, European Court of Auditors, Special Report No 10/2016.

<sup>8</sup> ECB, *Government debt reduction strategies in the euro area*, Economic Bulletin, Issue 3 / 2016.

slope of the yield curve in the one to ten-year sector has been steeper than in the pre-QE period. By issuing a larger share of long-dated bonds, Italy has followed a prudent approach that nevertheless implies a lower benefit from ultra-low bond yields and a slower rate of decline in public debt as a share of GDP in the early stages of the process.

In fact, while Italy's ten-year yield fell from an average of 2.87 percent in 2014 to 1.46 percent in 2016, the implied cost of funding has declined more moderately, from 3.6 percent in 2014 to 3.0 percent in 2016. Going forward, the implied cost of funding is projected to decline to 2.9 percent this year and 2.8 percent in 2018 despite a moderate rise in yields at issuance. The nominal GDP growth rate is projected to surpass the implied funding costs by 2019, which would significantly dampen debt dynamic.

#### **4. Uncertain inflation and growth prospects**

In fact, the official forecast of the Italian government (last updated in the 2017 DBP) looks for a gradual recovery in the deflator and, as a result, in nominal GDP growth over the next three years. However, unlike the Commission's forecast, the policy scenario of the government includes safeguard clauses mandating hikes in the VAT in January 2018 and January 2019. Projections for the GDP deflator would have to be lowered if the VAT hikes were replaced by alternative fiscal measures.

Away from fiscal policy, the European economic outlook has improved of late. The moderate recovery in oil prices and inflation during the second half of 2016 has led to an improvement in inflation expectations and to a rise in global bond yields. In addition, economic data surprises have been positive in the last three months, as most indicators of business activity and expectations moved up in the final months of 2016 and, to a lesser extent, in January. In Italy too the third quarter GDP data exceeded expectations and average growth estimates for 2016 were revised up as a result.

Consensus expectations for the euro area point to a continuation of moderate economic growth accompanied by high unemployment and a large current account surplus. Euro area trading partners thus seem unlikely to lend strong support to Italy's recovery via their imports or to experience a persistent rise in inflation. The Commission's Autumn forecast foresees euro area real GDP growth of 1.5 percent in 2017 and 1.7 percent in 2018, following growth of 1.7 percent in 2016. The harmonized index of consumer prices is seen rising 1.4 percent both in 2017 and 2018. Similarly, in its December forecast the ECB projected average HICP inflation of 1.3 percent this year, 1.5 percent in 2018 and 1.7 percent in 2019. Core inflation would register at 1.1 percent this year, 1.4 percent in 2018 and 1.7 percent in 2019.

These forecasts are subject to a significant margin of uncertainty, especially in light of Brexit and of the trade restrictions and the withdrawal from multilateral trade agreements such as TPP announced by the new US administration. So far the UK economy has fared better than expected following the referendum on EU membership in June of last year. However, article 50 of the European Treaty has not yet been triggered and the modalities of Brexit have not yet been decided. A 'clean break' from the EU would surely have adverse effects on the British economy in the medium term, with repercussions on EU trade.

Brexit also represents an opportunity for the continental economies to the extent they are able to attract manufacturing and service companies that decide to relocate their employees and infrastructure. However, the changed attitude towards multilateral

institutions and free trade on the part of the US, and the concrete risk of intensified tax competition in Europe, pose a risk for open economies like Italy that rely crucially on access to foreign markets and on foreign direct investment inflows.

## **5. Italy's fiscal stance in the euro area context**

In an environment of weak nominal growth, a highly restrictive fiscal policy stance may exacerbate deflationary pressures. The fiscal rules that were put in place in the aftermath of the sovereign crisis are intrinsically asymmetrical and potentially pro-cyclical: they have accomplished a high degree of fiscal consolidation in deficit or high-debt countries, but they have failed to promote offsetting accommodative policies in countries that enjoy 'fiscal space'.

Perhaps even more importantly, the Euro area does not have a joint fiscal capacity to be used for rebalancing purposes and/or to achieve an overall fiscal stance that would be appropriate in view of prevailing economic conditions. In fact, the broadly neutral Euro area fiscal policy stance recorded in 2015 and 2016 was only achieved because some member countries ran larger deficits compared to the recommendations they received from the Council.

Kicking off the European Semester, the Commission recently issued a recommendation to euro area countries involving a positive fiscal stance of up to 0.5 percent of GDP in 2017. Assuming compliance on the part of member countries in the corrective arm of the SGP and of those in the preventive arm that must converge towards their Medium Term Objectives (MTOs), this recommendation would only be viable if the few countries that according to the Commission enjoy 'fiscal space' made full use of them.

However, the text of the recommendation approved by the Council only features an invitation to "member states that have outperformed their medium-term objectives to continue to prioritise investments to boost potential growth while preserving the long-term sustainability of public finances" and does not quantify the appropriate euro-area fiscal stance.

The upshot is that 2017 will not see any meaningful fiscal accommodation in the euro area. In the Autumn Forecast, the Commission projected a euro area structural budget balance of -1.3 percent of GDP both in 2017 and in 2018, broadly unchanged from the -1.2 percent estimated for 2016. Among other factors, this aggregate estimate is obtained thanks to a significant worsening in Italy's structural balance that is at odds with the government's budget plans. If we assume that, based on its existing budget plan and the latest commitments, Italy will be broadly compliant with the SGP, the euro area structural balance will actually improve in 2017 and 2018, implying a tightening of the fiscal stance.

## **6. Fiscal space**

The subject of 'fiscal space' recently received significant attention by policymakers and international organisations, largely reflecting the realisation that extreme monetary accommodation may be insufficient to revitalise the advanced economies, let alone rebalance the euro area in the absence of a common fiscal policy. There is also a broad consensus on the idea that ultra-low bond yields provide a unique opportunity to boost infrastructure investment and meet the challenges of the 21<sup>st</sup> century's economy.

European fiscal rules appear to underestimate the degree of fiscal space that even the likes of Italy enjoy as long as financial and economic conditions remain favourable to increased public investment in infrastructure. The OECD recently developed an interesting analytical framework suggesting that even high-public-debt countries like Italy have scope to raise deficit-financed public investment by as much as 0.5 percent of GDP without endangering debt sustainability.

On the other hand, the Commission has based its recommendation on the euro area fiscal stance on an approach that considers the output gap and the S1 debt-sustainability indicator as the two critical variables determining whether a country enjoys fiscal space. The Commissions' conclusion concerning Italy is that such fiscal space is not available, because GDP is close to its potential and the S1 indicator is above a specified threshold. In Chapter III of this report we show that Italy's output gap and sustainability are both underestimated by the Commission's methodology, lending support to the OECD's thesis and to the approach followed so far by the Italian government.

## **7. Italy's output gap is grossly underestimated**

Euro area fiscal rules rest critically on an unobserved variable, namely 'potential growth.' In Italy's case, a loss of output of about nine percentage points of GDP since the onset of the crisis has been reflected in negative potential growth rates according to the commonly agreed estimation methodology. In fact, the European Commission Autumn Forecast projects Italy's potential output growth to remain negative in 2016 (-0.3 percent) and to only turn slightly positive this year (0.1 percent) and in 2018 (0.3 percent). Consequently, in spite of a low projected growth rate in real GDP (0.9 percent in 2017 and 1.0 in 2018), according to the Commission the output gap shrinks from -1.6 percent in 2016 to -0.8 percent this year and zero in 2018.

These estimates look increasingly inconsistent with macroeconomic evidence, both on a standalone basis and in comparison with other Euro area countries. According to the Commission, Italy's output gap in 2018 will be tighter than Germany's (-0.3 percent) and France's (-0.8 percent). If one considers GDP levels compared to the period preceding the sovereign crisis, as well as relative unemployment and inflation levels, one would expect Italy's output gap to be much wider than that of Germany or France.

The Commission has traditionally viewed the problem of Italy's output gap estimation as an unintended consequence of a methodology that has otherwise worked well for most other countries and whose integrity must be preserved. However, in the first chapter of this report we update previous work published in the 2016 Stability Program and show that relatively small enhancements of the agreed methodology are sufficient to obtain output gap estimates that are much more consistent with macroeconomic evidence.

The results produced by the enhanced methodology suggest the Italian economy will operate below its potential until the end of this decade. For instance, the output gap projected for 2018 is of -2.5 percentage points instead of zero. This has major implications for the structural balance and the assessment of Italy's compliance of the preventive arm of the SGP, as the structural deficit implied by the Autumn forecast falls from 2.4 to 1.1 percent of GDP and the headline deficit target of the government (1.2 percent) would imply a 0.1 percent structural surplus.

## 8. Italy's debt is sustainable

Italy's public debt is sustainable regardless of the horizon of the Debt Sustainability Analysis (DSA). The projections presented in Chapter 5 of this report postulate full implementation of the budget program last updated in the 2017 DBP and then hold the cyclically-adjusted primary balance at the level targeted for 2019 (3.2 percent of GDP) until 2027. Even with prudential assumptions concerning real GDP growth, inflation and bond yields, the baseline projection reaches a debt-to-GDP ratio of 101.6 percent in 2027. The ratio falls more sharply in the optimistic scenario, to 89.3 percent. But even in the pessimistic scenario it declines to 115.8 percent, way below the level projected by the Commission's DSA contained in the recent 2016 Debt Sustainability Monitor, 128.9 percent, which is obtained by assuming among other things a worsening in the cyclically-adjusted primary balance in 2017-2018 to 1.2 percent of GDP (from 2.4 percent estimated for 2016) and then stability at that low level.

With respect to Debt Sustainability Indicators, the analysis of the Commission concludes that Italy's debt presents low risks in the short and in the long run but poses risks in the medium term. In Chapter 5 we argue that the rise in Italy's reading for the S1 medium-term sustainability indicator computed by the Commission derives in large measure from changes in the definition of this index that were introduced in recent years. In particular, the horizon of the analysis has been shortened (because the end-point was kept unchanged at the year 2030 and then only shifted by one year, to 2031) and, similarly to the DSA projections, the cyclically adjusted primary balance is held constant at the low level projected for 2018.

As for long-term sustainability, the Commission's analysis continues to point to a low reading of the S2 indicator, confirming that Italy has one of the most sustainable long-term fiscal positions in the EU. According to the Commission's 2015 Ageing Report, pension expenditures will decline by 1.9 percent of GDP in 2060 compared to 2013, while health-care expenditures will rise by a moderate 0.9 percent of GDP.

## 9. Italy's debt structure is favourable

Public debt is mostly long-term and contingent liabilities are lower than in other large euro area countries. At end-2016, the average life of government securities was 6.76 years, up from 6.52 at the end of 2015. Their financial duration was 5.54 years and the average refixing period was 5.64 years, up from 5.41 in 2015. Thanks to this debt structure, a permanent upward shift in the yield curve of 100 basis points would raise interest payments by only 0.13 percent of GDP in the first year and the impact would rise to 0.5 percentage points only four years after the increase. The Treasury's issuance policy continues to aim for a gradual reduction in the share of short-term instruments and, consequently, in rollover risk, which, at any rate, is already moderate according to the IMF Fiscal Monitor.

It is also worth recalling that the most up-to-date Eurostat data on contingent liabilities show that as of end-2015 the Italian government had issued guarantees worth 2.2 percent of GDP, one of the lowest levels in the EU. Unlike most other member states, the government did not own any assets based on banks' nonperforming loans, and the liabilities of government-controlled entities classified outside the general government, at 47.4 percent

of GDP, were also significantly lower than those of other large members states (e.g. 110.4 percent in Germany and 62.7 percent in France)<sup>9</sup>.

## **10. Structural reforms and their fiscal costs**

Over the past three years, Italy has legislated and implemented a swathe of institutional and economic reforms. The effort continued with the recent ratification of the 2017 Budget, which contains several incentives to investment, innovation, research and development, and with measures concerning banks' recapitalisation and the implementation of the education reform enacted in 2015.

Estimates obtained with Treasury econometric models suggest that the structural reforms enacted in the last three years should raise real GDP by 2.5 percentage points in 2020, 3.9 percent in 2025 and 9.1 points in the long run.

Reforms may entail short-term economic and budgetary costs. In recognition of this, in January 2015 the Commission broadened the flexibility in the SPG related to structural reforms. Italy made full use of the possibility of expanding the structural balance by up to 0.5 percent of GDP. However, the applicability of the flexibility mechanism is confined to one year. The member state must then swiftly return to the previous deficit-reduction path – a path that may actually become steeper if, as in Italy's case, the estimated output gap decreases in the meantime. This abrupt reversal of the fiscal stance defies the purpose of creating a supportive economic environment for reforms and to offset their short-term costs.

Moreover, as we pointed out in the previous Report on Relevant Factors, flexibility in the SGP is confined to structural reforms undertaken by a given member state. It does not take into account Euro-area reform initiatives and their economic fallout. The Banking Union is a case in point, as it has caused broad repercussions on Euro area member states.

A strong banking system is a necessary condition for a genuine economic recovery. The Italian government has taken bold steps to reform the governance of the banking sector, to enhance insolvency procedures and to support the recapitalisation of banks that failed the European stress tests. But given that Italy did not take the route of a generalized banking bailout (to the benefit of Italian and European taxpayers), it also needs to follow growth-friendly policies that will improve credit quality and thereby strengthen the banking system.

## **11. Costs of immigration and refugee crisis**

Since 2014, Italy has experienced an extraordinary influx of refugees and migrants. Landings on Italian shores in 2016 reached 181,436 persons, up from 153,842 in 2015. Rescue operations and the provision of health care, shelter and education for unaccompanied minors are estimated to have cost 3.3 billion euros in 2016, net of EU contributions. A 3.8 billion cost (0.22 percent of GDP) is projected for 2017. However, if the influx continued to grow at the rate of recent months, expenditure would reach 4.2 billion euro (0.24 percent of GDP). An additional 200 million euro (0.02 percent of GDP) has been earmarked in 2017 Budget for the 'Fund for Africa,' which finances investment in key countries of transit and origin of the migratory flows.

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<sup>9</sup> Eurostat, *What is the extent of contingent liabilities and nonperforming loans in the EU Member States?*, 30 January 2017.

The difference between the expenditure estimated for 2017 (net of EU contributions) and the one sustained in the years 2011-2013, which preceded the current acute phase, is worth up to 3.2 billion (0.19 percent of GDP) and 8.4 billion cumulatively. On an accounting basis, the costs translate into higher personnel and other operating costs, as well as accelerated amortisation of aircraft and vessels. This effort should be taken into account when assessing deficit and debt developments.

## **12. Earthquakes and reconstruction costs**

Italy is traditionally characterised by a high seismic activity. In fact, six of the last fifteen years have seen at least one major earthquake (5.5 magnitude or above). However, the sequence that started on 24 August 2016, causing 299 victims, marks a phase of unusual seismic activity, as there have been five major earthquakes in the space of as many months. Most recently, on January 18th 2017, thirteen tremors were recorded in the space of ten hours in the province of L'Aquila, two of which were strong earthquakes.

The ongoing phase is thus somewhat abnormal even by Italian standards. In addition, a consensus has developed in Italy that a broader, systematic risk-mitigation policy is necessary given the human and economic cost of recurrent earthquakes. This requires not only appropriate regulations and enforcement, but also an additional budgetary effort.

In addition to one-off expenditures for rescue, assistance and reconstruction, the 2017 Budget raised tax incentives for seismic-risk mitigation investments and structural works, targeting mainly private housing. The mechanism envisages a tax allowance that is an increasing function of the seismic risk mitigation category. Additional resources are envisaged for public investment in anti-seismic infrastructure by establishing a special fund targeting schools, public offices and transport infrastructure. Taken together, increased anti-seismic tax incentives and public investment measures entail budgetary costs of close to 0.2 percent of GDP. These costs are on top of direct costs related to earthquakes that are usually classified as one-offs in structural balance computations.

## **13. Other relevant factors**

Household debt remains among the lowest in the euro area. In 2015, it amounted to approximately 41.6 percent of GDP, around 16 percentage points below the euro area (57.9 percent). The ratio of non-financial enterprises (NFCs) debt to GDP, at 65.2 percent, is lower than in the euro area (67.9 percent). Both ratios were broadly unchanged compared to 2014 and continued to improve in 2016.

In conclusion, in a spirit of compliance with the EU fiscal rules, we urge the Commission to consider the factors summarized in this note in order to adequately assess Italy's fiscal stance and prospects for public debt reduction in the coming years.





## **I. CYCLICAL CONDITIONS AND THE OUTPUT GAP**

### **I.1 THE ITALIAN ECONOMY IN THE INTERNATIONAL CONTEXT**

The Italian economy has been recovering for three years. Real GDP growth was slightly positive in 2014 (+0.1 percent) and picked up to 0.7 percent in 2015 and close to one percent in 2016<sup>1</sup>.

This moderate recovery has been supported by domestic demand and in particular private consumption, courtesy of higher real disposable income. Until recently, gross fixed investment lagged behind, with only transportation equipment posting very high growth rates. External demand supported growth in the early stages of the upswing, but lost momentum during 2016, only re-accelerating in the final months of the year.

In the short term the international scenario will remain mildly supportive. On the one hand, the effects of the significant contraction of trade with Russia and with other emerging countries have not yet receded. On a more positive note, contrary to expectations, the initial impact of Brexit on the euro area economy has been limited, but the medium-term outlook is surrounded by a significant degree of uncertainty.

Against this background, the latest official projections (2017 Draft Budgetary Plan) assumed a less dynamic exogenous environment and foresaw a real GDP growth rate of 1.0 percent in 2017 under the policy scenario. The economy is subsequently expected to expand by 1.2 percent both in 2018 and in 2019.

Italy's real GDP grew by 0.3 percent in the third quarter, thanks to a rebound in industrial production and continuing moderate growth in services. Available indicators for the fourth quarter suggest that growth is continuing at a moderate pace. Thus, the latest information suggests that the existing forecasts are realistic and within reach.

Nonetheless, the growth rate of the Italian economy foreseen in the official projections is lower than what would be necessary for real GDP to return to the pre-crisis levels by the end of this decade. The Italian economy is still characterised by substantial slack, and support from aggregate demand is crucial in order to spur output growth.

### **I.2 DEFLATIONARY PRESSURES**

Global deflationary pressures remain significant. Although oil prices recorded a moderate increase in recent months, core inflation remains at a historical low. Price dynamics have probably reached a floor but inflation rates are likely to remain very moderate for the foreseeable future. This is due to still-sizeable slack at global level and to second round effects causing slow wage growth in most countries.

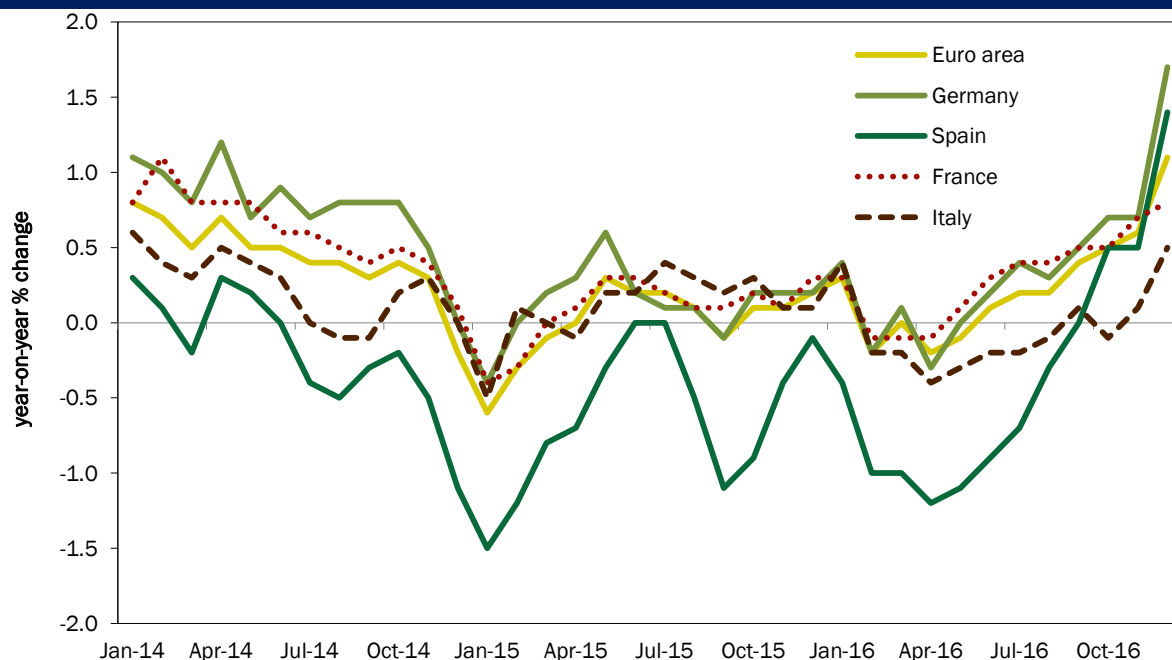
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<sup>1</sup> The latest official forecast is 0.8 percent, but the current assessment, which incorporates the third-quarter GDP data and indicators for Q4, points to growth of at least 0.9 percent in 2016.

In the euro area, inflation has been extremely subdued. The ECB has implemented several monetary policy measures to tackle deflation and to prevent a dis-anchoring of inflation expectation. While such intervention has reduced deflationary pressures, we are still far from the ECB's target of an inflation rate lower than, but close to, two percent.

Both headline and core inflation are still very low in Italy, compared to other euro area Member States. In 2016 the inflation rate was negative for the first time since 1959 (-0.1 percent).

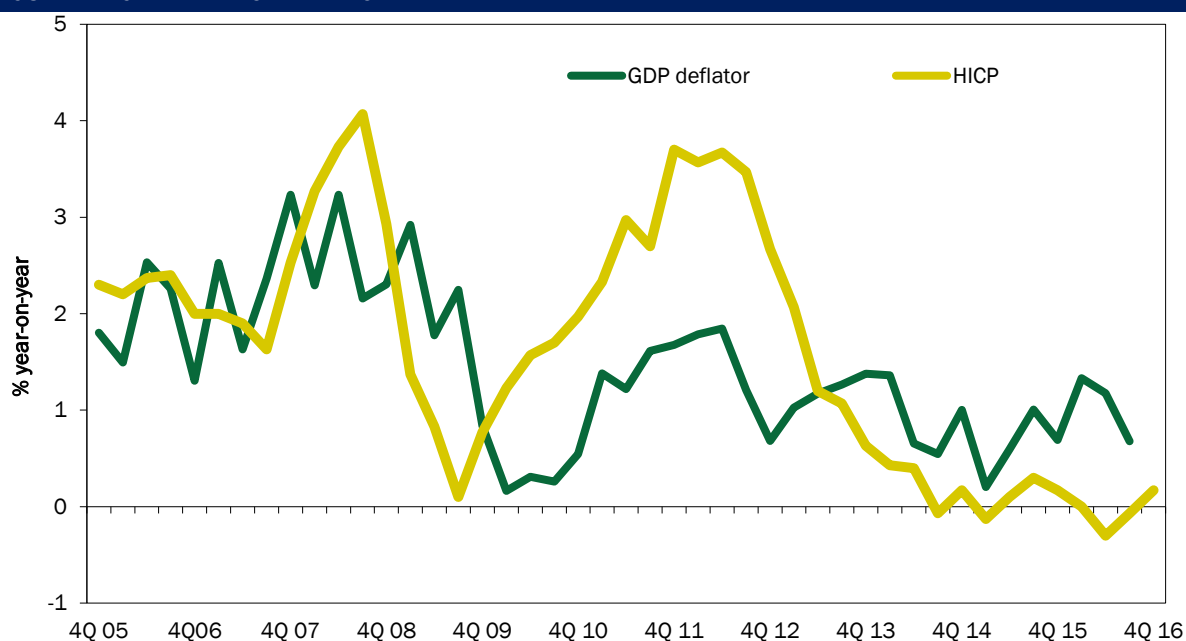
**FIGURE I.1: INFLATION – ALL ITEMS: ITALY VERSUS EURO AREA**



Source: Eurostat.

The GDP deflator growth has had a slightly more favourable evolution during all of 2015 and up until the first quarter of 2016. Lately, the dynamics of the deflator stalled and was much closer to that of the consumer price index. The temporary divergence between the dynamics of the GDP deflator and of the consumer price index was linked, on the demand side, to improvement in the terms of trade caused by the drop in oil prices (the import deflator experienced negative changes, pushing the GDP deflator higher). On the supply side, profit margins increased thanks to the euro depreciation and to a high degree of wage moderation.

The annual growth rates of the GDP deflator and consumer prices should converge towards one percent over the course of this year. In 2018-2019, the GDP and private consumption deflator will be driven not only by the evolution of the oil price and the cyclical improvement in the economy, but also by fiscal policy (a VAT hike is envisaged under the so-called safeguard clauses).

**FIGURE I.2: GDP DEFLATOR AND HICP**

Source: ISTAT.

### I.3 RISKS TO THE GLOBAL OUTLOOK

The baseline scenario reported in the latest official projections (2017 DBP) included a revision of the main exogenous variables, which led to a downward revision to the growth estimates contained in the 2016 Stability Program published last April. The main impact was due to the increase in oil prices. Furthermore, the appreciation of the euro against the U.S. dollar and other leading currencies together with the slowdown of global demand weighted for Italy contributed modestly to the downward revision across the entire forecast horizon.

In formulating a post-Brexit forecast for Italy it was assumed that: i) financial contagion would be limited; ii) the sterling exchange rate would remain weak at least through to end-2017; iii) UK imports from the EU would decline in the second half of 2016 and in 2017.

Other factors affecting the growth outlook concerned the European banking system and, in the Italian case, the comparatively high share of non-performing loans (NPLs) and their potential restraining effect on credit availability. The euro area banking sector also faces regulatory changes which in due course will increase the resilience of the system but in the meantime have been a source of uncertainty about capital requirements and the viability of specific banks.

More recently, new challenges have emerged around 'Brexit' and the new American leadership.

In the medium term, Brexit could have an impact on the Italian economic activity through the trade channel and, in an adverse scenario, financial contagion too. It is worth noting that the UK Office for Budget Responsibility recently revised down the GDP growth forecast for 2017 (by 0.8 percentage points) and in 2018 (by 0.4 percentage points).

As for the US, the initial reaction of the financial markets to the US election outcome has been positive for equities and negative for bonds. Verbal intervention has halted the rise in the dollar exchange rate. The policy changes under the new US administration are only beginning to emerge. Campaign promises include: (i) a large fiscal stimulus package; (ii) a more rigid immigration policy; (iii) a more activist trade policy and the withdrawal from certain multilateral trade pacts such as TPP. The new fiscal measures could boost GDP growth and inflation in the US. The effects on the US labour force are likely to come from immigration policy and higher trade tariffs. Increasing trade barriers would hurt US trade with emerging market economies in particular, while the impact on other regions may be cushioned by higher US domestic demand growth.

Global uncertainties pose a risk to the recovery of investment in Italy and in Europe at large, where business surveys and production and foreign trade data have otherwise pointed to an improvement in capital-goods industries.

Against this backdrop, as suggested by the European Commission in a recent communication<sup>2</sup>, the euro area needs a positive fiscal stance due to the still modest economic growth. The recovery is too slow and unused capacity is still high. The Commission argues in its communication that *“the continuation of the expansion in the euro area would thus need to rely increasingly on domestic demand.”*

The Commission itself is aware that over 2011-2013, the aggregate fiscal stance was contractionary in most Member States to face the consequences of the sovereign debt crisis. In 2014-2015, the aggregate fiscal stance turned broadly neutral and then slightly expansionary in 2016, but according to the Autumn forecast it is expected to be broadly neutral again in 2017.

## **I.4 ESTIMATION OF POTENTIAL GROWTH AND THE OUTPUT GAP**

According to the European Commission’s 2016 Autumn forecast, Italy’s real GDP grew by 0.7 percent in 2016 and will advance by 0.9 percent in 2017 and 1.0 percent in 2018. Potential output is estimated to have grown by -0.4 percent in 2015 and -0.3 percent in 2016. According to the Commission, potential growth should turn slightly positive this year (0.1 percent) and rise to 0.3 in 2018.

A breakdown of the Commission’s estimates shows that the labour contribution to potential output is close to zero through to 2016 and only slightly positive in 2017 and 2018 (0.3 and 0.4 percent, respectively). Total Factor Productivity (TFP) is estimated to have declined through to 2016 and to continue to do so in the next two years.

According to the Commission, Italy’s output gap was sharply negative in 2012-2014 only because of the depth of the recession. Moreover, the gap is closing at a rapid pace and will virtually disappear in 2018. Indeed, the Autumn estimates are -2.6 percent in 2015, -1.6 percent in 2016, - 0.8 percent this year and zero in 2018.

The Italian Government is of the opinion that the severe cyclical conditions recorded over the period 2012-2014 have not been properly incorporated into the commonly agreed production function methodology. The latter points to a protracted fall in potential output

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<sup>2</sup> COM (2016) 727 - Towards a positive fiscal stance for the Euro Area.

which contributes to the quick closure of the output gaps over the period 2015-2018, in spite of a still-high degree of slack in the economy. In fact, the European Commission itself, on the basis of a newly developed plausibility tool, has recently argued that the Italian output gap for 2016 may be wider than suggested by its official estimates. Based on additional cyclical indicators, the output gap in 2016 would be -2.1 percent of potential output instead of -1.6 percent<sup>3</sup>.

The Italian government believes that the assessment of cyclical conditions carried out through the output gaps stemming from the commonly agreed methodology is pro-cyclical and not in line with macroeconomic intuition. Moreover, the estimations appear to be characterised by statistical shortcomings that may render the methodology unable to provide an unbiased assessment of past and future potential growth dynamics.

As already pointed out in several occasions<sup>4</sup>, when applied to Italian data, the commonly agreed production function performs poorly with respect to the estimation of the Non-Accelerating Wage Rate of Unemployment (NAWRU) and to the extrapolation of the trend and cyclical components of Total Factor Productivity (TFP). To address both issues, the Italian Treasury proposed an enhanced production function model, maintaining the original structure of the EU commonly agreed production function and introducing only marginal variations to the method. Details and results of the enhanced model are based on the 2016 Commission Services Autumn Forecasts (see Focus on page 22).

As far as NAWRU is concerned, the main shortcomings are related to: 1) the intrinsic pro-cyclicality<sup>5</sup> of the estimates deriving from the judgmental selection of the initialisation bounds; 2) the very low statistical significance of the Phillips curve.

In order to carry out the estimation through the bivariate Kalman filter model, the initialization parameters for the latent factors and, in particular, the variances of the shocks to trend and cyclical components, and the variance of the stochastic process that drives the Phillips curve, must be identified *ex ante*.

Although the estimation method is rather sophisticated, the selection of the upper and lower limits (bounds) of the four variances of the shocks to the trend, the slope, the cycle and the Phillips curve is crucial for the determination of the NAWRU series, since in the case of Italy the estimated variances generally converge to the upper or lower variance bounds. Such values are chosen by the Commission on a judgmental basis, thus causing an inherent pro-cyclicality<sup>6</sup>.

To minimize the ‘cost of judgement’ and the ‘bias’ in the selection of the NAWRU variance bounds, the Italian Treasury devised an empirical method, based on an iterative

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<sup>3</sup> For further references, see the Box on the “Implementation of the constrained judgement” approach and its impact in the context of the fiscal surveillance” contained in the Commission Staff Working Document, Analysis of the draft budgetary plans of Italy, Accompanying the document “Commission Opinion, on the draft budgetary plan of Italy, also available at: [https://ec.europa.eu/info/files/staff-working-document-analysis-2017-draft-budgetary-plan-italy\\_en](https://ec.europa.eu/info/files/staff-working-document-analysis-2017-draft-budgetary-plan-italy_en)

<sup>4</sup> See for instance, the 2016 Italian Stability Programme, the 2016 Update of the Economic and Financial Document of September 2016, the May 2016 Report on the Relevant Factors shaping the Italian public debt dynamics.

<sup>5</sup> The introduction in the 2016 Autumn forecasts of an anchor value of structural unemployment, to which the Kalman Filter NAWRU estimation converges in the medium term, has to some extent addressed the pro-cyclicality issue, even though it only affects the results in the final part of the estimated series.

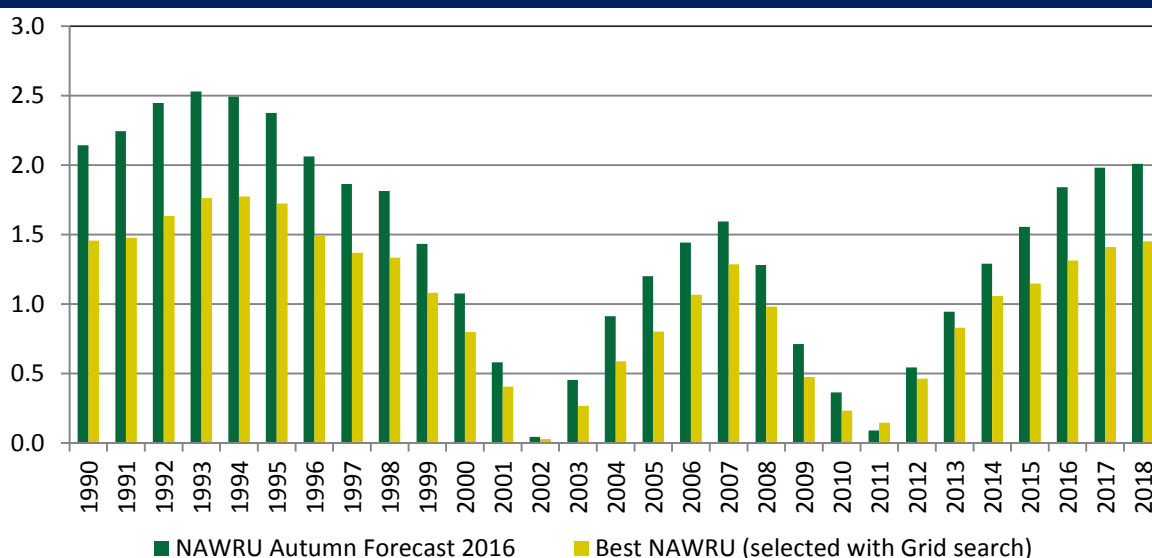
<sup>6</sup> See Fioramanti M., R. Waldmann, 2016, The Stability and Growth Pact: Econometrics and its consequences for human beings, column appeared on [www.voxeu.org](http://www.voxeu.org) (<http://www.voxeu.org/article/econometrics-and-its-consequences-human-beings>)

grid-search procedure<sup>7</sup>, which selects the initialisation bounds in an optimal manner (from a statistical point of view)<sup>8</sup>.

Moreover, on the basis of the Treasury Department grid search procedure, based on 600 iterations, it is possible to derive, for each point in time over the whole estimation horizon (1967-2018), a frequency distribution of each NAWRU estimate. According to our calculations based on the 2016 Autumn Forecasts, the NAWRU obtained with the selected optimal bounds deviates from the median of each frequency distribution by less than the NAWRU estimated by the European Commission whose bounds are based on a judgmental selection (Figure I.3). The optimal NAWRU obtained through the grid search procedure is very close to the center of the distribution of estimates, whereas the NAWRU of the Commission lies closer to the tails of the distribution. As a consequence, the judgmental selection of the NAWRU bounds by the Commission services results in an intrinsic pro-cyclicality of their estimates.

Against this backdrop, the Commission's policy of minimizing historical revisions among forecast vintages by 'cherry-picking' the variance bounds perpetuates such pro-cyclicality at the expense of the macroeconomic and statistical plausibility of the results.

**FIGURE I.3: DISTANCE TO THE MEDIAN OF THE NAWRU ESTIMATES' DISTRIBUTION**



Source: European Commission 2016 Autumn Forecasts and own elaborations.

Note: The Italian Treasury has carried out an analysis of the NAWRU starting with the values of the bounds used by the European Commission in the 2016 Autumn Forecast. A number of alternative combinations of lower and upper bounds for the variances of latent factors (about 600) has been constructed around such values through the grid search iterative procedure. Then, on the basis of a model selection criteria, an optimal combination of the initial variances of the latent factors have been selected, providing less pro-cyclical results and a general improvement of the statistics for the NAWRU estimates.

As far as TFP is concerned, its measurement for Italy is subject to some relevant shortcomings. In particular:

<sup>7</sup> See the 2015 Italy's Stability Programme, available on: [http://www.dt.tesoro.it/modules/documenti\\_en/analisi\\_programmazione/documenti\\_programmatici/PdS\\_2015\\_xENx.pdf](http://www.dt.tesoro.it/modules/documenti_en/analisi_programmazione/documenti_programmatici/PdS_2015_xENx.pdf)

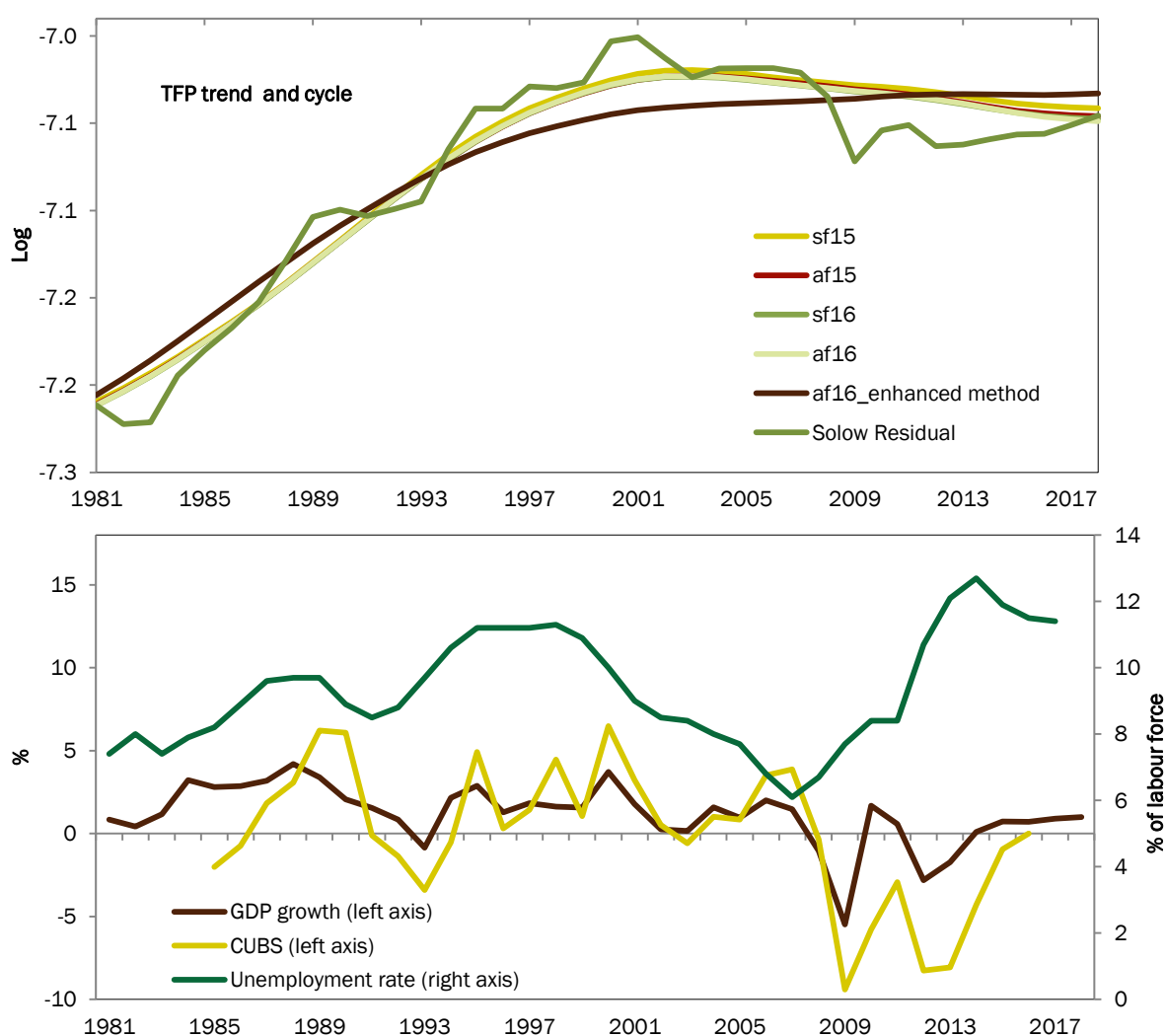
<sup>8</sup> In details, the optimal bounds underlying the 2016 Autumn Forecasts, are: 0 (LB trend); 0.02 (LB slope); 0 (LB cycle); 0.1 (UB trend); 0.045 (UB slope); 0.14 (UB cyle).

- The current estimates of the TFP trend are counterintuitive given that they have recorded negative growth rates since 2003. We contend that this is largely due to the survey-based capacity utilisation indicator (CUBS) used to extrapolate the cyclical component of the Solow Residual;
- The TFP trend shows a strong sensitivity to negative forecast revisions whereas it is unaffected by positive revisions to the historical data;
- The TFP trend exhibits a certain degree of cyclicity, which is due to its high sensitivity to updates in the CUBS index.

All these features lead to negative and rather implausible trend TFP growth rates that, in turn, have significantly contributed to the reduction of both the levels and the growth rates of potential output, particularly since 2003.

Focussing on the issue of the persistent negative TFP trend growth rate (the first bullet point above), the first panel of Figure I.4 shows the historical pattern of TFP trend estimates under different Commission forecast vintages and the estimates of the TFP trend resulting from the so-called enhanced production function method developed by the Italian Treasury and whose features are extensively described in the Focus section.

**FIGURE I.4: TFP TREND VIS-À-VIS REAL GDP GROWTH AND UNEMPLOYMENT**



Source: MEF and European Commission Forecasts (different vintages).

Even though they are smooth, TFP trend estimated by the European Commission follows quite closely the pattern of the Solow Residual, especially during the last 20 years. Accordingly, the TFP trend reaches a maximum around 2002 and subsequently shows negative rates.

Such a pattern is counterintuitive and implausible as the negative growth in TFP trend coincides, with both low GDP growth and, according to the CUBS index, with a loss of productive capacity in 2003. Yet the loss in capacity coincides with fast decreasing unemployment rate (second Panel of Figure I.4).

The trend of TFP estimated according to the enhanced method developed by the Italian Treasury seems to produce a more regular profile as, in addition to the CUBS index, it includes labour hoarding. Under this specification, the TFP trend keeps growing in the early 2000s, although at a slower pace, reflecting the deceleration of real output growth and a relatively faster employment dynamic.

As for the issues of TFP trend sensitivity to negative GDP forecast revisions and procyclicality (bullet points 2 and 3 above) it is worth considering the behaviour of the TFP trend over the last 7 years. In this respect, Figure I.5 compares the estimates of TFP trend levels in different forecast vintages, with both the GDP (in levels with 2010 as a base year) and the pattern in the Capacity Utilisation Index (CUBS).

Considering the value of the TFP trend for 2010 resulting from the 2015 Spring forecast as the base (with its value equal to 100), subsequent forecast vintages have revised downward (with no apparent macroeconomic reason) both the slope and the annual level of the TFP trend estimates. Such downward revisions in the TFP components occurred despite an upward revision to the GDP level for 2013, 2014 and 2015 in later ISTAT releases.

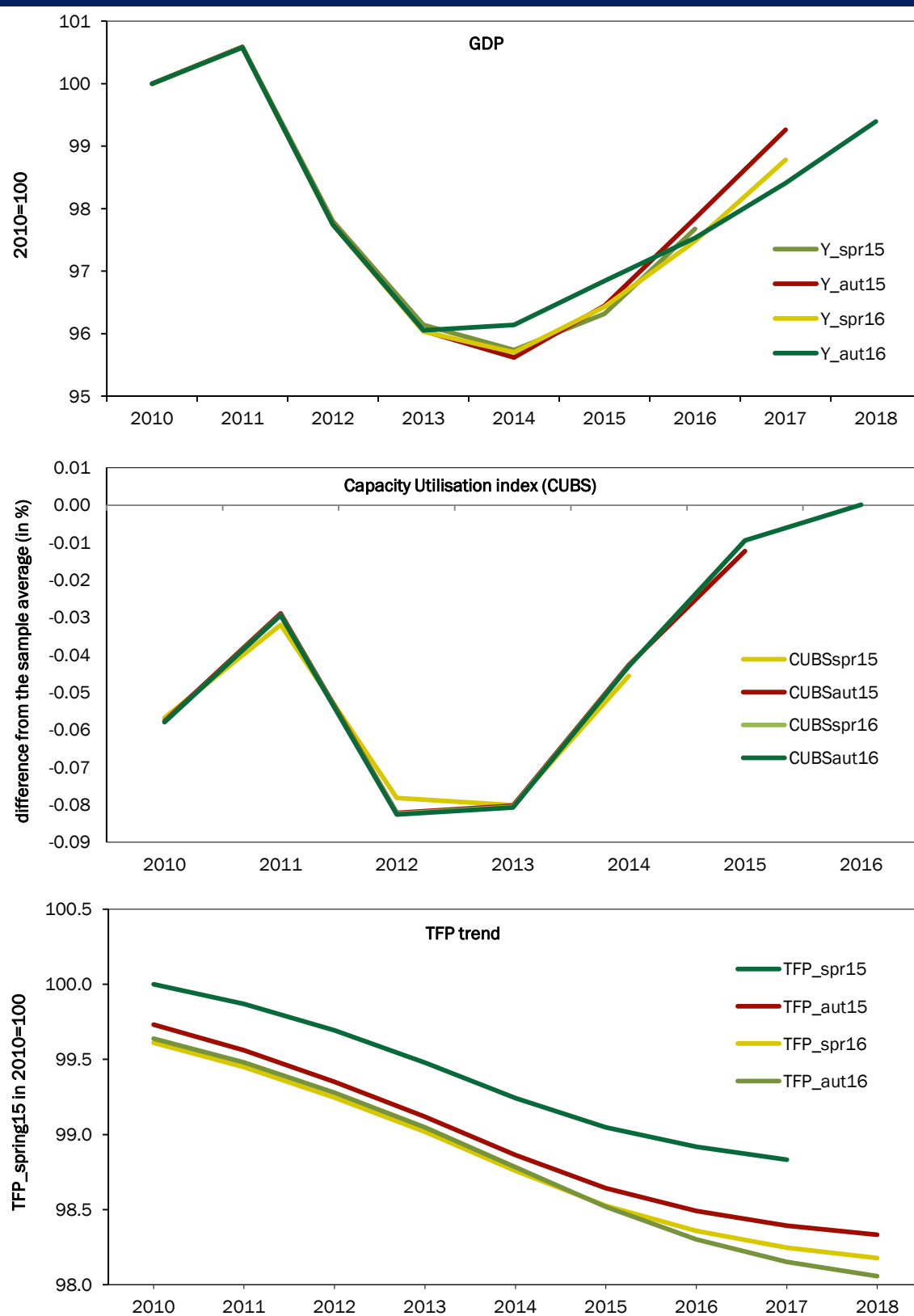
In particular, the series of TFP trend has suffered a downward shift of around 1.5 percentage points between the 2015 Spring and the subsequent 2015 Autumn forecasts which cannot be explained by the underlying data. Moreover, negative forecast surprises have kept producing an acceleration in the negative TFP trend dynamic over time.

Such revisions cannot be explained on the basis of macroeconomic intuition and are largely a result of the introduction of an 'anomalous' observation of the CUBS indicator for 2015 and 2016, leading to a sudden increase in sentiment indicators not matched by actual production levels and to a downward revision in the GDP forecasts which is fully internalised by the trend-extraction model.

The cyclical conditions, as measured by the commonly agreed methodology, thus appear inadequate to reflect a macroeconomic situation still characterized by excess capacity. With relatively limited changes in the commonly agreed methodology, the enhanced model presented in the Focus below leads to significantly different results compared to those produced by the Commission. Indeed, even though we use the Commission Autumn forecasts as the basis for the computations, we obtain estimates of Italy's output gap of -5.0 percent of potential output in 2014, -4.1 percent in 2015, -3.4 percent in 2016 and -2.9 percent in 2017. According to the Commission's matrix for defining the required fiscal effort, Italy would be in exceptionally bad times in 2014 and in 2015, very bad times in 2016 and bad times in 2017 and 2018 and the required structural effort would be much smaller than the one implied by the Commission's output gap estimates.



**FIGURE I.5: TFP TREND REVISIONS IN RECENT VINTAGES OF COMMISSION FORECAST**



Source: MEF and European Commission Forecasts (different vintages).

### The estimation of potential output: an enhanced methodology for Italy.

Given its relevance in determining structural budget balances both under the framework of the Stability and Growth Pact and under the national legislation (Law n. 243/2012), the agreed production function methodology shared at the EU level to gauge potential output and output gaps has come increasingly under scrutiny in recent years. Both the European Commission and the Output Gap Working Group (OGWG) have recognised the existence of theoretical and econometrical drawbacks and have largely discussed possible adjustments to the model. In this regard, the European Commission even developed a plausibility tool to assess, on the basis of other cyclical indicators, whether the output gap estimates for the current year resulting from the commonly agreed methodology could be considered reasonable or not.

The mandate of the Output Gap Working Group (OGWG) states that the commonly agreed methodology should respect the following principles: a) It has to be relatively simple, fully transparent and stable. The trend extraction methods should be based on economic as well as statistical principles with the key inputs and outputs clearly defined; b) It should strive for equal treatment for all EU Member States, whilst in exceptional circumstances recognising country-specific characteristics; c) It should provide an unbiased assessment of the past and future potential growth in the EU Member States, while aiming to include the effects of all adopted structural reforms; d) It should aim at limiting the pro-cyclicality of potential growth estimates.

As far as Italy is concerned, despite recent changes proposed by the Commission related to the estimation of the Non-Accelerating Wage Rate of Unemployment (NAWRU) using the information of the structural medium term anchor, the current agreed methodology remains unsuitable and unable to provide an unbiased assessment of past and future potential growth.

The results for Italy remain pro-cyclical and out of line with macroeconomic intuition. More in details, when applied to Italian data, the commonly agreed production function continues to perform poorly with respect to the estimation of the NAWRU and in the extrapolation of the trend and cyclical components of Total Factor Productivity.

On both items, the Italian treasury put forward in May 2016<sup>9</sup> a number of enhanced solutions based on a marginal modification of the commonly agreed methodology. With respect to those modifications, the current focus reiterates the model on the NAWRU and updates its results, while on the TFP it puts forward a new index for Capacity Utilisation which takes into account both the indications coming from survey data and the information on labour hoarding stemming from the data of Cassa Integrazione Guadagni (CIG).

### A new Phillips curve for the estimation of Italian potential GDP

The Non-Accelerating Wage Rate of Unemployment (NAWRU) is a latent variable representing the unemployment rate consistent with no change in wage inflation. Given this definition, the NAWRU for Italy is estimated in the commonly agreed methodology through a very stylized model. A Kalman filter is applied to the series of the unemployment rate and to the so-called Phillips curve, i.e. the equation that expresses the inverse relationship between wage inflation and a concurrent and two-period lags measure of cyclical unemployment<sup>10</sup>.

Recent empirical analyses have shown that the wage/unemployment relationship featured by the Phillips curve may have weakened over the past decades and, in particular, during the recent financial crisis<sup>11</sup>. In recent years, considerable increases in the unemployment rate experienced in some

<sup>9</sup> See the corresponding focus in chapter 1.4 of the previous Report on Relevant Factor Influencing Debt developments in Italy, May 2016

<sup>10</sup> For the complete specification of the commonly agreed methodology used for the NAWRU estimation see Section III.1 of the Methodological Note attached to the EFD 2016.

<sup>11</sup> Considering the current level of interest rates and low inflation, the relationship between the unemployment rate and labour cost seems to have lost significance. Indeed, despite the sizeable increase in unemployment during the most recent recession, the effects on wage inflation have been modest. Some empirical studies estimate a gradual levelling of the curve due to the fact that price expectations have been anchored to the inflation targets declared and pursued by the respective central banks. Other researches have shown how the traditional Phillips curve tends to indicate a weakening of the relationship between unemployment and wages (or price inflation) because the traditional curve overlooks the broader weight assumed by long-term unemployment, which, since it cannot be reabsorbed quickly, contributes to creating additional hysteresis. With reference to the first effect, see: Ball L. Mazumder S., (2015) *A Phillips Curve with Anchored Expectations and Short-Term Unemployment*, IMF Working Paper, WP/15/39, available at: <http://www.imf.org/external/pubs/ft/wp/2015/wp1539.pdf>. See

countries, including Italy, have not been matched by a correspondent reduction in wage inflation in line with what would have been predicted on the basis of the mechanisms underlying the Phillips curve.

In the 2016 Autumn Forecast, even though the related coefficients that link wage inflation to the unemployment gap are highly significant, the entire Phillips curve model is marked by a low coefficient of correlation  $R^2$  whose value is just above 0.16.

In an attempt to improve the fit of the model, it is possible to use an alternative specification of the Phillips curve, in which, in line with the approach previously adopted by other international organisations (such as the OECD and IMF), the endogenous variable currently represented by the series that measures the acceleration of wage inflation is replaced with a series that measures the acceleration of price inflation.

When using such specification for the Phillips curve, the model moves from the estimation of the Non-Accelerating Wage Rate of Unemployment (NAWRU) to the estimation of the Non-Accelerating Inflation Rate of Unemployment (NAIRU) while remaining within the framework used by the European Commission.

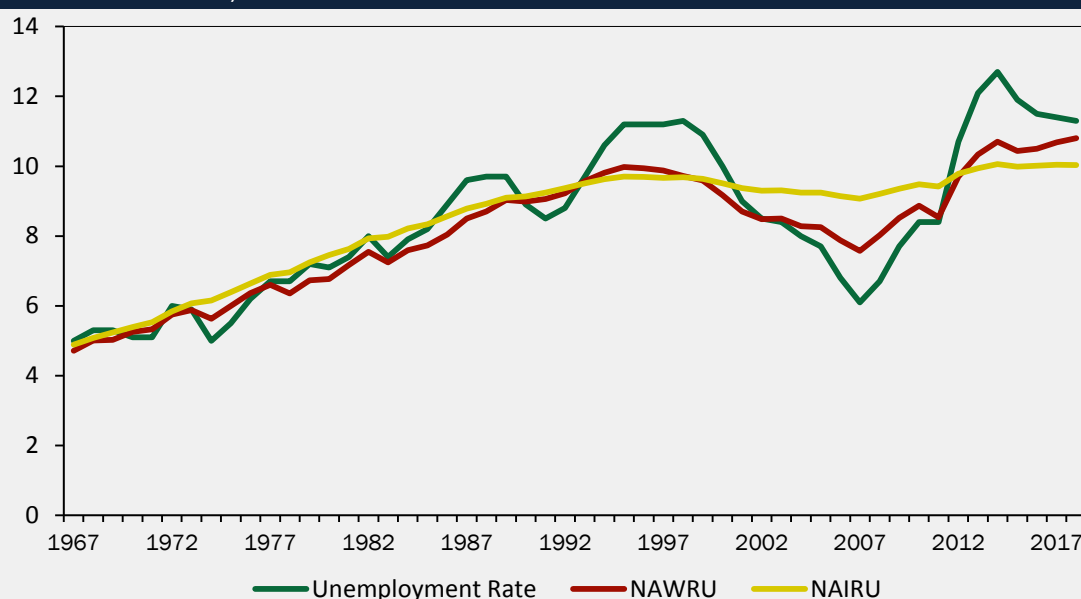
The results reported in the table and figures below show a general improvement in the estimates of structural unemployment when compared with the results obtained by the European Commission for the 2016 Autumn Forecast, as well as a considerable increase in the  $R^2$  statistic (equal to approximately 0.50 under the new specification).

The figure below shows the comparison between the NAWRU of the Autumn Forecast 2016 and the new estimate of the NAIRU which is significantly more smoothed and less pro-cyclical than the official series estimated by the Commission.

ESTIMATES OF THE PHILLIPS CURVE: CURRENT VS. ALTERNATIVE SPECIFICATION						
	NAWRU – Current specification			NAIRU – New Specification		
	2016 Autumn Forecasts			2016 Autumn Forecasts		
	Coefficient	Standard Error	T-Statistics	Coefficient	Standard Error	T-Statistics
Constant	-0.0013	0.0032	-0.4103	-0.0004	0.0023	-0.195
Beta-Lag 0	-0.0349	0.0112	-3.1155	-0.0099	0.005	-1.9718
Beta-Lag 1	0.0566	0.0186	3.0346	0.0161	0.0081	1.9904
Beta- Lag 2	-0.0267	0.0117	-2.2795	-0.0061	0.005	-1.2286
Exogenous variable (imported inflation)	-	-	-	1.3841	0.2098	6.5986
Log-Likelihood		-143.2876			-182.9667	
R-squared (one step ahead)		0.1612			0.5098	
Source: European Commission 2016 Autumn forecasts and own elaborations.						

also: Rusticelli E., Turner D. Cavalleri M.C. (2015) *Incorporating Anchored Inflation expectations in the Phillips Curve and in the derivation of OECD measures of the unemployment gap*, OECD Working papers. With reference to the effect of long-term inflation, see: Elena Rusticelli, (2014), *Rescuing the Phillips curve: Making use of long-term unemployment in the measurement of the NAIRU*, OECD Journal: Economic Studies, 2014, vol. 2014, issue 1, pages 109-127. As a general reading it is possible to refer to: IMF (2013) *“The dog that didn’t bark: has inflation been muzzled or was it just sleeping”*, World Economic Outlook, IMF, April

## UNEMPLOYMENT RATE, NAWRU AND NAIRU



Source: European Commission 2016 Autumn forecasts and own elaborations

### A Labour hoarding measure to estimate the trend of Total Factor Productivity

In order to address both the issue of the protracted negative TFP trend growth and the misspecification of the current TFP cycle by the CUBS index, the Italian Treasury developed an enhanced version of the commonly agreed methodology which introduces only a slightly different specification of the variable used to disentangle the cyclical component of TFP.

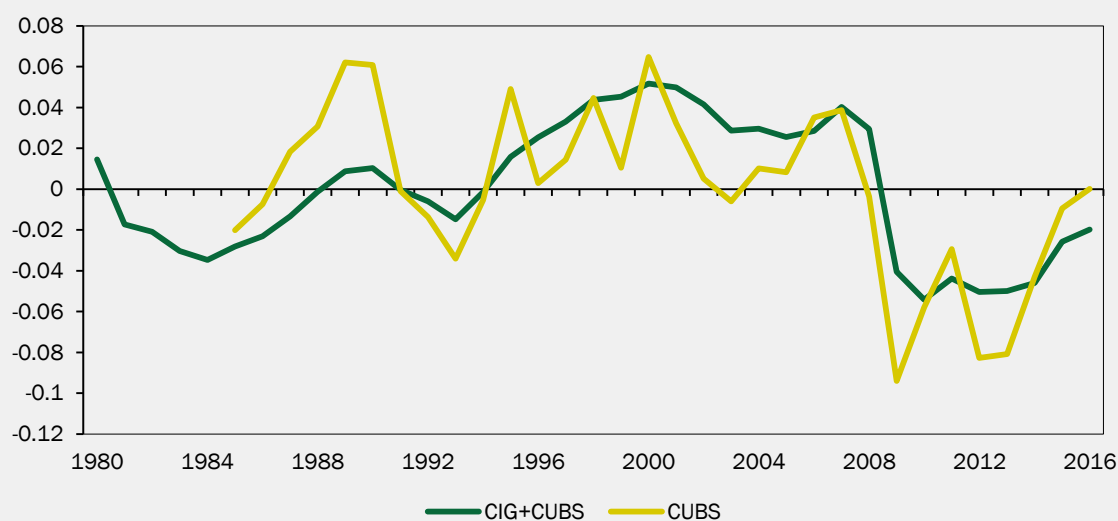
The Total Factor Productivity has been estimated by adjusting the CUBS index with a measure of labour hoarding. Labour hoarding has been measured with the data on the number of hours worked declared by firms to be paid out to workers who, in case of reduction of the activity due to crisis or negative cyclical developments, are earmarked in the supplementary wage scheme (Cassa Integrazione Guadagni - CIG)<sup>12</sup>. This statistic, collected by INPS, presents the following advantages: 1) it is a real variable collected for the whole economy on the basis of administrative data and is not a figure based on a survey; 2) it is based on data collected monthly since 1970, whereas the CUBS indicator has only been available since 1985.

The new index, labelled "CIG+CUBS" is derived in each year as a weighted average where a weight of 0.65 (equal to the labour share used in the commonly agreed production function) is applied to the CIG component and a weight of 0.35 (equal to the capital share used in the commonly agreed production function) is applied to the CUBS component. This approach is in line with the empirical and theoretical evidence reported by the European Commission, according to which the index of capacity utilisation CUBS is mostly correlated with capital utilisation<sup>13</sup>. As shown by the figure below, the new CIG+CUBS index performs relatively well as it tracks exactly the turning points of the CUBS index.

<sup>12</sup> It is worth noticing that the measure of the CIG, measured in million of worked hours, includes all sectors and all forms of supplementary wage schemes. However, the index is calculated taking into account only labour hoarding which is related to cyclical swings. Accordingly, the data on GIG (so-called *straordinaria*) which are linked to bankruptcy procedures and failure of companies are excluded.

<sup>13</sup> See page 32 of the paper by, Karel Havik, Kieran Mc Morrow, Fabrice Orlandi, Christophe Planas, Rafal Raciborski, Werner Röger, Alessandro Rossi, Anna Thum-Thysen, Valerie Vandermeulen, 2014, The Production Function Methodology for Calculating Potential Growth Rates & Output Gaps" EUROPEAN ECONOMY Economic Papers 535, also available at: [http://ec.europa.eu/economy\\_finance/publications/economic\\_paper/2014/pdf/ecp535\\_en.pdf](http://ec.europa.eu/economy_finance/publications/economic_paper/2014/pdf/ecp535_en.pdf)

## CASSA INTEGRAZIONE GUADAGNI (CIG) AND CUBS INDICATORS



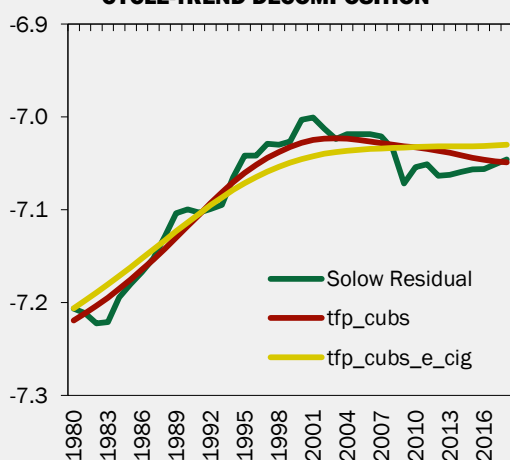
Source: INPS and European Commission 2016 Autumn forecasts.

Note: The CIG series is expressed as the log of the difference from the historical average (1980-2016).

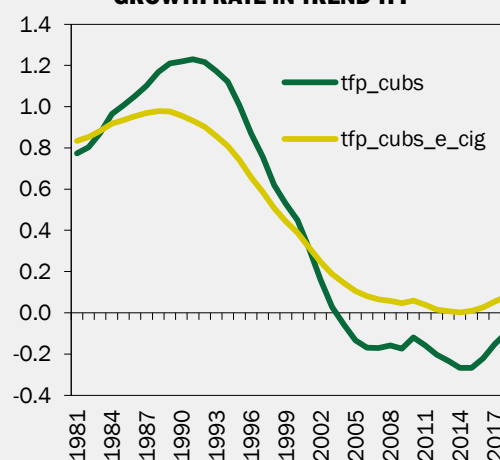
The estimation by means of the commonly agreed Bayesian Kalman Filter of the trend and the cycle of Total Factor Productivity with a measure of capacity utilization augmented for the effect of labour hoarding (as is the CIG series) would lead to a different picture both on the historical period and on the forecast horizon. With respect to the Commission's estimates, when the alternative measure of labour hoarding is employed, the TFP trend is estimated to move less pro-cyclically both during expansion and recession periods. In addition, differently from what was estimated by the Commission, the TFP trend would not peak in year 2000 and decrease thereafter, producing the counterintuitive result of negative TFP growth rates from 2003 to 2018. As shown by the figures below, even when employing the alternative methodology the growth rate of the TFP trend is seen to be decelerating quickly over the last decades, but such a pattern is not as exaggerated as in the official Commission estimates. Finally, in line with the assessment of current underutilization of productive capacity of the Italian economy, the use of a real measure of economic activity such as the CIG would produce a negative TFP cyclical gap which is not expected to close over the forecast horizon

## TOTAL FACTOR PRODUCTIVITY: ESTIMATES BASED ON THE CIG INDICATOR

### CYCLE-TREND DECOMPOSITION



### GROWTH RATE IN TREND TFP



Source: European Commission, 2016 Autumn Forecasts and own elaborations.

### The estimates of potential output, output gaps and structural balances with the enhanced methodology

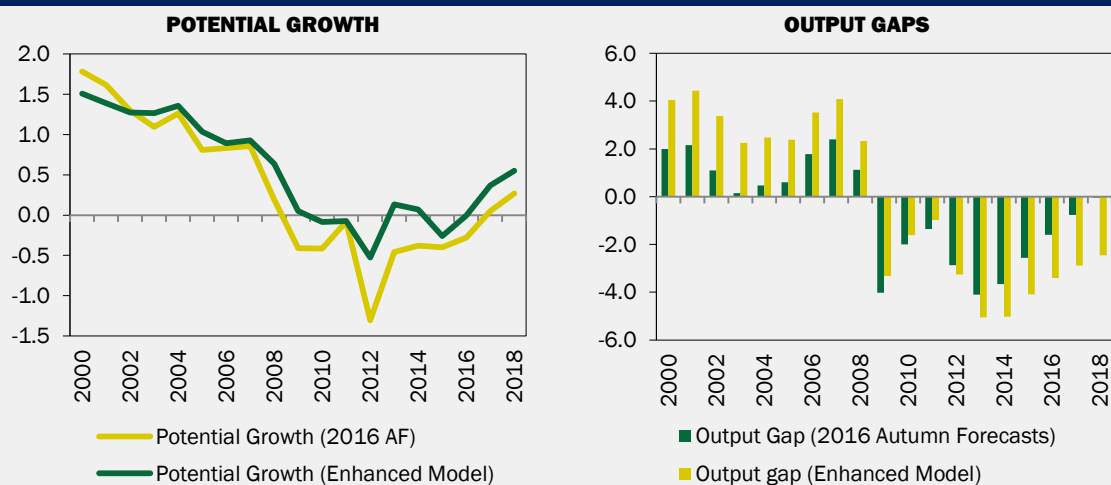
The inclusion in the commonly agreed production function of the NAIRU (instead of the NAWRU) series and of a TFP trend resulting from the application of a capacity utilization index augmented with a labour hoarding measure would lead to significant changes in potential output growth and output gaps, as estimated according to the macroeconomic framework underlying the 2016 Commission services Autumn Forecasts.

With the enhanced specification, potential growth will remain on a downward path. However, it will move in a less pro-cyclical manner with respect to the official estimates produced by the Commission. Potential growth is thus estimated to be lower than the Commission results in the year 2000-2002 and higher during the recent financial crisis, being negative only during the years 2012-2015.

Likewise, the output gaps under the enhanced specification will result in significantly wider gaps than what was estimated in the 2016 Autumn Forecasts. Based on such improvements, Italy's output gap would amount to -4.1 percent of potential output in 2015 (vis-à-vis -2.6 percent estimated by the Commission), -3.4 percent in 2016 (vs. -1.6 percent), -2.9 percent of potential output in 2017 (vs. -0.8 percent) and -2.4 percent in 2018 (vs. 0.0). Such values of the output gaps would translate into structural deficits of -0.5 percent of GDP in 2015 (instead of -1.1 percent estimated by the Commission), -0.8 percent in 2016 (vs. -1.6 percent), -1.2 percent of GDP in 2017 (vs. -2.2 percent) and -1.1 percent of GDP in 2018 (vs. -2.4 percent estimated by the Commission). According to these figures, and in line with OECD and IMF estimates, Italy would have broadly achieved its MTO already in 2015 and the deviation in 2016 would be justified by the request of budgetary flexibility under the Provisions of the Stability and Growth Pact (SGP).

According to the enhanced output gap model, the closing of the output gap in 2017 and 2018 would be slower than what projected by the 2016 Autumn Forecasts. In addition, the required structural effort would be much smaller than the one implied by the current Commission estimates. On the basis of the enhanced methodology, Italian economy would indeed experience exceptional bad times in 2015, very bad times in 2016 and bad times in 2017 and 2018.

#### POTENTIAL GROWTH AND OUTPUT GAPS ESTIMATED WITH THE ENHANCED MODEL



Source: European Commission, 2016 Autumn Forecasts and own elaborations.

#### OUTPUT GAPS AND STRUCTURAL DEFICITS ESTIMATED WITH THE ENHANCED MODEL

	Output Gaps		Structural Deficit	
	2016 Autumn Forecasts	Enhanced methodology	2016 Autumn Forecasts	Enhanced methodology
2014	-3.7	-5.0	-1.2	-0.4
2015	-2.6	-4.1	-1.1	-0.5
2016	-1.6	-3.4	-1.6	-0.8
2017	-0.8	-2.9	-2.2	-1.2
2018	-0.0	-2.5	-2.4	-1.1

Source: European Commission 2016 Autumn forecasts and own elaborations.

## II. STRUCTURAL REFORMS

### II.1 THE REFORM AGENDA

The government remains committed to continuing the implementation of ambitious structural reforms aimed at strengthening growth, efficiency and equity while sticking to a high degree of budget discipline.

As envisaged in the 2017 Budget, the recovery of the Italian economy will be sustained by infrastructure investment, the Industry 4.0 plan, and a new impetus for the green economy. The banking sector's remaining challenges are being tackled both to achieve stability of banks and to protect citizens' savings and to respond to specific Council's Recommendations. The reform of the labour market needs to be completed, along with public administration and penal justice reforms. The reconstruction after the recent earthquakes is also a priority.

#### FOCUS

##### **Short term costs to support public and private investment, enhance security and combat poverty<sup>1</sup>**

The 2017 Budget Law that was passed by Parliament in December contains important measures in these areas.

The measures related to the renovation of houses according to antiseismic criteria; extension of the tax deduction for energy efficient requalification up to the end of 2017; substitution of household electrical appliances with more energy efficient ones; and renovation of hotels, will entail an amount of funds of €0.14 billion in 2017, €1.6 billion in 2018 and €1.8 billion in 2019 (net equivalent: €0.8 billion in 2018 and €1.6 billion in 2019).

The introduction of a 24 percent income tax rate for entrepreneurs and partnerships (so called IRI) will account for €5.3 billion in 2018 and €3.1 billion in 2019.

The extension to 2018 of the 'New Sabatini', and the introduction of a hyper amortisation of 250% for instrumental goods for Industry 4.0 corresponds to €1.1 billion in 2018 and 1.9 in 2019.

The strengthening of R&D tax credits (50% deduction instead of the former 25%) and the increase of the maximum credit for tax payers from EUR 5 million to 20 million per company per year have an endowment of €0.7 billion yearly in 2018 and 2019.

In the agricultural sector, the exemption from personal income tax of income from ownership of land along with the contribution exemption for young farmers (less than 40-year-old) who enrol in 2017, will carry a benefit of €0.25 billion in 2018 and €0.16 billion in 2019.

Starting from 2017 the extension (in terms of beneficiaries and threshold) of exemption for productivity-related pay is assessed at €0.2 billion in 2017 and €0.4 billion in 2018.

As for the poverty and pension system, a bonus equivalent to one month's pension (quattordicesima) for pensioners with an income up to twice the minimum, as well as the extension of personal income tax deductions to pensioners younger than 75, will account for €1 billion yearly.

As for the measures related to poverty, the Fund to fight poverty and social exclusion is endowed with €0.15 billion in 2017 and €0.65 billion yearly in 2018 and 2019. Moreover, other measures targeted for families will have an endowment of 0.6 billion in 2017 and 0.7 billion yearly in 2018 and 2019. To

<sup>1</sup> For major details see the technical illustrative note published by the General Accounting Department, downloadable at the following link:

[http://www.rgs.mef.gov.it/VERSIONE-I/Attivit--i/Bilancio\\_di\\_previsione/Bilancio\\_finanziario/2017/NotaTecnicoIllustrativaLB/](http://www.rgs.mef.gov.it/VERSIONE-I/Attivit--i/Bilancio_di_previsione/Bilancio_finanziario/2017/NotaTecnicoIllustrativaLB/)



recall the main benefits: a bonus of €800 for a new born and the €1,000 annually voucher for a new born in 2016 to be used for enrolling in public or private nursery schools, or for home assistance for children of less than 3 years of age having serious chronic disease.

In the educational sector, the Fund for the implementation of the 'Buona scuola' reform has an endowment of €0.25 billion in 2017, and €0.3 billion yearly in 2018 and 2019. The increase of both the ordinary Fund for financing the Universities and the ordinary Fund for research entities, along with the new resources for universities' departments being assessed as excellent, and the fiscal allowances for the right to study for students having low family income, will have a funding of €0.18 billion in 2017, and €0.5 billion yearly in 2018 and 2019.

To boost public investment and the infrastructural development of the country, a dedicated Fund has been created, with an endowment of €47.5 billion up to 2032. Summing up, this measure gives Regions and local governments more 'financial spaces', along with the tax credit or contribution (if the rebuilding is private or public, respectively) for the reconstruction after the seismic events of 2016, the total amount of resources in the State budget is of €7.1 billion per year, from 2017 up to 2047.

Finally, €0.05 billion in 2018 and €0.25 billion in 2019 have been earmarked for the realisation of a strategic plan for sustainable mobility.

The commitment to a responsible management of the public finances has been pursued with the budget reform approved in August 2016, which incorporates the spending review into the annual budget process. The centralized purchasing of goods and services by the Public Administration through CONSIP and other purchasing bodies has also been strengthened. In addition, the annual review of tax expenditures has become a required component of the budget package, with the aim of reviewing and rationalising them given changing social and economic needs.

The 2017 Budget Law introduces several measures aimed at reviewing and reprogramming public spending through the optimisation of the budgets of individual ministries, the rationalisation of healthcare expenditure and procurement, the introduction of the 'digital healthcare file', the stabilisation of medical staff of the National Health System, the refinancing of the fund for innovative drugs and the recruitment of additional personnel where needed. Work on cost benchmarks is also proceeding.

The privatisation programme continues: in 2016 it involved ENAV, the air traffic control operator. The second tranche of the Poste Italiane privatisation is now planned for 2017. As for the state railways (FS), at the end of September 2016 the business plan for 2017-2026 was approved with the aim of preparing the group for privatisation. A multi-year investment plan worth 94 billion euros and a new mission of the FS Group are the key points of the Plan. The new mission is split into 5 strategic areas: infrastructure, integrated mobility and logistics, digital approach and international development. The final goal is to double the turnover over the next ten years, as well as deeply transform FS to create an international firm of integrated mobility.

In order to consolidate governance of the tax administration, a coordination unit was created, taking into account the IMF and OECD recommendations on this matter. To improve revenue results, the enhancement of compliance is foreseen, by means of simplification and reduction of controls on taxpayers having low-risk profiles; a reliability index will take the place of 'sector studies' (*studi di settore*); international rulings for big taxpayers will be fuelled, as well as electronic invoicing and digital transmission of VAT payments. Operational resources of the tax police will be targeted at combating illegal work, international tax evasion and criminal organisations. Many measures related to tax



collection and tax evasion are included in the Budget Law for 2017 and in the Fiscal Decree<sup>2</sup>, such as the extension to July 2017 of the voluntary disclosure of income and assets held abroad and the winding-up of Equitalia and its merger with the tax administration.

The Budget Law for 2017 also provides for simplification of the accounting system of individual and partnership companies by introducing the cash criterion - instead of the accrual criterion - to determine income and net production.

As for the banking sector, overall, the system is solid and adequately capitalised<sup>3</sup>. However, the share of non-performing loans is high and the government agrees it should be reduced over time. Further consolidation is necessary in certain segments of the industry (notably cooperative and mutual banks) and profitability should improve, including via cost-cutting initiatives. In addition, credit recovery times must be reduced. The reforms enacted in 2015-2016 have tackled all these issues and are currently in the implementation phase.

Recently, the government issued a decree-law to support the recapitalisation of Banca Monte dei Paschi di Siena which envisages sufficient resources (20 billion euros) to also support other banks that might need liquidity assistance via state guarantees or be unable to raise capital in response to supervisory stress tests. Meanwhile, the Chamber of Deputies has ratified an enabling law mandating the government to comprehensively reform insolvency procedures. The law must now be ratified by the Senate.

## FOCUS

### Recent measures concerning the Italian banking system

The Decree-law approved by the Italian government on 23 December 2016, which is currently undergoing parliamentary ratification, allows the government to provide extraordinary public financial support to banking institutions in the form of: (i) State guarantee on newly issued liabilities; (ii) State guarantee on the ELA provided by the central bank and (iii) precautionary recapitalisation.

In all cases, public support can be granted only if the measures taken are fully compliant with the Bank Recovery and Resolution Directive (BRRD) and the EU State aid framework (in particular the Banking Communication), and subject to the approval of the European Commission.

The financial envelope amounts to 20 billion euro to be roughly allocated for 20 percent to liquidity support and for the remainder to precautionary recapitalisations. It is a general safety net going well beyond estimates of current capital needs.

Precautionary recapitalisation support will only be granted following a positive decision by the European Commission on the compatibility of the aid with the internal market and on compliance with the BRRD. The Commission will examine the restructuring plan to be submitted by the bank with a view to ensure the viability within the restructuring period and on a sustainable basis.

In precautionary recapitalisation cases, burden sharing applies according to the 2013 Banking Communication. Aid can be granted only if coupled with adequate burden sharing by existing investors other than senior debt holders. In the case of solvent institutions, the involvement of subordinated investors takes the form of conversion of subordinated debt into equity, as the objective of the measure is to strengthen the bank's capital and not to cover losses.

The Decree-law also envisages the possibility of compensating retail investors in specific cases of mis-selling of bonds. While no cash transaction is allowed, the shares received by retail investors from the conversion of subordinated debt can be transferred to the State in exchange for senior bonds issued by the bank. The conditions for the compensation of retail investors, which can occur if relevant transparency rules have been violated, are defined in detail, requiring among other things that the bank be involved or likely to be involved in lawsuits.

<sup>2</sup> Decree Law n. 193/2016.

<sup>3</sup> For an up-to-date assessment, see Ignazio Visco, Bank of Italy Governor, Speech at the 23rd ASSIOM FOREX Congress, Modena, 28 January 2017.

Measures aimed at enhancing growth mainly go through the ‘*Industria 4.0*’ (I4.0) plan and the Budget Law for 2017: the super amortization at 140 percent has been extended to June 2018 and a hyper amortization at 250 percent for the purchase of goods functional to the I4.0 plan has been introduced. Moreover, tax credit on expenditure in R&D has been strengthened and extended to 2020 and many incentives for startup and innovative SMEs have been introduced. Among these, the Budget Law modifies the *Nuova Sabatini*, a measure to finance investments in new equipment and digital manufacture, extending it to 2018 with a larger financial allocation (raised from €5 to €7 billion). Moreover, the Budget Law reduces taxes for SMEs introducing a new tax on business income - IRI - through the application of a single rate of the IRES (corporate income tax) that has been reduced from 27.5 to 24 percent. The Guarantee fund for SMEs has been refinanced by the Budget Law with a focus on I4.0 investments.

A fund for public investment has been created by the Budget Law for 2017, financing mainly building renovation, anti-seismic interventions, energy efficiency, transport and viability as well as urban renewal. In particular for transport, a strategic plan for sustainable mobility is foreseen for the use of fund resources for the upgrading of local and regional public transport means. The cited fund also finances the mitigation of landslide risk, soil conservation and the mitigation of seismic risks. Specific resources have been allocated for the reconstruction, support and economic recovery of the Regions hit by the earthquakes of last August. The Budget Law also extends tax allowances for building renovation, anti-seismic interventions and energy efficiency.

Justice system reform aims at improving the efficiency of both civil and criminal trials. The legislative bill to reform civil proceedings aimed at guaranteeing a more immediate and effective safeguarding of rights as well as greater efficiency was approved by the Chamber of Deputies in March. Reform of the criminal code was approved by the Chamber of Deputies and is currently being considered by the Senate. It safeguards the rights of people involved in proceedings, and also reviewed the penitentiary system and the statute of limitations. Moreover, two draft laws about corporate crisis and insolvency procedures are being considered by the Chamber of Deputies. The insolvency framework has been further modified by the Budget Law for 2017, to include a possible plan of partial payment of fiscal and contribution credits during the composition with creditors or debt restructuring phases. In recent years, many efforts have been addressed regarding the digitalisation of the justice system, with special attention to the digital trial. The Budget Law for 2017 assigns additional resources to this objective.

In order to increase the efficiency and the quality of the services provided by the Public Administration, 14 delegated legislative decrees implementing the Enabling Law<sup>4</sup> have been approved. The principal aim of the reform is to simplify the Public Administration making existing tools and rules more efficient. It is not a sector reform but a change for the whole country affecting three main elements: the relation between citizens and the administration, the reinforcing of competitiveness of the country through clear timelines and rules and the reorganisation of public employment. The decrees adopted through November 2016 concern: the repealing of obsolete and out of date secondary legislation and implementing decrees, the code for digital administration, new Services Conference rules, certified reporting of the start-up of productive activity (SCIA), dismissal of public employees, State Owned Enterprises (SOEs), prevention of corruption and transparency, port

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<sup>4</sup> Law No. 124/2015.

authorities, police and state forestry corps, health managers, new code of financial justice, administrative regulation of private activities (SCIA 2), Chambers of Commerce, and simplification of the activity of public research entities. Following the Constitutional Court's ruling, supplementary and corrective provisions will be adopted in consultation with the Regions.

In 2015, the number of Italian families living in absolute poverty was more than 1.5 million. In order to address this social issue, a broad strategy to fight poverty and social exclusion has been implemented thanks to the adoption of a fund equipped with 600 million euros in 2016 and 1 billion euros in 2017. The Budget Law for 2017 has allocated further 150 million euros to the fund starting from 2017. The fund supports the national Plan for fighting poverty, which aims to provide a basic level of social assistance throughout the country and gives priority to poor families in proportion to the number of children and disabled. The enabling act also envisages the introduction of an economic support scheme assigned to poor people making efforts towards autonomy (*'reddito di inclusione'*). Pending the implementation of the enabling act, the Plan is currently financing two main measures: the Support for Active Inclusion (SIA) and the unemployment benefit scheme ASDI. Among possible measures that can affect poverty and welfare, the Budget Law for 2017 also raises the 14th monthly instalment (so called *quattordicesima*) for low-income pensioners and the enlargement of no-tax area for pensioners under 75.

In line with the measures adopted in previous years aimed at reducing unemployment, the Budget Law for 2017 states the total exemption from contribution (100 percent for 3 years and for a maximum of €3,250 per year) for employers who, during the 2017-2018 period, hire graduates they previously employed via apprenticeship or traineeship contracts. The contribution exemption is also recognized for farmers and professional workers in the agricultural sector under 40, whose farms are located in disadvantaged areas. Moreover, 530 million euros from European structural funds will be assigned to firms located in southern regions that hire - with permanent contracts - either young unemployed individuals (15 - 24 years old) or elder individuals who have not worked for at least 6 months. The Budget Law has also strengthened the tax exemption for productivity bonuses.

Employment services and active labour market policies have been deeply reorganized: instruments of active labour market policies can be activated through the website of the National Agency for Active Labour Policies (ANPAL) that coordinates the national network of employment services. The labour inspection activity has also been revised and the Labour Inspectorate statute was definitively approved in April 2016. ISFOL was also renamed INAPP, National Institute for the analysis of public policies. The Budget Law for 2017 also provides resources for additional measures to sustain employment such as nursery vouchers, supports for disabled children and compulsory parental leave for male workers.

The Budget Law for 2017 allocates 800 million euros for supporting students, guaranteeing the right to education and further implementing the *'Buona Scuola'* reform. Main measures concern: the financing of a State supplementary fund to grant merit and mobility scholarships; the setting up of a fund to finance basic research and promote research activities of professors of state universities; the revision of rules for university fees; the transformation of fiscal incentives to fight 'brain drain' in a structural measure; and the possibility for students attending schools at any level to benefit of a 19 percent IRPEF deduction.

The implementation of the *'Buona Scuola'* reform is proceeding, with 8 new decrees examined by the Council of Ministers. These decrees are related to the following issues:

initial training and access to teaching positions in secondary school; review of vocational education pathways; evaluation and certification of student's skills; national pre-school education (0-6 years); welfare of students; Italian schools abroad; individual education programme for students with disabilities. "Made in Italy" will be at the centre of the 'Buona scuola', and school-to-work experiences could be done accordingly.

## II.2 THE IMPACT OF STRUCTURAL REFORMS ON GDP

In this section an update of estimates of the macroeconomic impact of structural reforms is presented. The estimates of the macroeconomic effects have been obtained through the quantitative models used at the Italian Ministry of the Economy and Finance (ITEM, QUEST III and IGEM). The main areas of reform are the following: Public Administration (PA) and Simplification, Competitiveness, Labour Market, Justice, the reduction of the tax wedge and the school system. Moreover, interventions related to the nonperforming loans (NPL) in the bank balance sheets<sup>5</sup> and the 'Finance for growth' have been included.

In Table II.1 the impact on output of each of the main reforms is presented. The overall effect of the reforms here considered is a GDP increase with respect to the baseline scenario of 2.5 percent in 2020 and of 3.9 percent in 2025. In the long run, the estimated impact on output is a 9.1 percent increase.

**TABLE II.1: MACROECONOMIC EFFECTS OF STRUCTURAL REFORMS BY AREA OF INTERVENTION (percentage deviation of GDP from the baseline scenario)**

	2020	2025	Long run
Public Administration	0.4	0.7	1.2
Competitiveness	0.4	0.7	1.2
Labour Market	0.6	0.9	1.3
Justice	0.1	0.2	0.9
School System	0.3	0.6	2.4
Tax Shift (total)	0.2	0.2	0.2
<i>of which: Reduction of tax wedge (IRAP-IRPEF)</i>	0.4	0.4	0.4
<i>Increase in the taxation of capital income + VAT</i>	-0.2	-0.2	-0.2
Spending Review	-0.2	-0.3	0.0
Nonperforming loans	0.2	–	–
Finance for growth/Industria 4.0	0.5	0.9	1.9
<b>TOTAL</b>	<b>2.5</b>	<b>3.9</b>	<b>9.1</b>

### **FOCUS** The macroeconomic impact of the incentives for financial investments and the introduction of Individual Saving Plans (PIR)

The recent economic crisis has amplified the adverse effects of frictions in the credit market and exacerbated the difficulties of Italian companies in obtaining financial resources. Such rigidities and imperfections translate into hurdles for businesses to access external finance, that are particularly burdensome for the peculiarities of the economy's production structure, characterized by a high incidence of small and medium-sized enterprises.

<sup>5</sup> The simulations have been revised also in the wake of technical suggestions recommended in the report of the European Commission prepared in accordance with Article 126(3) of the Treaty (see [http://ec.europa.eu/economy\\_finance/economic\\_governance/sgp/pdf/30\\_edps/126-03\\_commission/2015-02-27\\_it\\_126-3\\_en.pdf](http://ec.europa.eu/economy_finance/economic_governance/sgp/pdf/30_edps/126-03_commission/2015-02-27_it_126-3_en.pdf)).

The aim of this focus is to assess the macroeconomic impact of a reduction in the tax burden associated with capital gains arising from long-term financial instruments. These measures are included in art. 18 of the 2017 Budget Law. The purpose of these new financial measures is to foster flows of capital into small and medium enterprises to stimulate firms' growth and strengthen their competitive ability and managerial skills.

A first group of the provisions (par. 1-10 of art. 18) introduces exemption on capital income taxation for the investments in financial assets carried out by the social security funds and supplementary pension funds.

A second group of the provisions (par. 11-25 of art. 18) envisages the introduction of the Individual Savings Plans, which provide exemption on capital income taxation for household savings (up to €50,000 per year) channelled into these vehicles for financing the productive system.

The macroeconomic impact of the measures is presented in Table R1. The simulation has been performed with the IGEM model, assuming an increase of firms' capital accumulation induced by a greater availability of financial funds allocated to the production system. In the technical report accompanying the measure, it is assumed that the amount of financial resources allocated each year to these financial instruments is equal to about €14.6 billion euros. In constructing the simulation exercise, we have relied on an estimate by the European Commission (EC) of the effect on investment of an expansion in the availability of long-term funds for the business sector. Based on the estimated coefficient from the EC study (0.14), the increase by €14.6 billion euros in the resources allocated to financial instruments generates an average annual increase of investments equal to 0.8 percent, compared to the baseline scenario. In IGEM this variation in investment is achieved through an increase in the rate of growth of the physical capital by 0.06 percent in five years.

The simulation results show the expansionary effects of the measure under consideration, with investment that, compared to the baseline scenario, increase by 0.3 percent in the first year and 0.8 percent in 2020. GDP increases with respect to the baseline scenario by 0.1 percent in 2018 and 2019 and 0.3 percent in 2020. In the long term, investments increase with respect to the baseline scenario by 2.9 percent and GDP by 0.9 percent.

**TABLE R1 - MACROECONOMIC EFFECTS OF THE MEASURES INCLUDED IN ART. 18 OF 2017 BUDGET LAW (percentage deviation from the baseline scenario)**

	2017	2018	2019	2020	2025	Long run
GDP	0.0	0.1	0.1	0.3	0.5	0.9
Consumption	0.0	0.1	0.1	0.1	0.4	0.8
Investment	0.3	0.4	0.5	0.8	1.6	2.9

Table R2 shows the macroeconomic impact of measures contained in the 'Finance for growth' package presented in the DEF 2016, as supplemented by the effects of the measures contained in the Budget Law for 2017 presented in this note. The set of measures considered triggers higher investments in 2020, compared to the baseline scenario, by 1.4 percent and output by 0.5 percent. Long term investments increase by 6.2 percent relative to the baseline scenario and GDP by 1.9 percent.

**TABLE R2 - MACROECONOMIC EFFECTS OF THE 'FINANCE FOR GROWTH' PACKAGE (percentage deviation from the baseline scenario)**

	2020	2025	Long run
GDP	0.5	0.9	1.9
Consumption	0.2	0.8	1.6
Investment	1.4	3.0	6.2

### The macroeconomic impact of some interventions in the production system

The aim of this Focus is to document the macroeconomic impact of some of the investment incentives introduced via the Budget Law for 2017 and not included in the Table II.1. In particular, the analysis considers the effects of the hyper-amortisation provision, the extension for one year of the super-amortisation, and the strengthening of the tax credit for research and development. These measures were simulated using the ITEM econometric model.

The results are expressed in terms of percentage deviation from the baseline scenario. These interventions would imply an increase of GDP in the 2017-2019 period of 0.1 percentage points. With reference to these incentives and in particular to the introduction of hyper-amortisation and the extension of the super-amortisation, in the simulations these measures pertain only to investments made in 2017 and the first half of 2018, although generating a fiscal savings for businesses several years after 2017. The fiscal stimulus yields a significant increase in investment in the period just mentioned, giving also rise to expansionary effects in subsequent years.

#### THE MACROECONOMIC IMPACT OF INVESTMENT AND R&D INCENTIVES (percentage deviation from baseline)

	Average 2017-2019
GDP	0.1
Investment	0.9
Labour	0.1

Table II.2 reports the effects of structural reforms with a focus on the main macroeconomic variables. The benefits are significant, especially in the medium to long run, with an impact on both consumption and investment broadly in line with that estimated for output. By using the models it is also possible to calculate the impact of the reforms on the public finances and the results point to an improvement in the indicators of public finance performance with respect to the baseline scenario.

**Table II.2 - MACROECONOMIC EFFECTS OF REFORMS (percentage deviation from the baseline scenario)**

	2020	2025	Long run
GDP	2.5	3.9	9.1
Consumption	2.8	4.6	7.1
Investment	4.1	6.4	14.4

### **III. MEDIUM TERM BUDGETARY POSITION**

#### **III.1 STRUCTURAL DEFICIT, FISCAL CONSOLIDATION AND CONVERGENCE TO THE MTO**

In the midst of the most acute phase of the recession and exceptionally bad cyclical conditions, Italy remained broadly compliant with the requirements of the preventive arm of the Stability and Growth Pact (SGP) in 2015 and in 2016 (see Table III.1). For 2015, both the 2017 Draft Budgetary Plan (DBP) and the recent Commission services Autumn Forecasts show that the structural balance was reduced in line with the required effort over the single year and over the average of two years (2014-2015). As for the expenditure rule, an over-achievement of the targeted adjustment equal to 0.16 percentage points of GDP was also reached.

In 2016, the Italian government applied for the full application of the budget flexibility allowed under the preventive arm of the SGP. Taking into account the flexibility foreseen by the Structural Reforms clause and the one for EU co-financed investments, the required fiscal effort would translate into a negative change of 0.25 percentage points of GDP in the structural balance.

Vis-à-vis the possibility to increase the structural deficit by a maximum of 0.25 percentage points, the deterioration of the structural deficit of 0.6 percentage points of GDP recorded in 2016 according to the Autumn Forecasts and the DBP would not be significant. In addition, the expenditure aggregate is expected to grow, in real terms, by 0.4 percent according to national authorities and by 0.3 percent according to the Commission services, in line with the respective benchmark. On the basis of such results, no significant deviation on the path of convergence to the MTO would have been recorded in 2016.

For 2017, on the basis of output gap estimates produced through the commonly agreed production function methodology, Italy would qualify as being in bad times according to the estimates of the DBP and in normal times on the basis of the results of the Commission autumn forecasts. According to the matrix that specifies the fiscal adjustments in the preventive arm of the SGP, Italy would then be required to converge towards the MTO reducing the structural deficit by 0.5 percentage point on the basis of the estimates of the DBP and by 0.6 percentage points on the basis of the Commission services Autumn Forecasts.





Due to the materialisation of significant costs linked to the assistance to refugees and the earthquakes in central Italy as well as the investments required to secure the buildings against future seismic risks, the Italian authorities required that an amount of 0.4 percent of GDP be excluded from the SGP in 2017. The European Commission, in its Opinion on the 2017 Italian Draft Budgetary Plan, accepted such a request specifying that the cost of refugees burdening the public finances could be excluded from the required fiscal effort for an amount of 0.15 percent of GDP. The expenses due for securing buildings and structures against the risks of future seismic activities could be counted out from the fiscal effort required according to the SGP up to a total amount of 0.18 percent of GDP, if supported by specific projects. Accordingly, the required fiscal effort of 0.6 percentage points of GDP would be more than halved.

However, even taking into account the additional earthquake and refugees clauses in 2017 for a maximum amount of 0.32 percent of GDP, the 2016 Autumn Forecasts still highlight a risk of significant deviation on both the structural balance criterion and the expenditure rule on the single year and on the two-year average (Table III.1).

According to our computations, the 0.2-percent-of-GDP package of structural measures requested by the Commission would ensure that the deviations from the required convergence path in 2017 were not significant.

In this respect, it is worth noting that under the preventive arm of the SGP compliance with the required fiscal efforts is highly dependent on the way cyclical conditions are assessed through output gaps and potential output calculations.

As was previously argued, the commonly agreed production function methodology performs poorly for Italy especially in terms of TFP estimation, producing output gaps that are too small and close too rapidly as the economy recovers<sup>1</sup>.

Compliance with the requirements of the preventive arm of the SGP has been reassessed by re-calculating output gaps and potential output estimates of the 2016 Autumn Forecasts through the use of the enhanced production function model presented earlier in this report and re-estimating the ten-year potential growth benchmark applying the same enhanced methodology to the data of the 2016 Spring forecasts.

On the basis of such alternative methodology, Italian economy would indeed experience exceptional bad times in 2015 (with output gaps being wider than -4.0 percent of potential output), very bad times in 2016 (with output gap being equal to -3.4 percent) and bad times in 2017 (with output gap being equal to -2.9 percent of potential output).

Taking into consideration the additional earthquake and refugee clauses, the assessment of the significant deviation through the alternative potential output estimates - still within the framework of the commonly agreed methodology - would yield a different picture (see the third column of Table III.1). In 2017, only a low risk of deviation would be signaled, as the annual deviation from the required change in the structural balance would amount to -0.5 percent of GDP, and the annual deviation of the expenditure aggregate would amount to -0.4 percent of GDP. On a two-year average, the public finances would be fully compliant with the requirement of the SGP.

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<sup>1</sup> TFP trends contribution to potential growth is estimated as being negative in Commission Services Forecasts since 2003 and until 2018.

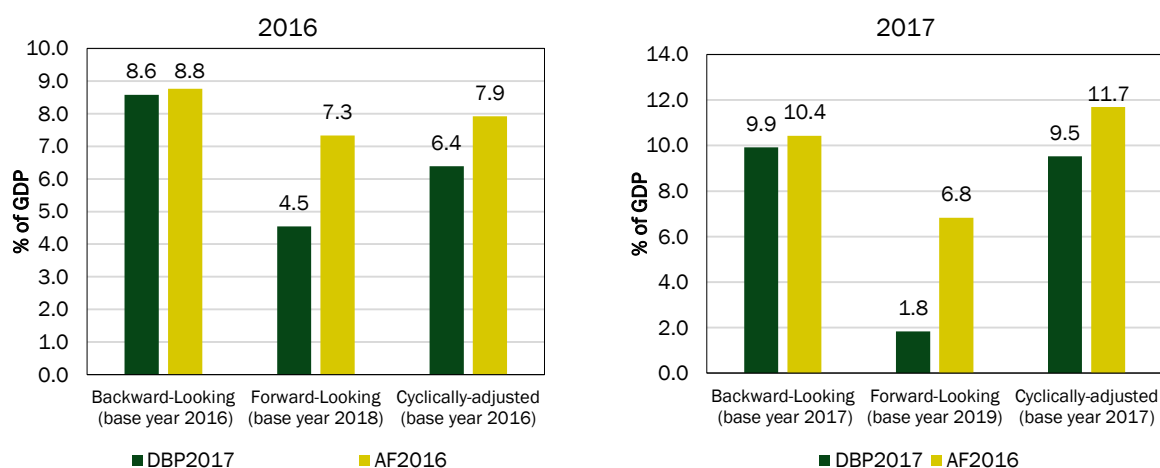
Accordingly, adding to the previous simulation the additional measures for 0.2 percent of GDP to be adopted in 2017 would further reinforce the compliance with the preventive arm of the SGP assured by the enhanced methodology for the calculation of potential output and output gaps (see the last column of Table III.1).

### III.2 CYCLICAL CONDITIONS AND THE DEBT RULE

Compliance with the debt reduction benchmarks has become increasingly demanding for Italy and, in general, for high debt countries.

Figure III.1 shows the gaps with the debt reduction benchmarks in all debt rule configurations, for 2016 and 2017 both under the policy scenario of the Italian Draft Budgetary Plan and under the no-policy change assumption featuring the Commission services Autumn Forecasts.

**FIGURE III.1 – GAPS TO THE DEBT REDUCTION BENCHMARKS: RESULTS FROM THE 2017 DRAFT BUDGETARY PLAN VS 2016 AUTUMN FORECASTS**



Source: MEF simulations on DBP 2017 and on Commission Services Autumn Forecasts 2016.

On the basis of the forward-looking configuration with base year 2019, the gap to the debt reduction benchmark will be reduced to only 1.8 percent of GDP in 2017 thanks to the convergence to the MTO projected by Italian authorities in 2018 and 2019.

On the contrary, in spite of the very bad cyclical conditions experienced by Italy since 2013 in a context of protracted low-inflation and concrete risks of deflation, the gap to the cyclically-adjusted debt benchmark is estimated to be substantial in 2016 and further widening in 2017.

Weaker growth and low inflation impact the evolution of the debt-to-GDP ratio through two channels: the cyclical deterioration in the budget balance and the lower nominal GDP levels<sup>2</sup>. Nonetheless, the debt rule in the current cyclically-adjusted configuration, cannot

<sup>2</sup> In this respect, the formula used to cyclically adjust the debt-to-GDP ratio in the framework of the SGP debt rule subtracts, in the numerator, the cyclical component of the budget balance of the current and previous two years, from the current year debt level. Similarly, the level of GDP in the denominator is re-calculated by using potential GDP growth and, in order to account for inflation, the growth rate of GDP deflator of the current and previous two years. The resulting cyclically-

adequately take into account exceptionally weak economic circumstances, such as persistent negative cyclical conditions and/or ultra-low inflation.

Such conclusions are also shared by the European Commission which in its reply to a recent Report of the Court of Auditors has highlighted the importance of adequately taking into account deflation and the inability of the current debt rule mechanism to incorporate inflation dynamics. In this regard, the Commission has concluded that the cyclically adjusted debt-reduction benchmark does not fully capture the impact of very low inflation over extended periods<sup>3</sup>.

According to the European Commission, while the cyclically-adjusted debt level is developed with the aim of excluding the influence of the economic cycle on the assessment on compliance with the debt rule, the adjustment only corrects for the difference in the potential and the actual GDP growth rate over three years. Therefore, the protracted subdued nominal GDP growth experienced by several Member States in the last couple of years could still impact on the compliance with the debt rule, even when assessed on the basis of the cyclically adjusted debt level.

In addition, the Commission has confirmed that the debt benchmark does not control for the evolution of prices. The cyclically adjusted debt level uses the observed GDP deflator, thus there is no correction for unexpectedly low inflation. However, for several countries the unexpected lowering of inflation has led to a significant increase in the real financing costs on debt. Therefore, several countries were severely affected on their debt dynamics by the increase in difference in the real financing cost and the real GDP growth rate.

In this vein, in a recent publication, also the ECB<sup>4</sup> has underlined that negative inflation/growth surprises tend to make compliance with the requirements of the debt rule more demanding in the short term. In order to assess the compliance of Italy's public finances with the fiscal adjustment required during the transitional regime of the debt rule, the ECB has carried out several simulations in which both the impact of low inflation and negative growth rates were taken into account. In particular, the simulations assumed higher GDP deflator growth as for 2014 (2 percent) and real GDP growth of zero in 2014 (instead of the real GDP contraction). Under these assumptions, the fiscal adjustment required to comply with the debt rule would have almost halved for Italy over the period 2013-2015. The structural adjustment achieved in 2013 would have been in line with the requirements adjusted for low inflation and growth, while for 2014 and 2015 the actual adjustment would have fallen short of the requirements.

Given such backdrop, Figure III.2 shows how the cyclically-adjusted gap to the benchmark derived for 2016 on the basis of the Autumn Forecasts would change if the enhanced production function methodology developed by the Italian Treasury was used to estimate potential growth and output gaps.

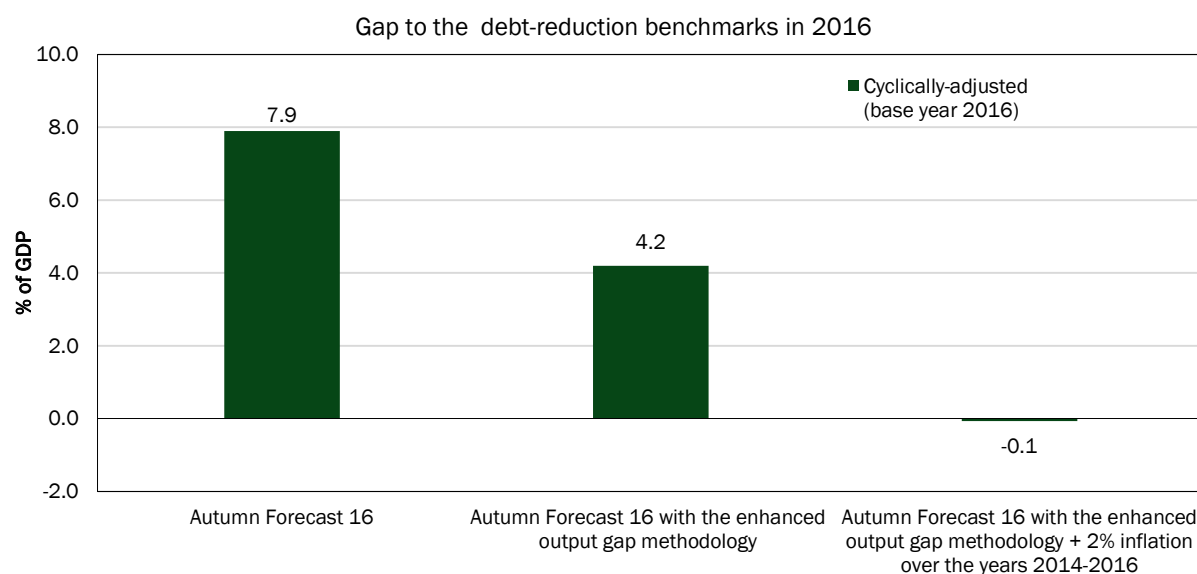
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adjusted debt-to-GDP ratio is then compared with the debt reduction benchmark obtained through the backward looking configuration. In case the debt-to-GDP ratio cyclically-adjusted is lower than the benchmark, the debt rule is complied with.

<sup>3</sup> See the European Commission Reply to the Report of the Court of Auditors, European Court of Auditors, Special Report No 10/2016, Further improvements needed to ensure effective implementation of the excessive deficit procedure.

<sup>4</sup> ECB Economic Bulletin, Issue 3 / 2016, see the special chapter "Government debt reduction strategies in the euro area".

**FIGURE III.2 – GAPS TO THE DEBT REDUCTION BENCHMARKS IN THE CYCLICALLY-ADJUSTED CONFIGURATION AND WITH THE ENHANCED PRODUCTION FUNCTION METHOD**



Source: MEF simulations on 2016 Commission Services Autumn Forecasts.

With more appropriate assumptions on the NAWRU and on Total Factor Productivity (see Focus in Chapter 1), the gap to the benchmark derived according to most recent Autumn Forecast would change significantly and the compliance with the debt rule would be eased. In particular, the gap with the debt reduction benchmark in cyclically-adjusted terms would be almost halved, falling from 7.3 percent of GDP in the Autumn Forecast to 4.2 percent in the alternative enhanced model configuration.

Furthermore, by assuming that the GDP deflator would grow at 2 percent<sup>5</sup> per year over the period 2013-2015, in line with the ECB simulations, the gap to the debt reduction benchmark would be negative (-0.1 percent of GDP) and the debt rule would be complied with already in 2016.

The two scenarios in Figure III.2 suggest that the debt rule as it is currently designed might fail to properly consider the interplay between fast closing output gaps due to protracted negative potential growth and slow or negative price dynamics that are currently experienced in Italy.

The above considerations and scenarios shows that the design of the benchmarks for the debt rule is ill-equipped to take into account exceptionally weak economic circumstances. While the analysis of Relevant Factors envisaged by article 126.3 of the Treaty provides a safeguard against an application too mechanistic of debt benchmarks, the debt-reduction rules should be streamlined and adapted to a broader range of macroeconomic outcomes, including periods of deflation.

<sup>5</sup> The assumption on inflation is in line with the historical dynamic for Italy; for the ten-year pre-crisis period (2005 - 2015), in fact, the deflator averaged almost 2.5 percent, while the average 2000-2017 is about 1.8 percent.

### III.3 MEASURES OF FISCAL STANCE

In its recent Communication<sup>6</sup>, the European Commission has underlined the need to move towards a positive fiscal stance for the Euro Area, in support of the monetary policy of the European Central Bank. As the Commission Autumn 2016 Economic Forecasts recall, economic growth has been resilient but modest. Although the euro area GDP has recovered its pre-crisis level in real terms since 2015, unemployment has declined to its lowest level since 2010 and investment has started to pick up, the euro area recovery remains slow, unused capacity in labour and capital is still significant and the overall level of uncertainty is high. The Commission recognizes, therefore, that the continuation of the expansion in the euro area would need to rely increasingly on domestic demand and, while monetary policy has already been very widely used in the recent past, fiscal policy could be more supportive.

From 2011 to 2013, in fact, many Member States adopted a contractionary fiscal stance in order to maintain fiscal sustainability and preserve their access to the markets. In 2014 and 2015, the aggregate euro area fiscal stance turned to be neutral, whereas it is estimated to be slightly expansionary in 2016 but it is expected to be broadly neutral again in 2017.

The Commission is not the only international institution which has recently expressed concerns about the fiscal stance and the about the need of following a more expansionary fiscal policy at the European level. The OECD has recently recognized that in the current juncture of low inflation and accommodative monetary policy, low or negative interest rates have increased fiscal space even for countries with high debt/GDP ratios.

In a context of subdued demand and decreasing investment rates, these conditions provide for an unprecedented opportunity to use either at national level and/or better in a coordinated manner, expansionary and well framed fiscal policies to boost short term growth and spur long term potential output without increasing debt/GDP ratios.

The extent to which countries can use deficits spending to stimulate domestic demand and raise potential growth without destabilising public debt, depends on the fiscal space. In this regard, two definitions of fiscal space are provided.

The first measure, called debt limit, is the one preferred by the OECD. Fiscal stance is given by the distance between the current level of primary balance and the estimated primary balance corresponding to the debt/GDP ratio at which a country will lose market access.

The other definition of fiscal space is the one adopted by the European Commission, which ponders the trade-off between stabilization needs of a country, measured by the output gaps and its fiscal sustainability needs, measured through the calculation of the tax gaps or sustainability indicators.

Both definitions of fiscal stance may suffer from methodological shortcomings and results may strongly depend on the underlying assumptions on the potential growth, the implicit interest rates, the level of the primary balance that could be credibly sustained by a country and the projected pattern of age-related expenditures. However, on the basis of different methodological approach, the OECD and the Commission reaches dissimilar

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<sup>6</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions "Towards a positive fiscal stance for the Euro Area" - Bruxelles, 16 November 2016.

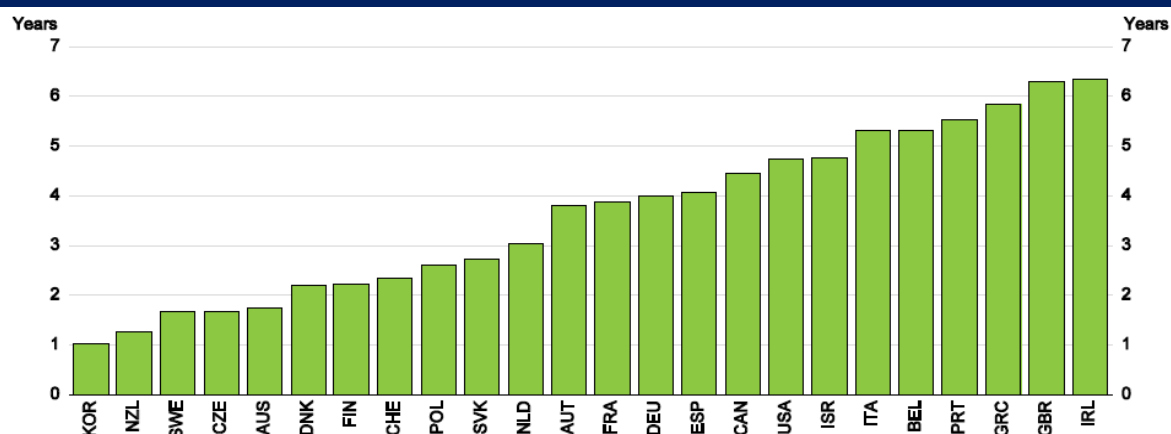
conclusions on both the aggregate fiscal stance and on the country that could optimally make use of it.

According to the OECD, fiscal space appears to have risen in most countries since 2014, as savings from lower interest rates have more than offset the deadweight costs stemming from lower potential growth and higher debt-to-GDP ratios. In addition, thanks to adopted structural reforms in health-care and pension expenditures, the measures that account for projected long-term ageing-related spending pressures also point to some fiscal space in most of the larger advanced economies.

In this regards, according to the OECD, governments, through a coordinated initiative, could finance in deficit a  $\frac{1}{2}$  percentage point of GDP, through productivity enhancing fiscal measures, for three to four years on average, without permanently raising the debt/GDP ratio in the medium term. Such an initiative could encompass high-quality spending on education, health or research and development as well as green infrastructure that would bring significant output gains in the long run.

More in details, simulations carried out by the OECD suggest that in countries like Italy, Belgium, Portugal a temporary increase in government deficit of about 0.5 percent of GDP used to finance public investments can be sustained for at least 5 years without endangering fiscal sustainability (Figure III.2). Such fiscal initiative would indeed raise potential output more than it would increase debt. In the simulation, the number of years is calculated so that the debt in 2040 under the no-policy-change scenario would coincide with the debt-to-GDP ratio resulting after assuming the increase in public investments.

**FIGURE III.2 –NUMBER OF YEARS WHICH A PERMANENT INVESTMENT INCREASE CAN BE FUNDED WITH TEMPORARY DEFICIT**



*Note:* A no-policy change scenario is compared to a scenario with a permanent increase of public investment by 0.5% of GDP and a temporary deficit increase of the same amount during the number of years reported in this figure. The number of years is set so that the debt level in 2040 is the same in the no-policy change scenario and in the investment shift scenario. Public investment has decreasing marginal returns as estimated in Fournier (2016), and the other structural parameters estimated in Fall and Fournier (2015) are homogenous across countries. The country-specific parameters that can influence the computation the most are the initial public investment level, the initial capital stock level, the initial public debt level and the interest rate to growth rate gap.

*Source:* OECD calculations based on Mourougane *et al.*, forthcoming.

On the basis of these results, OECD states that in many OECD countries fiscal policy could be more expansionary than currently planned. Nonetheless, there is also evidence that existing fiscal rules could limit recourse to fiscal policy in Europe and elsewhere, even when such a policy would be necessary. In particular, the SGP rules make it difficult to use this

additional fiscal space, either for countries currently in the Excessive Deficit Procedure (EDP) or which have not reached their MTOs, and can restrict policy options for countries that currently meet the EU requirements. Therefore, the OECD suggests that the application of the SGP could be modified to allow for a more supportive fiscal stance, for example by excluding net investment spending from fiscal rules and more generally developing a consistent approach for using discretion in applying fiscal rules.

On the other hand, according to the European Commission, the orientation of the fiscal stance should be determined at the country and at the aggregate level by looking jointly at two indicators: 1) the output gap in the current year, measuring the stabilization needs of a country; 2) the medium-term sustainability indicator S1, measuring the fiscal sustainability needs.

Member States with a positive output gap would be classified as being in “good times”, and therefore not in need of an expansionary policy, as their economies are already above their potential, while countries with a negative output gap would need additional support from fiscal policy in order to consolidate the recovery. Moreover, Member States with a value of S1 above a certain threshold would be considered at high risk and would require further consolidation to ensure the sustainability of public finances, while countries with a S1 below such threshold, being at low or medium risk, could afford an expansionary fiscal policy without endangering their sustainability of their public finances.

As recognized by the European Commission, such methodology has some evident drawbacks. First of all, the two indicators, output gap and S1, may give conflicting messages. For instance, for Italy, Spain, Finland, Portugal, Belgium, Austria the negative value for the output gap of 2016 would place these countries in bad economic times, while the value of S1 would instead point to a substantial risk for the medium-term sustainability of public finances suggesting the need for further fiscal consolidation. In such cases, reconciling the indications of the two variables to give a uniform direction on the fiscal stance requires additional assumptions which may be questionable.

In addition, the estimates of output gaps and S1 are very sensitive to different model specifications and/or macroeconomic or public finance’s assumptions. Therefore, with slightly changed underlying data the conclusions on fiscal stance may switch completely.

For instance, as far as the output gap is concerned, the volatility and the unreliability of such a measure is recognized even by the European Commission that recently has developed an econometric tool - the so-called “plausibility test” - to countercheck, on the basis of the information content of other cyclical variables, whether the output gap estimated for the current year with the commonly agreed methodology could provide reasonable indications from a macroeconomic point of view. Such a tool has indicated that for 2016 the output gap of Italy should be at least 0.5 percentage points wider than what is estimated by the Autumn Forecasts.

Moreover, as extensively argued previously in this Report, output gap estimates obtained through the enhanced model developed by the Italian Treasury, which departs from the commonly agreed methodology for some slight modifications in the underlying variables used to obtain the NAWRU and TFP, show that the gap for Italy could be, in line with macroeconomic intuition, significantly wider given the still large and unused capacity of the economy.

Focusing on debt sustainability, it is worth noticing that the indicator S1, given its intrinsic drawbacks, could not be the most reliable index to assess whether a country is

experiencing sustainability risks. Indeed, the definition of the S1 indicator has been deeply modified by the Commission over the last few years, making very difficult to carry out comparisons between different data releases.

According to the methodology of calculation of S1 published in the Fiscal Sustainability Report<sup>7</sup> of 2009, the objective of such indicator was to measure the gap between the current fiscal position expressed in structural terms and the one required to achieve the debt target of 60 percent of GDP in 2060, taking into account the impact of expenditure linked to ageing. The Report stated that the choice of the debt-to-GDP target for S1 was in line with the debt limit stated in the Treaty and, above all, that the target year of 2060 had been chosen to be far enough in time to allow to analyze the significant impact of ageing, while remaining within a horizon within the reach of current taxpayers and policy makers.

In the Fiscal Sustainability Report<sup>8</sup> of 2012, the definition of S1 has been further modified. In the European Commission's intentions, S1 had to be designed as a medium-term debt sustainability indicator in which the required fiscal effort, taking into account the impact of expenditure related to ageing, should have been calibrated so that the debt threshold of 60 percent of GDP would have been reached much earlier, i.e. in 2030. According to the new S1 indicator definition, the fiscal effort was to be introduced in a linearly increasing fashion from the last year of the Commission services forecast horizon to 2020 (the so-called cost of delay) and then maintained constantly for the next ten years so that to hit the debt-to-GDP threshold of 60 percent in 2030.

According to the Commission, limiting the length of the time horizon for the calculation of S1 to 2030 instead to 2060 would have anyway assured a sufficiently long period to fully take into account in a meaningful way both the impact of age-related expenditures as well as the measures and the reforms implemented by national authorities to deal with ageing of population. Whatever were the intentions of the Commission at the time, the change in S1 definition introduced in 2012, by halving the length of the projection horizon, has deliberately increased the fiscal effort required to achieve the target of 60 percent of GDP, making the task particularly hard especially for countries, like Italy, with high initial (but sustainable and declining in projection) debt-to-GDP ratio.

In the 2015 Fiscal Sustainability Report<sup>9</sup>, published in January 2016 and in the Debt Sustainability Monitor of January 2017, the methodology for the derivation of S1 has been substantially changed again. In fact, while also in these reports was stated that the target year must be moved forward in time so as to allow "adequate ageing impact analysis", the calculation period for S1 was kept constant to 2030 (or moved to 2031 as in the recent Debt Sustainability Monitor). By contrast, the time horizon for the cost of delay was no longer kept to 2020 as per the definition used in the Sustainability Report of 2012, but it has been set over the five years subsequent the end forecast horizon.

The fact that between the Sustainability Report of 2012 and those of 2015 and 2017 the definition of the cost of delay has changed makes the two methods not entirely consistent.

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<sup>7</sup> European Commission, 2009, 2009 Sustainability Report, EUROPEAN ECONOMY n. 9, also available at: [http://ec.europa.eu/economy\\_finance/publications/pages/publication15998\\_en.pdf](http://ec.europa.eu/economy_finance/publications/pages/publication15998_en.pdf)

<sup>8</sup> European Commission, 2012, 2012 Sustainability Report, EUROPEAN ECONOMY n. 8, also available at: [http://ec.europa.eu/economy\\_finance/publications/european\\_economy/2012/pdf/ee-2012-8\\_en.pdf](http://ec.europa.eu/economy_finance/publications/european_economy/2012/pdf/ee-2012-8_en.pdf)

<sup>9</sup> European Commission, 2016, 2015, Fiscal Sustainability Report. EUROPEAN ECONOMY and 2016 Debt Sustainability Monitor, Institutional Papers 47 ([https://ec.europa.eu/info/publications/debt-sustainability-monitor-2016\\_en](https://ec.europa.eu/info/publications/debt-sustainability-monitor-2016_en))

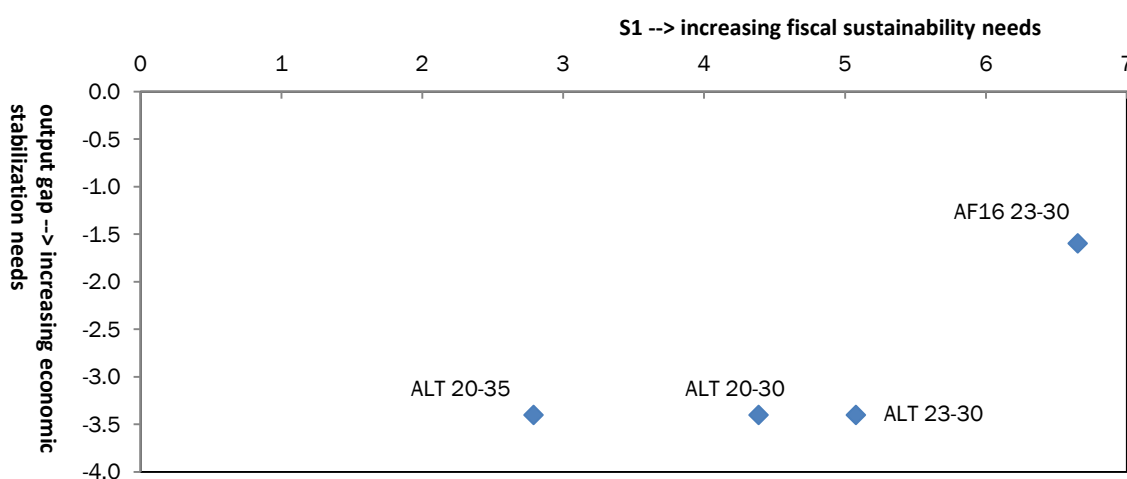


For instance, in the case of the recent 2016 Autumn forecast, the delay in the adjustment would begin in 2019 and end in 2023, leaving only 7 years of full fiscal adjustment to reach the debt threshold of 60 percent of GDP in 2030 vis-à-vis the period of 10 year that was granted in the 2012 Fiscal Sustainability Report. Once again, the convergence to the 60 percent threshold has become even harder for countries with high, though sustainable, initial debt.

In conclusion, according to the current methodology, the outcomes of S1 depend strongly on the number of years assumed for the delay in the adjustment (to date, five) and on the number of years remaining to the convergence to the target of 60 percent of the debt-to-GDP ratio. While, on one hand, lengthening the time horizon to reach 60 percent debt-to-GDP threshold decreases the annual fiscal effort and improves the S1 indicator, on the other hand, increasing the number of years of delay in the adjustment worsens the indicator, requiring higher fiscal efforts in a shorter time period.

On the backdrop of all these considerations on the unreliability of the output gaps and on the sensitivity of the S1 indicator to the setting of the time horizon, Figure III.3 presents an assessment of the Italian fiscal stance under different specifications.

**FIGURE III.3 – ITALIAN FISCAL STANCE: OUTPUT GAP VERSUS S1 WITH DIFFERENT SPECIFICATIONS**



Source: 2016 MEF elaborations.

Note: AF stands for Autumn Forecasts whereas ALT stands for the estimation of output gaps carried out with the enhanced method developed by the Italian Treasury. The first number is the year at which will end the period of delay in the fiscal adjustment for the S1 indicator whereas the last number indicates the year in which the debt threshold of 60 percent of GDP is expected to be reached.

The right side of the graph reports the combination between the 2016 output gap as published by the Commission in the last Autumn Forecasts and S1 indicator computed according to the methodology published in the 2015 Fiscal Sustainability Report (with the period of delay ending in 2023 and the debt hitting the 60 percent threshold in 2030). Due to the high value of S1 vis-à-vis the value of the output gap, such combination would point towards a higher fiscal sustainability need for Italian public finances rather than a stabilization need and to a negative or non-existent fiscal stance.

The other combinations in the figure consider the output gap computed according to the enhanced model developed by the Italian Treasury (see Paragraph 1.4) and different specifications of S1. For instance, using the enhanced output gap measure for 2016 and lengthening the time horizon to reach the 60 percent of the debt-to-GDP ratio in 2035 and shortening the number of years of the delay in the adjustment to two rather than five, would significantly improve S1 which would reach a value close to 2.8, well below the high risk threshold (equal to 3.0) estimated in the 2012 Fiscal Sustainability Report and slightly above the threshold (equal to 2.5) of the 2015 Fiscal Sustainability Report. In this case, the combination would point towards a higher stabilization needs for the Italian public finances rather than a fiscal sustainability need and to a positive fiscal stance. With intermediate specifications, S1 would signal a lower risk than what suggested by the Autumn Forecasts values and correspondently it would increase the need for a stabilization policy as well as the magnitude of the fiscal stance.

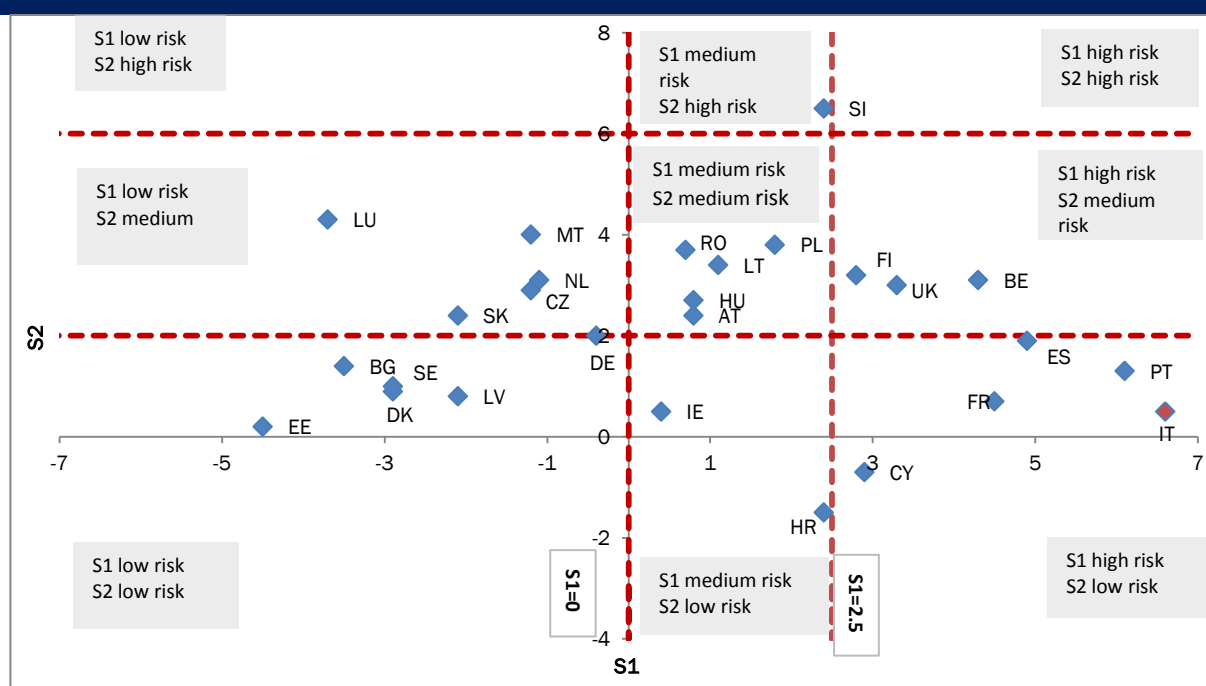
As with S1 and the assessment on the amplitude of the fiscal stance strongly depends on the distance to the 60 percent debt-to-GDP ratio and on the number of years that are chosen to reach that threshold, it is of some interest to assess the trade-off between stabilization and sustainability needs by looking at other indicators which are less prone to revisions due to the time horizon.

For instance replacing the sustainability indicator S1 with S2, countries will be required to carry out a fiscal effort that will allow to stabilize the debt-to-GDP ratio over an infinite horizon by complying with the intertemporal budget constraint rather than converging to the debt threshold of 60 percent of GDP.

It is interesting to notice that the relative position on fiscal sustainability among Member States changes a lot depending on the indicator chosen. In fact, as Figure III.4 shows, there is no correlation among the relative position of Member States concerning the value they score in the S1 and S2 indicators: Luxemburg, for instance, has the best performance for S1 and among the worse for S2.

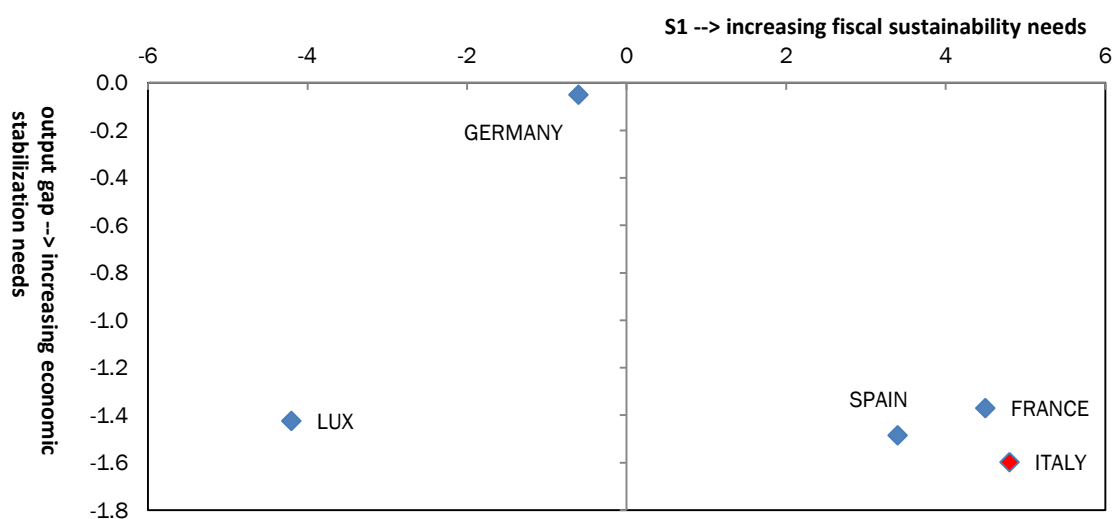
Taking into account the differences between the two indicators, Figure III.5, presents the combination between the 2016 output gap as published by the Commission in the last Autumn Forecasts and S1 indicator for different Euro area countries. In this example, Germany and Luxembourg appear to have a negative output gap coupled with a better sustainability position relatively to Spain, France and Italy in terms of fiscal sustainability. Therefore, according to the approach of the Commission, Germany and Luxembourg are entitled to undertake a moderately expansionary fiscal policy which, instead, is negated to Spain, France and Italy, in spite of their large output gaps because of the existence of risks on fiscal sustainability signaled by S1.

**FIGURE III.4 –CORRELATION BETWEEN COUNTRIES RELATIVE POSITIONS ON S1 VERSUS S2**



2016 MEF elaborations based on the Commission Services 2016 Debt Sustainability Monitor

**FIGURE III.5 –FISCAL STANCE: OUTPUT GAP VERSUS S1, CHOSEN COUNTRIES**

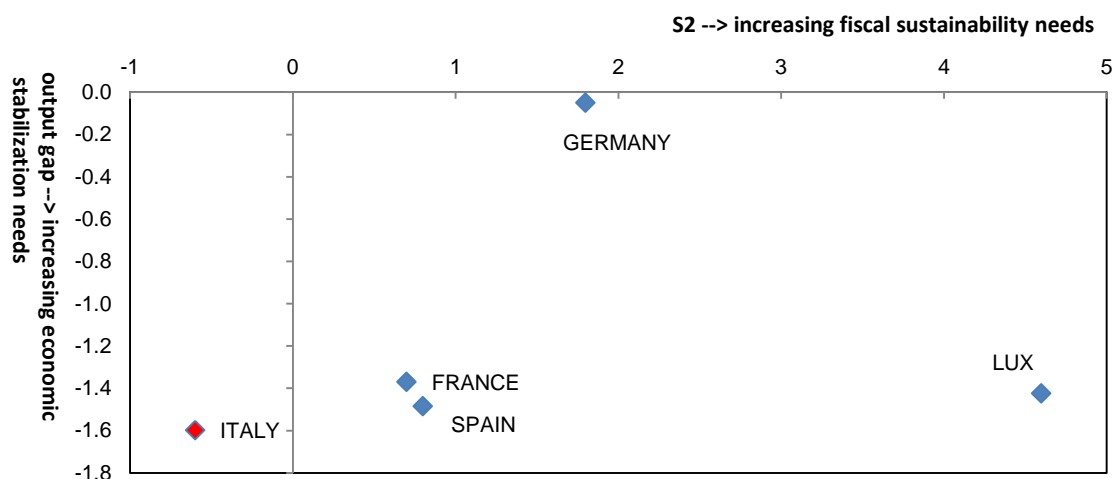


2016 MEF elaborations.

When using S2 in place of S1, as done in Figure III.6, the situation is reversed. Italy, France and Spain, which are able to stabilize the debt-to-GDP ratio over the long term taking into account the impact of ageing costs, will have a fiscal position more sustainable than Luxembourg and Germany and, at the same time, larger output gaps. In this example, a moderate fiscal expansion would not have any dangerous effects on the sustainability side, given that the ageing costs in the three countries are totally under control.

In conclusion, the concept of fiscal stance as designed by the Commission is strongly dependent on the indicators that have been chosen. In this respect, relying on an enhanced measure of output gaps, more in line with existing spare productive capacity, and having more time to converge to the 60 percent debt-to-GDP ratio over the medium run, Italy would gain a significant fiscal space which could be used to implement stabilization policies and structural reforms able to boost potential growth.

**FIGURE III.6 – FISCAL STANCE: OUTPUT GAP VERSUS S2, CHOSEN COUNTRIES**



2016 MEF elaborations.

### III.4 ITALY'S FISCAL STANCE IN THE EUROPEAN CONTEXT

In the recent debate on the appropriateness of the fiscal stance for the Euro Area, a broad consensus has emerged on the importance of rebalancing the macroeconomic policy mix, as growth has revealed weaker than desirable. It is in the light of the sluggish recovery and risks in the macroeconomic environment that the IMF, recommended to G20 Member States at their meeting in early September to use all policy tools - structural, monetary and fiscal - to support short-term growth while accelerating the positive impact of structural reforms<sup>10</sup>.

Also the OECD recently argued that 'a rethink is needed for how the fiscal policy stance should be evaluated, particularly in the context where very low sovereign interest rates provide more fiscal space'<sup>11</sup>.

As already recalled in the previous paragraph, the European Commission, in its November 2016 Communication<sup>12</sup>, argued that an expansionary fiscal stance of 0.5 percent of GDP the Euro Area as a whole would be appropriate in the following years. According to the European Commission estimates, this target is consistent with a policy fully pursuing a

<sup>10</sup> IMF, 'Global prospects and policy challenges', G20 Leaders' Summit September 4-5.

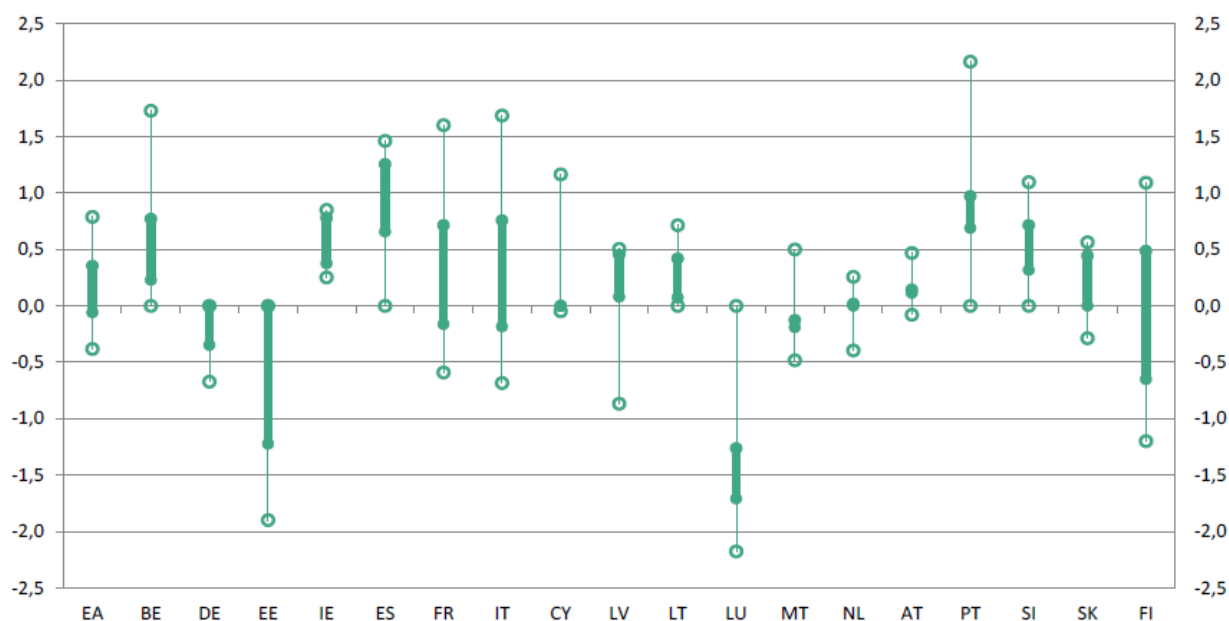
<sup>11</sup> OCSE, 'Global economic outlook', Chapter II, November 2016.

<sup>12</sup> European Commission, 'Towards a positive fiscal stance for the euro area', November 2016.

stabilisation objective of closing the aggregate Euro Area output gap by 50 percent (see Figure III.7)<sup>13</sup>. At present, monetary policy is the only policy tool that is supporting aggregate demand, while there is scope within the European fiscal rules for growth-friendly fiscal policy to play a bigger role in supporting demand. Such an improved policy mix would ease, according to the Commission, the functioning of the EMU and prevent an increase in global imbalances<sup>14</sup>.

Given the risk that low investment and high unemployment could eventually become structural with long-lasting detrimental effects on potential growth, promoting an increase in demand appears to be desirable, in general, because of the high efficiency of fiscal policy to attain stabilization goals in such a context. Indeed, in the current low interest rate environment, where the European Central Bank accommodative monetary policy is maintaining interest rates near the zero floor, an expansionary fiscal policy can exert major impact on employment and real GDP as fiscal multipliers are proved to be particularly large.

**FIGURE III.7 – RANGES FOR THE FISCAL STANCE**



Source: Commission Services – Public Finance in EMU - 2016.

The lower (upper) bounds indicate full priority to stabilization (sustainability). The thick lines indicate restrictive ranges, within which the fiscal stance accommodates both stabilisation and sustainability needs, while the thin lines indicate broad ranges, within which the fiscal stance addresses one objective at the expense of the other.

The current debate also suggests that, besides the intonation of fiscal policy and the size of expansion, it is important to improve the quality of the composition of public finance, notably by supporting material and immaterial public investment and making tax-benefit structures more efficient. Finally, the increasing importance of the Euro Area as a whole calls for a more balanced distribution of the adjustment across Member States, having considered that fiscal space is heterogeneous distributed in the area.

<sup>13</sup> European Commission, 'Public Finance in EMU', December 2016.

<sup>14</sup> European Commission, 'Quarterly Report on the Euro Area', Volume 15, No 3 (2016).

Actually, while sustainability risks for the medium-term are to be reduced, in the short-term these appear to be moderate for the whole Euro Area, as reflected in the low interest rates of most government bonds. In such a framework, the higher efficiency of well-designed fiscal impulse and the relatively low cost of delaying consolidations point in the direction of favouring macroeconomic stabilisation rather than public finances sustainability.

Against these normative recommendations, the horizontal assessment of the European Commission on national Draft Budgetary Plans (DBP) for 2017 points to a deterioration of the structural deficit of about 0.2 percentage points of GDP in the Euro Area in 2016, reflecting the use of flexibility clauses by main Member States (among which Italy). In 2017, instead, the fiscal stance in the area is projected to turn again neutral with a nil change in the structural balance. Other measures of fiscal stance based on primary balance or the newly introduced Discretionary Fiscal Indicator (DFI) provide a similar picture. In addition, the Council opinion on the DBP required several Member States (among which Italy) to reinforce the planned structural adjustment in 2017, in order to fully comply with the rules of the preventive arm of the SGP.

In such a context, if Italy and other Member States, whose fiscal plans are expected to deviate from the adjustment path towards the MTO, delivered the additional structural improvements recommended by the Commission, the fiscal stance for the Euro Area would turn to be restrictive in both 2017 and 2018. The fiscal stance in the EMU would bring back in an expansionary territory only if Member States having achieved or overarched their MTO, notably Germany and the Netherlands, would use their fiscal space. However, as stressed by the same European Commission in its November 2016 Communication, the SGP does not provide for binding mechanisms to require Member States that are at their MTO or have overarched their objective to use the available fiscal space. As a result, full adherence to the rules of the preventive arm of the SGP would hamper the achievement of the recommended fiscal policy orientation of the euro area in 2017.

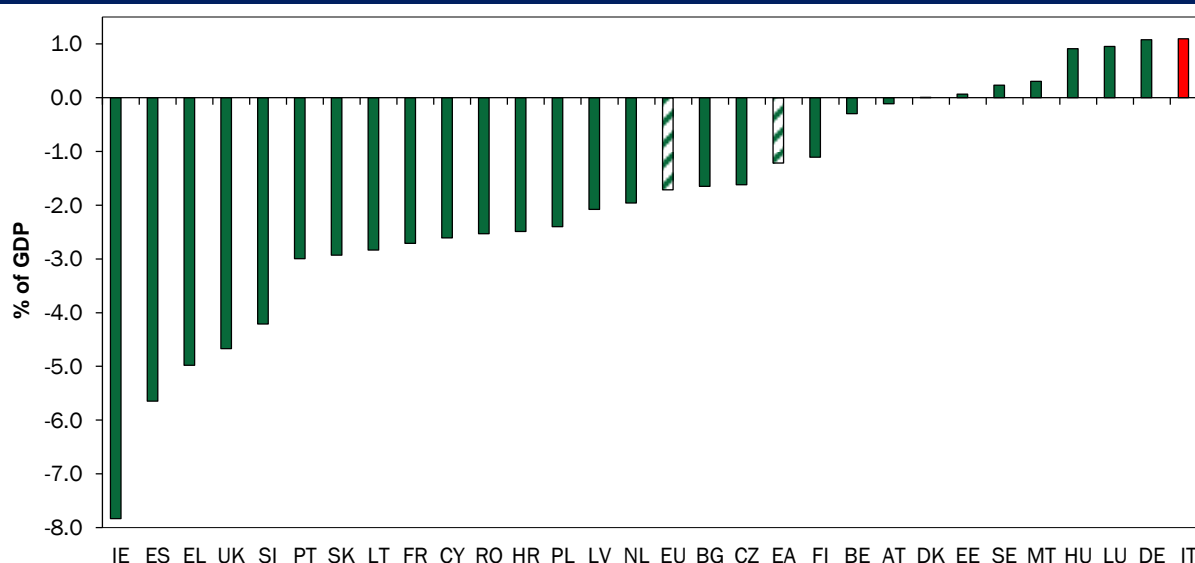
Against this backdrop, it is of some importance to consider that, not only fiscal space is unevenly distributed in the Euro Area, but also economic perspectives and, therefore, the need to foster a more balanced and inclusive economic growth in the EMU would require a fiscal stimulus in countries that are experiencing the weakest performances, in terms of both employment and domestic demand, rather than in those already competitive and with relatively more favorable fiscal position. The main driver to curb the high debt ratio experienced by Italy and other member states is indeed economic growth.

To sum up, the Italian government considers the greater emphasis placed on growth-friendly fiscal consolidation in 2016 and 2017 appropriate. As recommended by international bodies, Italy has made use of flexibility margins for structural reforms and public investments allowed by the SGP rules. The orientation of Italy's fiscal policy in 2017 would contribute to the fiscal stance originally recommended by the Commission for the Euro Area. Finally, discretionary measures focus primarily on public investment and address underinvestment in the private sector by providing selective tax incentives on the purchase of capital goods with a high R&D and innovative content.

### III.5 ITALY'S TRACK RECORD OF PRIMARY SURPLUSES, DEVELOPMENTS IN PRIMARY SPENDING AND QUALITY OF PUBLIC FINANCES

Since the economic and financial crisis, fiscal consolidation has been a central feature of Italy's public finance. The headline deficit has been equal to or below 3 percent of GDP as from 2012 in spite of very unfavourable cyclical conditions. It declined to 2.6 percent of GDP in 2015 and is projected to further decrease in 2016 and beyond. The decline in net borrowing has been ensured by the maintenance of positive primary balances: Italy records the highest primary surplus in the Euro Area and the European Union on average over the last seven years (see Figure III.8). In the period 2009-2015, both the Euro Area and the European Union recorded a primary deficit.

**FIGURE III.8 – GENERAL GOVERNMENT PRIMARY BALANCE, EDP (AVERAGE 2009-2015)**



Source: 2016 European Commission Autumn Forecast.

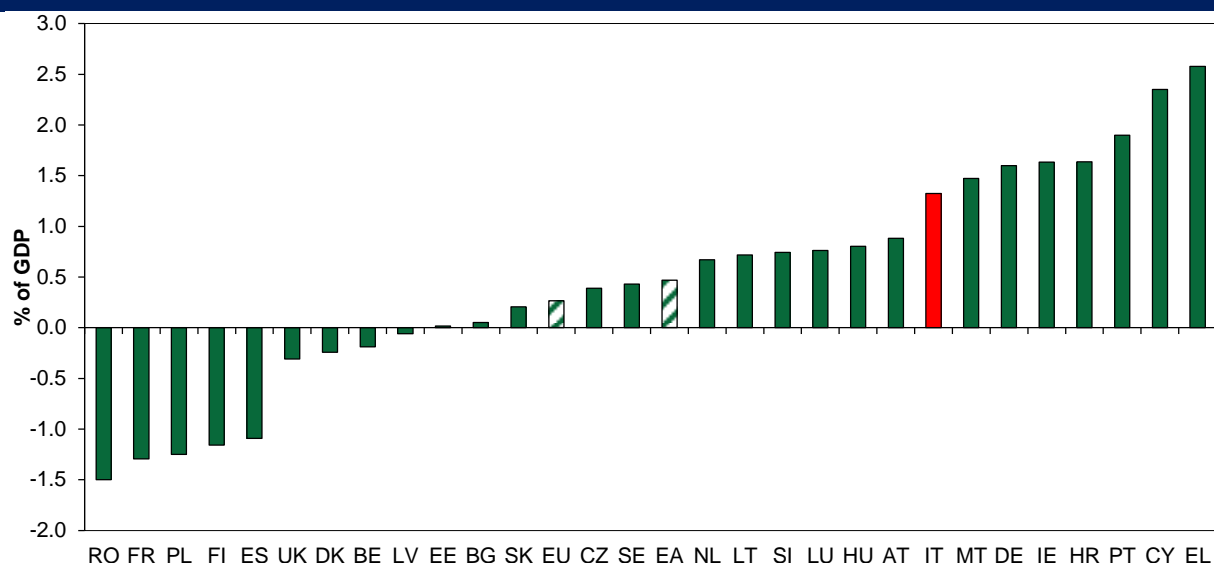
The 2016 Commission Autumn Forecast projects the Italian primary surplus to be stable at 1.6 percent of GDP in 2016 and slightly reduce in the following years, once the expansionary effects of the 2017 Budget Law are included. The average primary surplus forecast over the period 2016-2018 is about 1.3 percent of GDP (see Figure III.9), thus confirming the soundness of Italy's position vis-à-vis other European partners with a similar level of debt-to GDP ratio and economic growth perspectives. The primary balance in the Euro Area is forecast at 0.5 percent on average in the period.

The maintenance of high primary surplus has been accompanied by a progressive improvement in the quality of public finance and further reinforcement is expected in the following years.

On the revenue side, the measures introduced in the latest years have aimed at minimizing the distortionary impact on economic growth. According to the analysis carried out within the so-called Tax Assessment Framework, which was discussed in the Economic Policy Committee (EPC) meeting of last October, Italy has been recognised as the only country which was able to substantially reduce the tax wedge on labour in 2015 among those

countries identified as facing a potential challenge as regards the tax wedge for low income earners.

**FIGURE III.9 – GENERAL GOVERNMENT PRIMARY BALANCE FORECAST, EDP (AVERAGE 2016-2018)**



Source: 2016 European Commission Autumn Forecast.

As a result of budget measures already legislated, taxes deemed detrimental for the economy will be reduced. The cut in the corporate income tax rate (from 32.5 to 24 percent) will lead to a decrease in current taxes on income and wealth-ratio to GDP at 14.4 percent next year, as pointed out by the Commission in the staff document on Italy's 2017 DBP. Social contributions are also projected to decrease as a share of GDP, mainly due to the measures enacted in previous Stability Laws.

The corrective arm of the SGP explicitly mentions the development of primary expenditure, both current and capital, as a relevant factor to be considered for the purpose of the Excessive Deficit Procedure (Art. 3, of Regulation 1467/1997).

As already stressed in Italy's Report on relevant factors of May 2016, the achievement of a sound primary surplus in 2015 was matched by the stabilisation of primary current expenditure and a turnaround in public investment, which grew by 0.3 percent after five consecutive years of decline according to data notified by ISTAT in September. General government primary spending declined to 46.2 percent of GDP and is forecast to reduce to 45.5 percent of GDP in 2016. In 2017, the Commission Autumn Forecast projects a further reduction by 0.2 percentage points in terms of GDP, including the effects of the 2017 Budget Law.

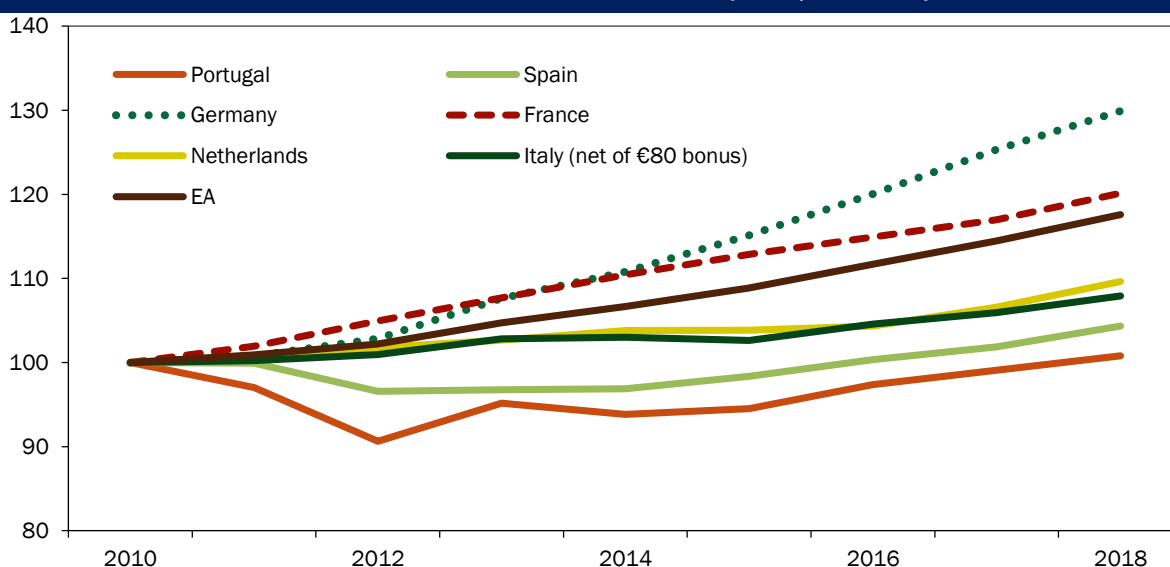
Focusing on expenditure composition, in 2015 primary current expenditure declined to 42.1 percent of GDP, while capital expenditure reached a share of 4.1 percent. Italy's primary current spending would have reduced in absolute terms if the €80 fiscal bonus, which was introduced in 2014 and made permanent in 2015, was classified as a lower tax rather than a social transfer in cash, contrary to the development observed on average in the EA and EU and in main European partners.

In 2016, compensations of employees are projected to increase in nominal terms after five years of consecutive reductions, due to the override of turnover in some sectors of the



general government and the end of wage freeze following the Constitutional Court ruling of June 2015, which declared unconstitutional the freezing of collective bargaining in the public sector in force since 2010. Social transfers in cash will increase at a similar rate of GDP, while the dynamic of intermediate consumption is almost flat, reflecting the spending review measures introduced in the past. As a result, as for 2016 current primary expenditure will start to increase again (see Figure III.10), but at a lower rate than GDP. The ratio of primary current spending to GDP is therefore expected to remain on a decreasing path and below those of the Euro Area.

**FIGURE III.10 - GENERAL GOVERNMENT PRIMARY CURRENT SPENDING (LEVEL, 2010= 100)**

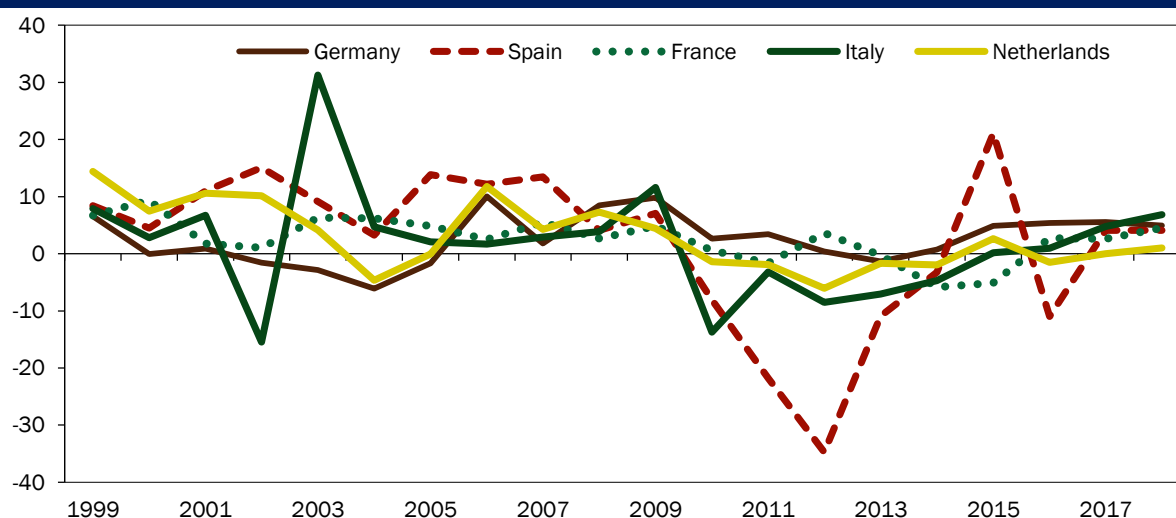


Source: Elaboration on 2016 European Commission Autumn Forecast.

According to the Commission forecast, gross fixed investment are planned to increase by 0.9 percent this year, due to the implementation of the Investment plan for which Italy applied for additional SGP flexibility last Autumn. The planned increase is about 4.7 percent in 2017 and 6.9 percent in 2019, due to the measures planned in the 2017 DBP and approved by the Parliament with the 2017 Budget Law (see Figure III.11).

According to national authorities, special consideration should be given on the efforts planned by Italy to bring back public capital accumulation at least at pre-crisis level. The sluggishness of investment activity is not just an Italian issue, but according to recent literature it is deemed as one of the main cause of the unsatisfactory economic recovery in the main industrialised economies that are facing lowering standards in their infrastructural assets after years of investment retrenchment due to austerity measures. The recovery of public investment in Italy should be encouraged by European fiscal rules in the future years. Government investment are expected to exert the highest impact on GDP assessed by a multiplier above 1 in the current exceptional situation characterised by a high share of constrained households and interest rate at the zero lower bound.

Finally, in the current year several reforms affecting the effectiveness of Italy's national budgetary framework have been delivered.

**FIGURE III.11: GENERAL GOVERNMENT GROSS FIXED CAPITAL FORMATION (GROWTH RATE)**

Source: Elaboration on 2016 European Commission Autumn Forecast.

Firstly, it is worth mentioning the reform approved last May that reinforced the top-down approach to economic and financial planning, through integrating the spending review process into the budget cycle. According to the new framework, by the end of May the Ministry of Economy and Finance sets expenditure targets for each Minister consistently with national spending targets. The Ministries can make proposals on efficiency improvements, in the use of resources through administrative procedures and any regulatory change designed to achieve the expected results/spending ceiling. These proposals are evaluated for the purpose of their inclusion in the Budget Law and subject to parliamentary debate during the approval process of the budget. The reform approved last May also streamlined the classification of the State budget, to make clear the link between the underlying policies and the services provided<sup>15</sup>.

Secondly, the reform of the public finance and accounting law approved last August provided for the integration of the Stability Law in the Budget Law. One of the main consequences of the reform is that the Budget Law becomes a substantive law, as the constitutional principle, placed so far in Article 81, under which the Budget Law could not introduce either new spending or new revenue, is abolished. Until last year, the the State budget bill was merely a picture of revenue and expenses forecast over the forthcoming three years, once the measures introduced by the Stability Law were finally factored in. Starting from this Autumn session, the Budget Law affects directly, through rescheduling or refinancing, appropriations at unchanged legislation. The integration of the three-year public finance measures in the budget bill allows to bring the focus on the total amount of public resources and their relationship to the final objectives of measures, while in the past the debate focused exclusively on the yearly changes introduced by the Stability Law. The reform allows the Parliament to simultaneously verify the financial effect of public finance measures and the resulting revenue and spending levels. It is also aimed at improving transparency and enhancing the allocation function of the budget, since the analysis of budget content relating to each spending program is to be conducted at the level of budgetary elementary units instead of the upper levels of functions and programs as it has been until now.

<sup>15</sup> Please find more details in Chapter III of the Update to the 2016 Economic and Financial Document.

## **IV. DEVELOPMENTS IN THE GOVERNMENT DEBT POSITION**

### **IV.1 THE DYNAMIC OF THE DEBT-TO-GDP RATIO**

According to the 2016 Commission's Autumn Forecasts, Italy's public debt as a ratio of GDP has increased, on average, by 3.0 percentage points over the period 2013-2015 but the rate of growth has progressively decelerated with time.

The increase in Italian debt has been the result of factors that are mostly outside the direct control of national authorities. These are, in terms of relevance: the piling up effects coming from interests; the negative impact of real GDP growth; and the negative contribution coming from the stock-flow adjustment. The snowball effect has also been amplified in the current environment of low inflation.

Overall, in 2013-2015, the snowball effect has raised debt, on average, by 3.7 percentage points of GDP with a sizeable portion of such an increase that has to be accounted for the effect of negative or nil real GDP growth experienced in 2013 and 2014, which pushed the debt-to-GDP ratio up, on average, by 1.0 percentage points.

By contrast, the counterbalancing impact coming from inflation (i.e. growth in GDP deflator) has been extensively subdued. Indeed, with an average change in GDP deflator equal to 0.9 percent over the period 2013-2015, the reducing impact on public debt has been, on average, only around 1.2 percentage points of GDP. In this respect, it is worth highlighting that, due to very low inflation in 2016, the debt reducing impact stemming from prices is not expected to improve further.

Against this backdrop, in spite of the difficult cyclical conditions, Italian governments have been able to run significant primary surpluses over the 2013-2015 period amounting, on average, to 1.8 percent of GDP, a figure which is well above the historical average primary surplus recorded since 2001, equal to 1.4 percent of GDP. By contrast, the contribution coming from the Stock Flow Adjustment has pushed the debt-to-GDP ratio up by, on average, almost 1.0 percentage points, offsetting in part the reduction effect stemming from the budgetary tightening.

In 2016, thanks to the maintenance of a high primary surplus around 1.6 percent of GDP projected both by the latest Commission and the Italian government, the debt-to-GDP ratio has increased only slightly (0.7 percentage points according to the Commission and 0.5 percentage points according to national authorities) in spite of the lacklustre price developments. The piling up impact coming from the snowball effect has remained significant and prevailing but it has been almost offset by the countervailing contributions stemming from primary surplus and stock flow adjustment components, with the latter benefitting from substantial yields from privatisations<sup>1</sup>.

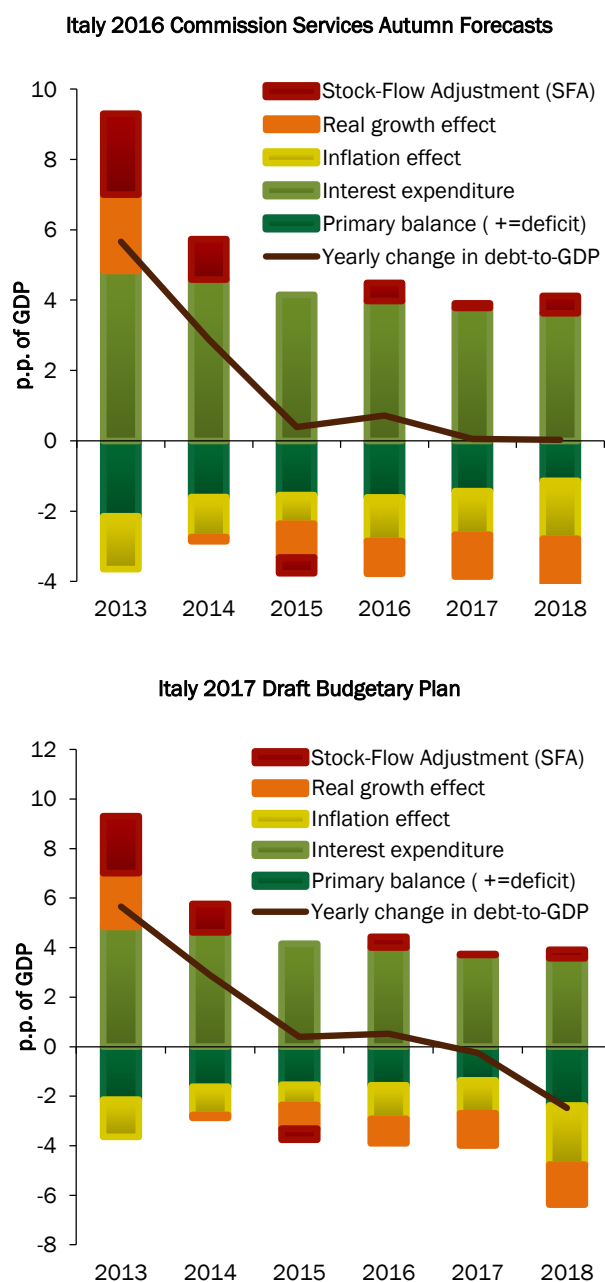
In 2017, the debt-to-GDP ratio is expected to stabilize according to Commission estimates and to decrease by 0.3 percentage points of GDP according to the DBP. The

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<sup>1</sup> In 2016, an amount of 5.6bn euro has been allocated for debt reduction purposes.

impact of the snow-ball effect will be reduced thanks to higher real GDP growth and completely offset by the declining contribution of primary surplus.

**FIGURE IV.1: ANNUAL CHANGE IN THE GROSS DEBT RATIO: 2016 COMMISSION AUTUMN FORECAST VS 2017 DBP**



Source: European Commission, Spring Forecast 2016.

3.5 percent of GDP in 2013, 3.7 percent of GDP in 2014 and 3.6 percent of GDP 2015. In 2016-2019, the impact of such components is expected to be, on average, around 3.3 percent of GDP.

In 2018, debt-to-GDP ratio is expected to remain constant to the level of 133 percent according to the Commission. The reduced magnitude of the snowball effect due to a more substantial contribution coming from real growth and price dynamics will not be completely offset by the primary surplus which, in turn, under a no-policy change assumption which does not take into account the activation of the safeguard clause implemented in the Italian Budget law, is projected to fall to 1.1 percent of GDP from 1.4 percent expected during the current year. In the government projection, instead, the debt-to-GDP ratio is expected to diminish by 2.5 percentage points of GDP in 2018 thanks to the return on a sustained growth path as well as thanks to the impact of the measures legislated in the 2017 Budget law which will increase the primary surplus to 2.4 percent of GDP (Figure IV.1).

Finally, it is of some importance to highlight that Italy is among the Member States providing funding to financial stability mechanisms set at the European level since the onset of the sovereign debt crisis in 2011, though it has not benefitted from any support. These transactions have exerted a significant impact on the level of public debt.

According to the figures published in the 2016 Update of the Economic and Financial Document, the funding to financial stability mechanisms (ESM, EFSF) together with the financing of the Greek programs amounts to about 0.8 percent of GDP in 2011, 2.6 percent of GDP in 2012,

## IV.2 PUBLIC DEBT STRUCTURE

With the aim of addressing the main financial risks such as those due to the refinancing of public debt, interest rate, inflation and exchange rate risks, in 2016 relevant progresses have been achieved on the composition of the stock of government securities, which currently represents around 84 percent of the total General Government debt.

In spite of the increase in the stock of governments securities of nearly 53 billion euros during 2016, the share of BOTs<sup>2</sup> decreased from 6.34 percent at the end of 2015 to 5.74 percent at the end of 2016. A similar pattern was recorded for the CTZs' share<sup>3</sup> that went down from 2.68 percent to 2.12 percent over the same period. Within the stock of nominal BTPs<sup>4</sup>, the share of paper with a residual maturity below 1 year was stable at 8 percent. The same occurred for the stock of BTPs with a residual maturity equal or longer than 10 years which hovered around 24 percent of the total. Within this last segment, however, the share of very long dated bonds (with a residual maturity equal or longer than 15 years) was further consolidated moving up from 59 percent to 59.4 percent.

In term of flows the share of total debt issuance of bonds with a maturity equal or longer than 10 years was around 24 percent in 2016 vis-à-vis a share of 21.5 percent in 2015. The increase in long dated debt issuance was also due to the successful introduction in the market of two new BTP benchmark tenors: the 20 year one introduced in April and the 50 year one in October<sup>5</sup>.

Thanks to this policy, the picture of refinancing risk management marginally improved: the average life of the total stock of government securities increased from 6.52 years in 2015 to 6.76 years in 2016, after three years of reduction. While the share of securities coming due in the next year increased slightly (from 16.5 percent at the end of 2015 to 17.31 percent at the end of 2016 ) the share of paper coming due in the next 5 years came down from 54.32 percent at the end of 2015 to 53.3 percent at the end of 2016.

Also the exposure to interest rate and inflation risk was substantially unchanged if not slightly reduced: in 2016 the quota of CCTeus/CCTs (floaters with a maturity between 5 and 7 years linked to 6-month Euribor rate and 6-month T-bill auction rate) increased at the margin from 6.68 percent to 7.21 percent whereas that of BTP€I and BTP Italia (real bonds linked, respectively, to European and Italian inflation) went down from 13.66 percent to 12.71 percent due mainly to a only partial refinancing of the BTP Italia large redemptions. Accordingly, the total share of floating debt was stable at around 20 percent in the last two years.

Focusing on the interest rate risk, it is of some importance to notice that *Average Refixing Period (ARP)*<sup>6</sup> increased marginally from 5.41 to 5.64 years, therefore showing a slightly better exposure to potential interest rate shocks coming from fixed income markets.

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<sup>2</sup> T-bills, i.e. government paper with a maturity at issuance equal or shorter than 1 year.

<sup>3</sup> CTZ are zero coupon paper with a 2-year maturity at issuance.

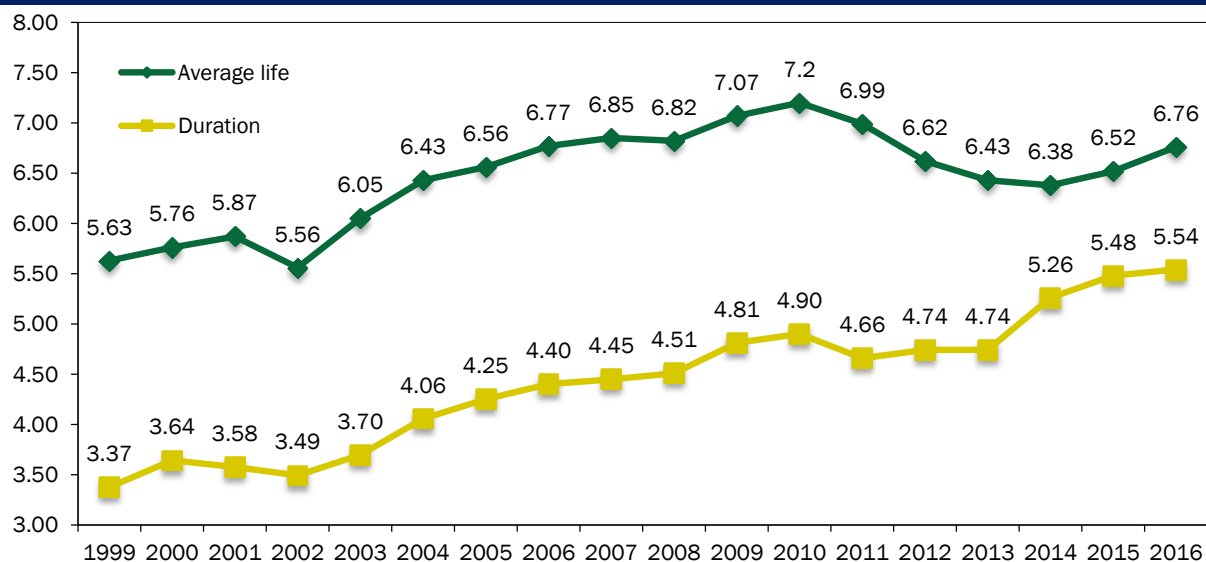
<sup>4</sup> BTP are the standard fixed-rate nominal bonds with a maturity range from 3 to 50 years at issuance.

<sup>5</sup> The issuance of long dated bonds on the other standard maturities (15 and 30 years namely), both in the nominal space and in the inflation-linked space, was also continuous and regular.

<sup>6</sup> The average refixing period (ARP) reflects the average time still to elapse (without discounting the flows) before the debt structure incorporates the new market rates. For real or nominal fixed-rate securities, the indicator is based on the residual life of each security, whereas for variable-rate securities, the indicator is based on the time to elapse until the indexing of the next coupon. Each security is included in the weighted calculation for the nominal value outstanding.

In parallel, also the duration of total stock of government securities went up from 5.48 to 5.54 years, but part of this increase was also due to a further reduction of market interest rates<sup>7</sup>.

**FIGURE IV.2 – AVERAGE LIFE AND DURATION OF GOVERNMENT SECURITIES OUTSTANDING**



Source: MEF

The evolution of the total debt interest burden to market shocks provides another way to look at how the exposure to interest rate risk has been managed over the year. As of January 2017, no significant change has occurred with respect to what reported last April in the 2016 Economic and Financial Document, (DEF 2016, Table V.1).

In this regard, a permanent shock of 100 basis points on the whole yield curve would impact the interest debt burden for 0.13 percent of GDP in the first year, 0.28 points in the second year, 0.40 points in the third year and 0.50 in the fourth year. This stands against the potential impact of the same shock if all the debt had to be refinanced in the same year, that would equal to 1.12 percent of GDP as of the stock of government securities at end of 2016.

Finally, the exposure to exchange rate risk in 2016 remained negligible: at the end of the year the share of debt issued in foreign currency unhedged<sup>8</sup> was still 0.13 percent as in the end 2015.

The results achieved in terms of risks management did not prevent to benefit, at the same time, of some further debt cost reduction. Indeed, with respect to 2015, in 2016 the average cost at issuance fell to 0.55 percent from 0.70 percent of last year. This was of course helped by the reduction of market interest rates for the Italian debt as all the issuance activity carried out up to the initial part of the last quarter of the year took place

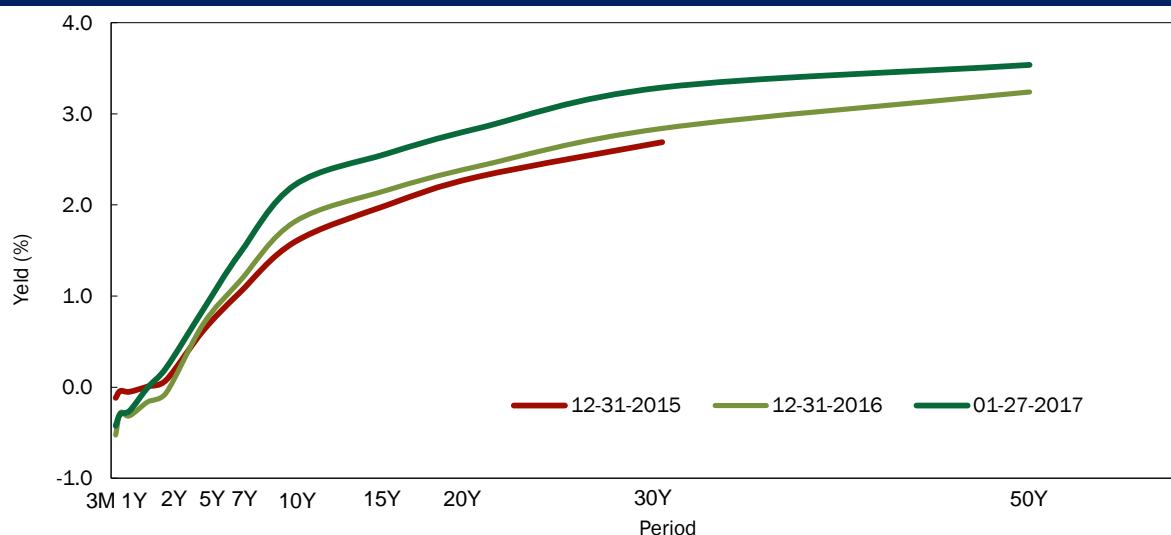
<sup>7</sup> The duration measure is indeed affected also by the general level of interest rates in addition to the actual composition of debt.

<sup>8</sup> Large part of debt issued in foreign currency is indeed swapped back into euro.

in a market context characterized by a general trend of declining rates, even with periods high volatility.

Short term rates were negative throughout 2016 (reaching a minimum of around - 0.24 in mid-October for the 1 year T-bill) but also all two-year paper placements were carried out at negative rates (the minimum was reached in September at -0,21 percent) and even some three-year BTP auctions were priced at rates below zero. The market 10 year rate moved down from 1.5 percent at the start of the year to almost 1 percent in mid-August to then back up significantly, levelling to 1.8 percent in December, after having gone beyond the 2 percent threshold the days before the Constitutional Referendum. The slope of the Italian yield curve remained therefore quite stable during the year - at around 140-120 basis points - in the segment 2-10 year up to August. Afterwards it steepened significantly to reach in the current days a level almost double with respect to that of August (220-240 basis points). Significantly, the slope of the 10-30 year segment did not follow the same path: it remained at current levels - 110 basis points - all over the year, except for the summer period when it even decreased somewhat, showing a strong resilience of the demand for very long dated bonds.

**FIGURE IV.3 – EVOLUTION OF ITALIAN DEBT YIELD CURVE**



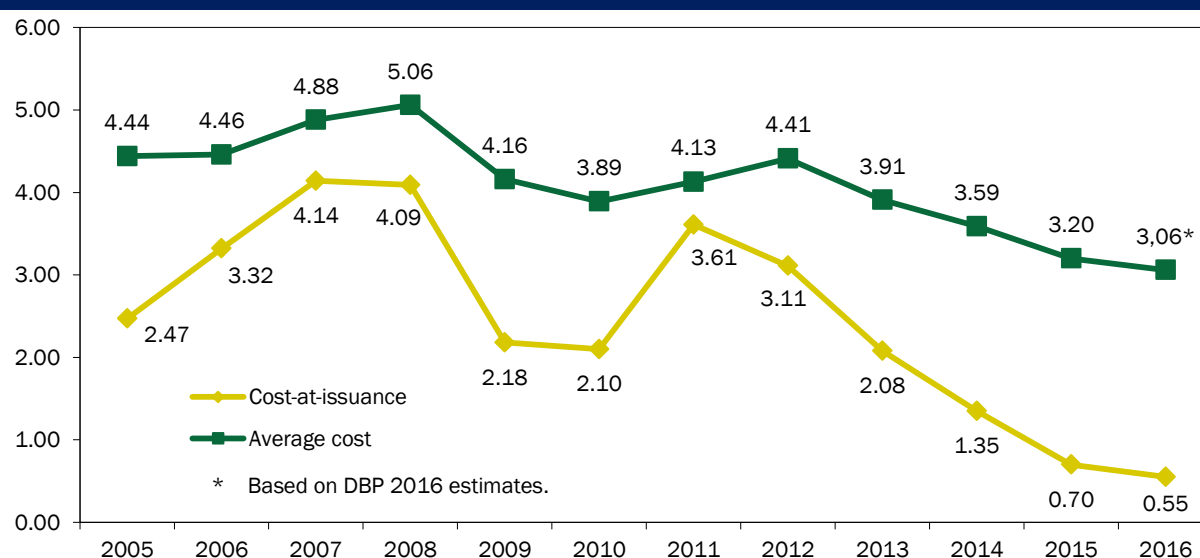
Source: MEF.

The reduction of yield level was mostly due to the ECB activity in carrying out its QE program but also to the improved macroeconomic and public finance outlook vis-à-vis 2015.

At the end of 2016 the amount of debt bought by the ECB was slightly below 210 billion euros (book value), a level reached through monthly purchases of around 9.5 billion on average starting from last March. In 2016 this activity impacted the general level of interest rates but it neither significantly compressed volatility, that instead resurfaced in many instances throughout the year with large movements on a daily (but especially intra-day) basis in rates level nor, as mentioned above, contributed in flattening the shape of the Italian yield curve.

By issuing significantly on longer maturities, in order to further improve the debt resilience to market risks, Italy therefore gave up to some more interest burden reduction consequently losing the benefits in terms of the decline in debt-to-GDP ratio.



**FIGURE IV.4 – THE EVOLUTION OF THE DEBT AVERAGE COST AND THE COST-AT-ISSUANCE**

Source: MEF.

Against this backdrop, a provisional estimate of the total interest burden on General Government Debt point to an average cost level of around 3.06 percent in 2016, which represents a reduction of around 4 percent vis-à-vis the 2015 level (3.20 percent). Such a reduction is largely below that of the marginal cost at issuance that fell of 21 percent, from 0.7 percent in 2015 to 0.55 percent in 2016: the difference in the reduction speed is mostly explained by the debt structure which is characterized by a significant presence of long dated bonds.

If, for instance, the issuance activity in 2016 had been skewed towards shorter maturities, the marginal cost at issuance would have fallen even more (approaching 0 percent) pushing down also the average cost; nonetheless this policy would have left the debt more exposed to market risks in the future.

As already pointed out in the previous report on the Relevant Factors of May 2016, the structure of the debt protects Italy from interest rate shocks and other types of risks. At the same time, it makes for a slower decline in interest payments as yields fall.

### **IV.3 FURTHER RISKS RELATED TO THE STRUCTURE OF PUBLIC DEBT FINANCING**

Both the level and the changes in the share of short-term public debt (in percent of the total debt) provide an indication of increased/decreased refinancing risk (or roll-over risk) and vulnerability in relation to government's reliance on temporary market financing. In the European Commission's approach, those values would be examined in relation to a set of calculated critical thresholds, according to the so called signals' approach, so as to establish whether fiscal risks related to the structure of public debt financing may eventually emerge.

According to the Commission methodology for assessing debt sustainability, short-term debt above 6.6 percent may be considered at high risk of roll-over whereas its yearly change should be considered highly risky if it records an increase above the threshold of 2.76



percentage points. On the basis of Eurostat figures, between 2013 and 2015, the share of short term debt of Italy has constantly decreased going, respectively, from 15 percent to 14 percent. In 2016, according to the provisional data published by the Bank of Italy<sup>9</sup>, which cover the period up till November of last year, the share moved further down by approximately 0.9 percentage points. Accordingly, given the constant reduction pattern, possible risks of roll-over may only stem from the initial share.

As show in the previous section, Italy's public debt presents a high average term to maturity (average life) of 6.7 years that compares favorably with those of other developed countries. In particular, according to the IMF, in 2016, the debt-to-average maturity (i.e. an indication of the amount of new issued bonds) will be 20.4 percent of GDP, a value not far from the average of 18.8 percent for G7 countries (Table IV.2).

**Table IV.2: STRUCTURAL INDICATORS FOR THE DEBT IN 2016**

Country	Average term to maturity, 2016	Debt-to-average maturity, 2016
AT	7.7	11.0
BE	8.5	12.5
DE	6.1	11.2
ES	6.5	15.3
FI	6.1	10.4
FR	7.1	13.7
<b>IT*</b>	<b>6.7</b>	<b>20.4</b>
NL	6.5	9.7
PT	6.7	19.2
SI	6.4	12.5
SWE	4.8	8.9
UK	14.4	6.2
USA	5.8	18.8
JPN	7.4	34.0
AUS	7.1	5.8
CAN	5.5	16.8
G-7	6.8	18.8
G20 ADV.	6.7	17.9

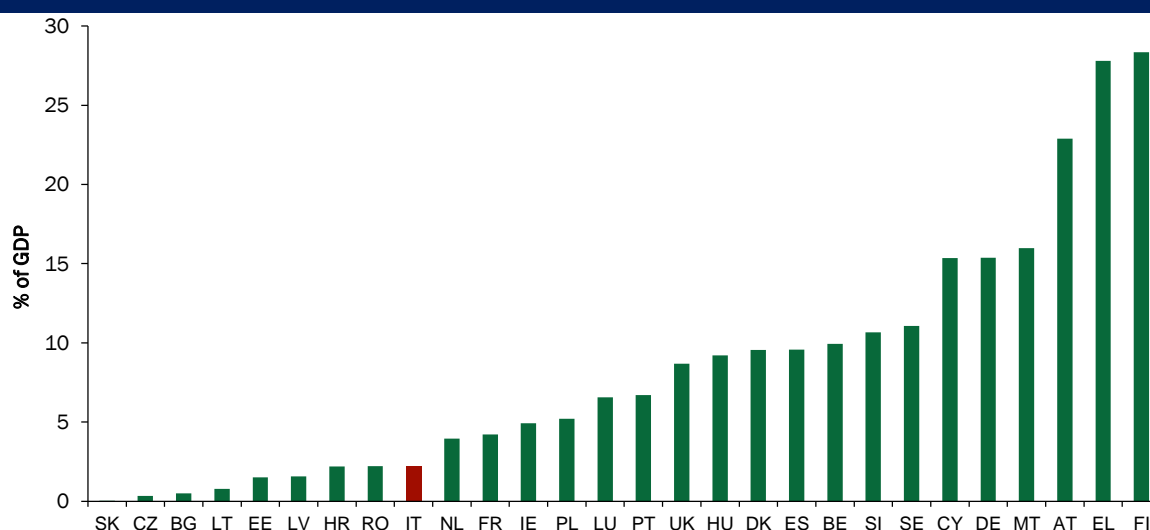
Source: IMF Fiscal monitor - October 2016.

(\*) Figures provided by national authorities.

In order to have a more comprehensive assessment of risks related to overall public debt sustainability, the data for government contingent liabilities, which are by nature potential and not actual, are also provided.

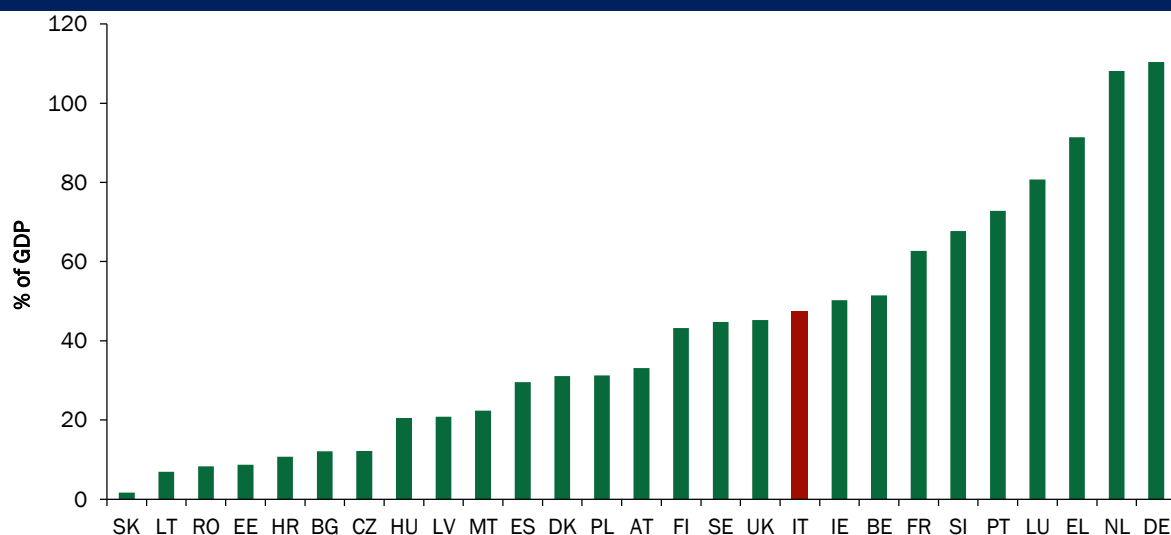
According to the January 2017 Eurostat release on contingent liabilities and non performing loans in the EU Member States, in a comparison with main European partners, Italy presents one of the lowest stocks of guarantees at 2.2 percent of GDP in 2015. Italy's stock has declined since 2012, thanks to lower guarantees issued in favour of the banking system (approximately 1.5 percent of GDP against total 2.7 percent of 2014).

<sup>9</sup> Supplemento al Bollettino Statistico - Finanza pubblica, fabbisogno e debito n. 3 del 17 Gennaio 2017. Tavola 8

**FIGURE IV.5 - TOTAL STOCK OF GOVERNMENT GUARANTEES IN % OF GDP, 2015**

Source: Eurostat, Newrelease nr. 19/2017.

Moreover, the potential risk stemming from the Italian government's participation in corporations' capital are in line with the major economies of the European Union and significantly below the figures of other countries with lower level of public debt, such as Germany and the Netherlands, whose liabilities of government controlled entities classified outside general government represent respectively 110.4 and 108.1 percent of GDP. Furthermore, unlike most other member states, the government did not own any assets based on banks' non-performing loans.

**FIGURE IV.6 - TOTAL LIABILITIES OF GOVERNMENT CONTROLLED ENTITIES IN % OF GDP, 2015**

Source: Eurostat, Newrelease nr. 19/2017.

## V. DEBT SUSTAINABILITY

### V.1 MEDIUM TERM DEBT-TO-GDP PROJECTIONS

The developments of Italian public debt over the medium term are assessed taking into account the European Commission results, based on the Autumn Forecasts, as presented in the recently published 2016 Debt Sustainability Monitor (2016 DSM)<sup>1</sup>, as well as considering the a set of simulations carried out by national authorities on the basis of the macroeconomic outlook and the fiscal targets of the 2017 Draft Budgetary Plan.

According to the DSM, the debt-to-GDP ratio is projected to increase slightly between 2015 and 2016 from the level, respectively, of 132.3 percent to 133.0 percent. The latter figure is projected to remain constant in 2017 and, under a no-policy change assumption, also in 2018.

Moreover, in the so-called baseline scenario<sup>2</sup>, which assumes for the period 2019-2027 that the cyclically primary surplus will stay constant at the level estimated for 2018 (equal to 1.1 percent of GDP), the Commission projects Italian public debt as a ratio of GDP to decrease slowly reaching the level of 128.9 percent in 2027 at the end of the forecasts horizon.

A more accelerated declining pattern is evident in the policy scenarios, which consider either the compliance with the requirements of the Stability and Growth Pact or the Stability Programme scenario. Under such assumptions, the debt-to-GDP ratio is expected to fall every year at a significantly faster rate, reaching a level close to 100 percent in 2027 (Figure V.1).

Based on a set of combined assumptions on GDP growth, inflation, primary balance and yield curve, similar deterministic scenarios for simulating the projected evolution of the debt-to-GDP ratio over the medium term have been carried out by the Italian Treasury<sup>3</sup> (Figure V.II).

The Italian treasury baseline policy scenario includes, for the years 2016 to 2019, the macroeconomic outlook and the fiscal targets of the DBP 2017. For the years beyond 2019, in line with the method called T+10, currently used by the European Commission and discussed in the EPC-output Gap Working Group (OGWG), the potential GDP growth rate is

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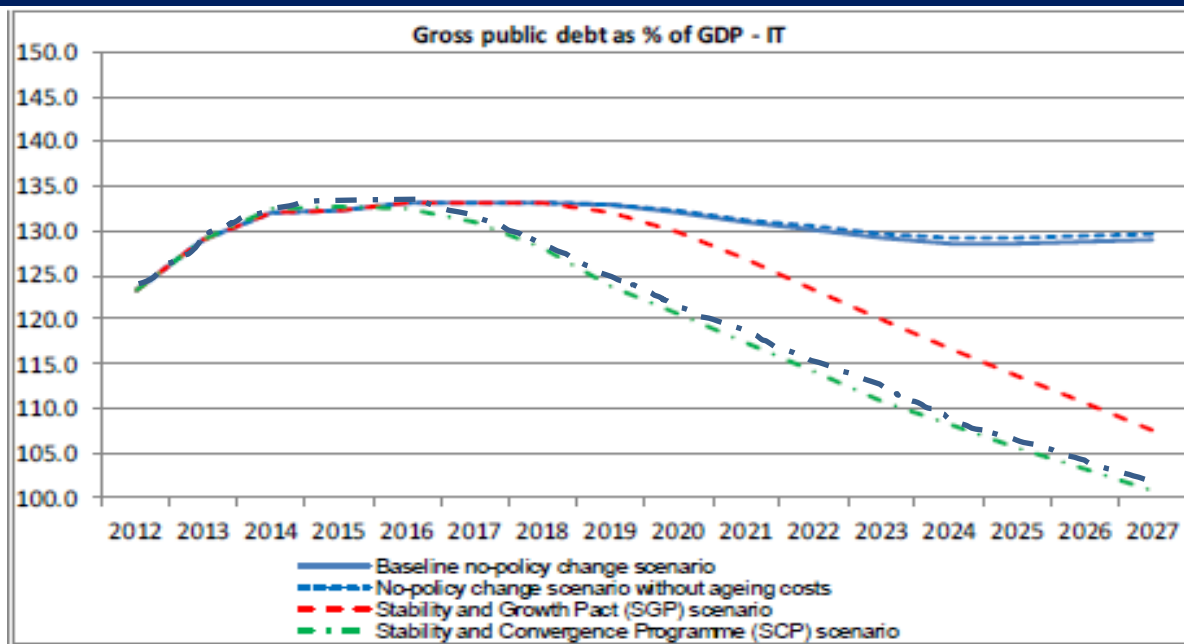
<sup>1</sup> European Commission, 2017, Debt Sustainability Monitor 2016, European Economy Institutional Paper n. 47, also available at: [http://ec.europa.eu/economy\\_finance/publications/eeip/ip047\\_en.htm](http://ec.europa.eu/economy_finance/publications/eeip/ip047_en.htm)

<sup>2</sup> The DSM deterministic debt-to-GDP projections are based on the Commission services 2016 Autumn Forecasts up to 2018. From 2019 up to 2027, the no-policy change scenario is carried out assuming that the 2018 primary structural balance will be kept constant over the projection horizon, changing only to take into account the impact of age-related expenditures as projected in the 2015 Ageing Report. Potential output growth is assumed to evolve in line with country-specific paths derived on the basis of the T+10 production function extrapolation methodology agreed by the Output Gap Working Group (OGWG). Long-term interest rate converge to 3 per cent in real term at the end of the projections horizon. Inflation is measured through the growth rate of GDP deflator which is assumed to converge to 2 per cent in 2021. The output gap closes linearly in 2020 starting from the level of 2018. The Stock-Flow adjustment is assumed equal to zero from 2018 onwards.

<sup>3</sup> Cacciotti, Conti, De Castro, Masi, Morea, Teobaldo, 2017, Gli Obiettivi Fiscali del Draft Budgetary Plan del 2017 e la Sostenibilità delle Finanze Pubbliche Italiane, MEF, Dipartimento del Tesoro, Nota Tematica, Forthcoming.

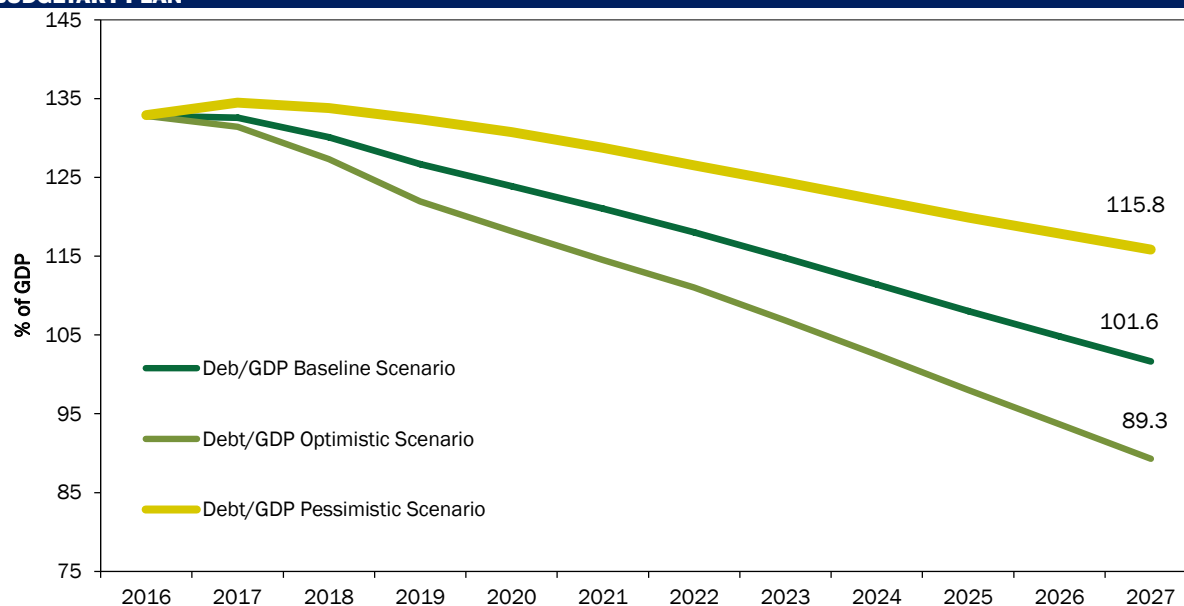
projected through a production function model assuming that the variables related to the individual inputs are extrapolated with simple statistical techniques or converging towards the structural parameters (such as the NAWRU). The output gap is closed linearly in the three years after 2019. On the basis of such assumptions, real GDP growth is projected to be on average equal to 0.7 percent over the period 2016-2027.

**FIGURE V.1: DETERMINISTIC MEDIUM-TERM DEBT-TO-GDP RATIO PROJECTIONS: SCENARIO FROM THE COMMISSION 2016 DEBT SUSTAINABILITY MONITOR**



Source: European Commission, 2016 Debt Sustainability Report.

**FIGURE V.2: DETERMINISTIC MEDIUM-TERM DEBT-TO-GDP RATIO PROJECTIONS BASED ON THE 2017 DRAFT BUDGETARY PLAN**



Source: MEF, 2016.

The yield curve is kept constant to the level of 2019 until the end of the forecast period, while the growth rate of the GDP deflator converges to 2.0 percent in 2022. Furthermore, the cyclically-adjusted primary balance estimated by the DBP for 2019 is kept constant to level of 3.2 percent of GDP until 2027, the end of the projection horizon.

In addition, the baseline scenario is shocked assuming, respectively, an optimistic and a pessimistic framework over the period 2016-2019. In the alternative scenarios, GDP growth is projected to be 0.5 percentage point per year higher or lower with respect to the baseline DBP projections. The yield curve is reduced by 40 bp in the optimistic scenario and increased by 100 b.p in the pessimistic one. These shocks impact both on the projected potential output and on the primary surplus all over the whole projection horizon, i.e up till 2027.

In all of the scenarios, the projections of the debt-to-GDP ratio are carried out by the endogenous estimation of the implicit interest rate which, in turn, considers the shocks on the yield curve and the primary surplus. The alternative scenarios allow certain interactions between macroeconomic variables so that, for example, lower GDP growth rates are accompanied by lower primary surpluses and higher borrowing costs.

Under such baseline and alternative macroeconomic and fiscal assumptions, the projections confirm the downward trend of the debt-to-GDP ratio over the medium term in all the scenarios. In the baseline scenario, which includes the DBP fiscal targets for 2019, the debt converges to a level equal to 101.6 percent of GDP in 2027. In the optimistic growth scenario, the debt-to-GDP ratio would decline even more rapidly to reach in 2027 a value equal to 89.3 percent of GDP, slightly below the threshold of 90 percent which is considered by the European Commission as the level below which the sustainability of the debt would no longer be at high risk in the medium term. In this scenario, the debt reduction benchmark for the debt rule in its forward looking configuration would be largely achieved both in 2017 and in 2018 (on the basis of the 2019 and 2020 forecasts).

On the contrary, in the pessimistic scenario the debt-to-GDP ratio would continue to decrease but at a slower pace. At the end of the projection period it would reach a value equal to 115.8 percent of GDP, 14 percentage points of GDP above the corresponding level of the baseline scenario. In this case, the debt rule would never be complied with.

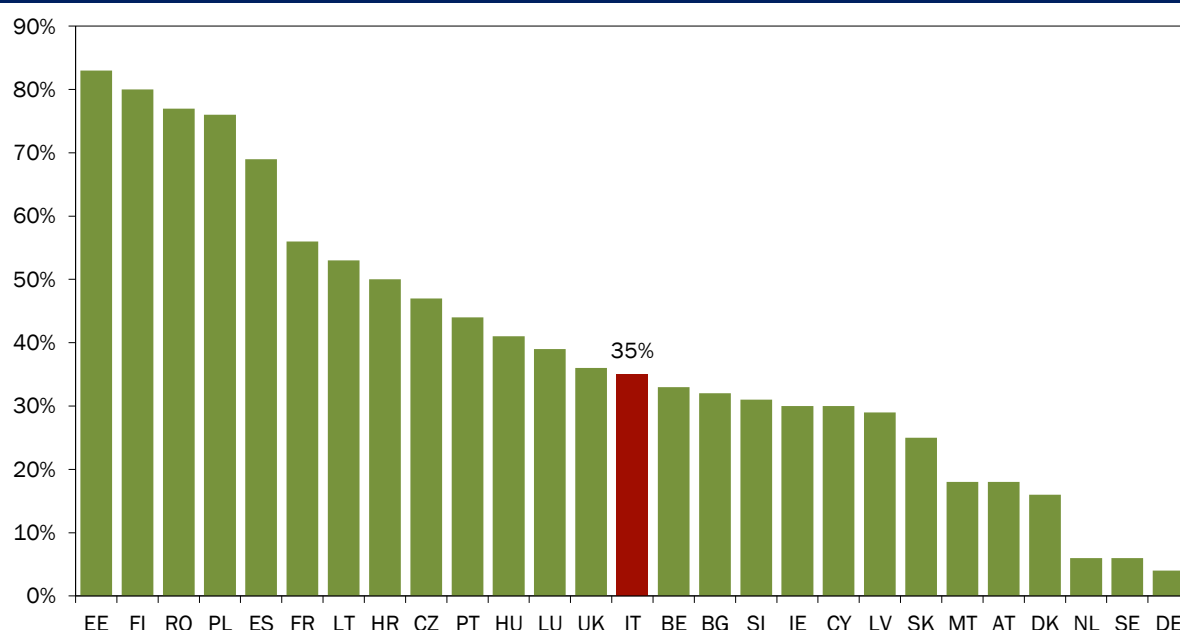
Finally, thanks to a stochastic debt simulation analysis, carried out by the Commission to grasp the sensitivity of debt-to-GDP projections to a constellation of shocks hitting simultaneously GDP growth, yield curve and primary balance, it is possible gauge whether the probability that debt-to-GDP ratio in 2021 is going to be higher than the 2016 level. For Italy such probability is only 35 percent and it is relatively low compared other EU Member States (Figure V.3).

Overall, the most widely accepted definition of fiscal sustainability assumes that a country is solvent when, under a no-policy change assumption, the debt-to-GDP ratio is not growing or is decreasing. The level at which the debt stabilizes in the medium term matters mostly in view of the probability to loose market access.

Both the Commission and the national authorities' results show that Italian public debt is expected to decrease over the medium term either considering a no-policy change assumption or assuming the full materialization of the government fiscal targets.

On the contrary, in its assessments, the Commission judgmentally considers at high risks Member States whose debt-to-GDP ratios are projected to stay, over the next 10 years, above a threshold, discretionarily chosen at 90 percent. Such a conclusion is somehow questionable, as the empirical literature is so far inconclusive on the effect of debt thresholds. In addition it is not proved that for debt-to-GDP ratios above 90 percent, the country is automatically expected to lose the market access.

**FIGURE V.3: PROBABILITY THAT THE DEBT-TO-GDP RATIO IN 2021 IS HIGHER THAN 2016**



Source: European Commission, 2016 Debt Sustainability Monitor.

On such a backdrop, the government is of the opinion that, in spite of the high starting levels, Italian debt is solvent and sustainable as it is expected with a high probability to stabilize and decrease in the next year and over the medium term thanks to the achievement of planned fiscal targets and thanks to the pension and health care reforms implemented so far.

## V.2 FISCAL SUSTAINABILITY IN LIGHT OF AGEING POPULATIONS

According to the Commission 2016 Debt Sustainability Monitor, Italy's public finances would be classified as being at low risk over the short term horizon, at high risk over the medium term, and at low risk over the long run, on the basis of a multi-dimension sustainability assessment.

This assessment is based, mostly, on the joint consideration of deterministic debt-to-GDP ratio projection scenarios presented in the previous section and on three sustainability indicators, S0, S1 and S2, which identify risks over different time horizons<sup>4</sup>. While the S1 and

<sup>4</sup> S0 is a composite index for the risk of fiscal stress in the year ahead the last historical value (the estimates refer to 2015). S0 is calculated on the basis of two thematic sub-indexes incorporating, respectively, only fiscal and financial-

S2 indicators respectively measure medium-term and long-term sustainability risks, the S0 indicator provides an identification of sustainability challenges in the shorter term (up to 1 year).

The table below shows the sustainability indicators for Italy according to the 2016 Stability Programme, the 2015 Fiscal Sustainability Report and the 2016 Debt Sustainability Monitor.

<b>TABLE V.1 - MULTI-DIMENSIONAL RISKS OF FISCAL SUSTAINABILITY</b>			
	<b>S0</b>	<b>S1</b>	<b>S2</b>
	<b>Short-term risks</b>	<b>Medium-term risks</b>	<b>Long-term risks</b>
2016 Debt Sustainability Monitor	0.42	6.6	0.5
2016 Stability Program	0.19	2.9	-1.5
2015 Fiscal Sustainability Report	0.21	4.2	-0.9

Source: Italy's 2016 Stability Programme, 2015 Fiscal Sustainability Report and 2016 Debt Sustainability Monitor.

Notes: For the S0 indicator, countries with an overall value above 0.46 are considered at risk of fiscal stress in the year ahead. For the S1 indicator, countries are considered at low risk if the value is below zero, at medium risk if the value is between 0 and 2.5, at high risk for values above 2.5. For the S2 indicator, countries are considered at low risk if the value is lower than 2, at medium risk for values included between 2 and 6 and at high risk for value above 6 percent.

With respect to the overall short-term risks of fiscal stress (S0), the value for Italy (0.42) is below the assumed threshold.

Concerning the medium term indicator, S1 shows a significant worsening in the 2016 Debt Sustainability Monitor vis-à-vis the 2015 Fiscal Sustainability Report and a huge volatility between national and commission estimates.

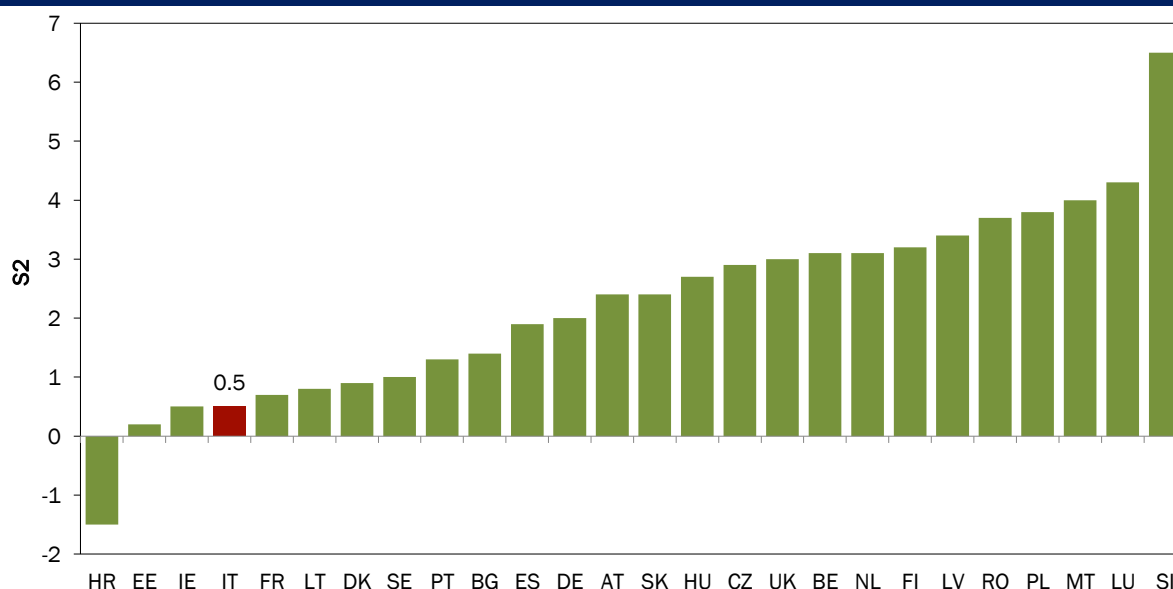
As discussed in Chapter III, both the volatility and the worsening of the S1 indicator somehow stem from the changes in the definition undertaken by the Commission in the last years. Indeed, it is of some importance to notice that, by construction, the results of the S1 indicator worsen when the distance from the target year decreases. In the 2012 Sustainability report the fiscal effort to reach a debt level of 60 percent of GDP in 2030 had to be achieved linearly in 6 years (from 2014 to 2020) and maintained constant for 10 years (from 2020 to 2030). On the contrary, in the current report (and in the 2015 Sustainability report), the fiscal effort had to be carried out linearly for 5 years (from 2019 to 2024) and maintained constant only for 7 years (from 2024 to 2031). Under these conditions, it is clear that countries with high, though decreasing and sustainable debt, like Italy are penalized.

In addition, S1 is highly dependent on the level of the cyclically-adjusted primary balance in the initial year, i.e. in 2018. In this respect, the no-policy change assumption carried out by Commission in the Autumn Forecasts does not currently include the impact of the safeguard clauses, which instead should be included as they have been legislated in the Budget Law. The exclusion of such item reduces the primary surplus by at least 1.1 percent of GDP, worsening significantly the initial budgetary conditions and the S1 index.

competitiveness variables. The medium-term sustainability indicator (S1) shows the required increase in the structural primary balance to be achieved, taking into account the burden stemming from age-related costs, cumulatively from 2019 to 2023 so as to ensure, if such an effort is maintained constant, the convergence of the debt-to-GDP ratio to the 60 percent threshold by 2031. The long-term sustainability indicator (S2) shows the fiscal adjustment in terms of structural primary balance which, if realized within the end of the short term forecast horizon, allows for complying the intertemporal budget constraint over an infinite time horizon.

Concerning instead the indicator of long-term sustainability S2, the Commission confirms that Italy's debt is among the most sustainable over the long term among EU countries. The gap relative to the primary balance required to stabilize debt at the current level and pre-finance all the future increases in age related expenditures is slightly positive (0.5 percent of GDP according to the Commission) *vis-à-vis* much larger and positive values for most of the EU countries (Figure V.4).

**FIGURE V.4: LONG-TERM FISCAL SUSTAINABILITY (S2 indicator)**



Source: European Commission, 2016 Debt Sustainability Monitor.

Liabilities emerging from the ageing of population have thus been offset by the pension reforms introduced over the past 20 years and the tight control on health and long-term care expenditures. Long term sustainability would be fully preserved also in case of deterioration of the current high level of the structural primary balance.

Furthermore, as shown in Table VI.2, the 2015 Ageing Report projects for Italy over the period 2013-2060 a reduction of 1.9 percent of GDP in pension expenditures and a slight increase of 0.9 percent of GDP in health-care expenditures which are well below the those recorded by EU/Euro Area aggregates.



**TABLE V.2: AGE RELATED EXPENDITURES (percent of GDP)**

Countries	Pension expenditures	Health-care expenditures
	Change 2013-2060 (% of GDP)	Change 2013-2060 (% of GDP)
BE	3.3	0.1
BG	-0.4	0.4
CZ	0.7	1.0
DK	-3.1	0.9
DE	2.7	0.6
EE	-1.3	0.6
IE	1.1	1.2
EL	-1.9	1.3
ES	-0.8	1.1
FR	-2.8	0.9
HR	-3.9	1.7
<b>IT</b>	<b>-1.9</b>	<b>0.7</b>
CY	-0.1	0.3
LV	-3.1	0.6
LT	0.3	0.1
LU	4.1	0.5
HU	-0.1	0.8
MT	3.2	2.1
NL	0.9	1.0
AT	0.5	1.3
PL	-0.7	1.2
PT	-0.7	2.5
RO	-0.1	1.0
SI	3.5	1.2
SK	2.1	2.0
FI	0.1	0.7
SE	-1.4	0.4
UK	0.7	1.3
NO	2.5	0.9
EU	-0.2	0.8
EA	0.0	0.9

Note: 2015 European Commission, Ageing Report.



## VI. OTHER RELEVANT FACTORS

This section presents the other relevant factors that, according to the government, should be taken into consideration when assessing Italy public debt developments. In this respect, a particular focus should be given to: 1) private sector debt developments; 2) extraordinary outlays related to the immigration and seismic risk.

With reference to the latter, the 2017-2019 Budget comprises exceptional expenditures amounting to about 0.4 percent of GDP for 2017, in relation to the following factors:

- The ongoing rise in migrant arrivals on Italian shores (amounting to 0.2 percent of GDP) and the need to set up a comprehensive policy of migration management, including investment in key countries of transit and origin of the flows (0.02 percent of GDP);
- The earthquakes of the past five months and the need to mitigate seismic risks via private and public investment (amounting to roughly 0.2 percent of GDP).

Such costs are additional to the outlays for rescue and assistance to the population (including the provision of temporary accommodation), which have been already included among the one-offs expenditures.

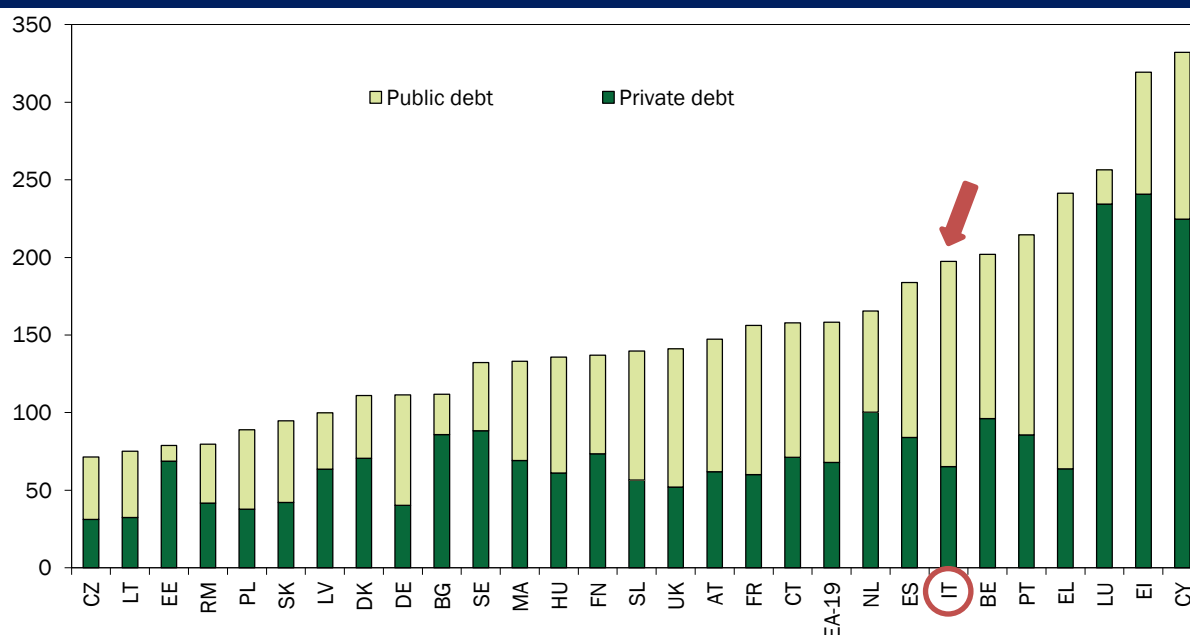
### VI.1 PRIVATE SECTOR DEBT

According to the latest official projections (Draft Budgetary Plan 2017), in 2016 the debt-to-GDP ratio should increase by only 0.5 percentage points. The government confirmed its objective to reduce public debt-to-GDP as of 2017. The more recent statistics released by Eurostat suggest that the private debt-to-GDP ratio has decreased significantly (2.0 percentage points), whereas in the euro area the ratio increased by 0.9 percentage points. As a result, the total Italian debt-to-GDP ratio (public and private) was reduced by 1.6 percentage points, 0.9 percentage points more than the euro area (Figure VI.1).

In detail, the debt of Italian households continues to remain among the lowest in the euro area. In 2015, household debt amounted to approximately 41.6 percent of GDP, 0.6 percentage points below the level of 2014 and 16 percentage points below the corresponding figure for the euro area (57.9 percent of GDP). With regard to non-financial enterprises (NFCs), the ratio of firms' financial debt-to-GDP ratio (amounting to 65.2 percent) is lower than in the euro area (67.9 percent of GDP) and substantially stable vis-à-vis the level of 2014 (equal to 67.2 percent of GDP). Firms' and households' financial conditions continued to improve also in 2016. According to the latest available data<sup>1</sup>, NFC total debt fell slightly to 67.1 percent of GDP and households' debt remained relatively stable.

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<sup>1</sup> Eurostat

**FIGURE VI.1 - PUBLIC AND PRIVATE DEBT DECOMPOSITION (% of GDP, 2015)**

Source: Eurostat.

According to the latest data released by the Bank of Italy, in November 2016 lending to firms was stable compared to the previous year. Significant differences persist among sectors and firm size: loans to companies in the service sector continued to grow while those to manufacturing firms fell slightly. Loans to construction firms are still in a negative territory. Lending to firms with 20 or more employees was slightly positive while it continued to decrease for smaller businesses. In the same month, lending to households continued to expand at a moderate pace both for consumer credit and house purchases.

The quarterly Bank Lending Survey reported unchanged lending policies to firms and households in the fourth quarter of 2016. Similar results were found for firms by the business surveys conducted in December by ISTAT and by the Bank of Italy together with 'Il Sole 24 Ore'.

The improvement in the economic outlook started to have a positive effect on the credit quality: in the third quarter of 2016, the ratio of new non-performing loans to outstanding loans fell from 2.9 to 2.6 percent (seasonally adjusted and on annualized basis). The ratio fell from 4.5 to 4.1 percent for loans to firms and from 1.9 to 1.7 percent for those to households. The ratio of the stock of NPLs to total outstanding loans remained broadly stable in the third quarter of 2016.

## VI.2 COSTS OF MIGRANTS AND REFUGEES CRISIS

Since 2014, an extraordinary influx of refugees and migrants has arrived on the Italian coasts. The numbers soared in 2016 - already a record year - totalling 181,436 individuals rescued so far<sup>2</sup>. The current figure is well above the peak experienced two years ago, more than three times the level of 2013 and even higher than in 2011-2012, the period following the 'Arab Spring'. The magnitude of the phenomenon indicates its severity, which is further stressed by the large number of women and minors involved (unaccompanied children will be more than 25 thousand in 2016).

The current crisis reflects the ongoing conflict in the East Mediterranean area, lax border controls in Libya and a growing number of people fleeing hostile conditions in areas of Sub-Saharan Africa. It is putting unprecedented pressure on the European Union's external borders and generating political and social tensions in EU countries. A common European response is necessary to re-evaluate the asylum system mechanisms<sup>3</sup>, the protection of human rights, and the management of external borders as already stated in the document on *A Shared European Policy Strategy for Growth, Jobs and Stability* issued by the Italian Government in February 2016<sup>4</sup>.

At its October meeting, the European Council acknowledged the emergency in tackling migratory flows and notably the prevention of illegal immigration along the Central Mediterranean route. The Council also recognized "*the significant contribution, including of financial nature, made by frontline member states in recent years*". Indeed, external borders are matter of common responsibility. Italy is playing a critical role in securing them and has made an exceptional financial effort to fulfil humanitarian obligations. Since the outbreak of the emergency, close to half a million people were saved at sea.

The escalation of arrivals is producing a considerable strain on the reception capacity. Attendance to the various types of facilities has increased from 22 thousand units in 2013 to 104 thousand in 2015 up to 176 thousand units<sup>5</sup> in 2016 (Figures in the Appendix from 1 to 4). Most refugees are hosted in temporary structures (about 77 percent), because the conventional reception services for asylum seekers run at the central level and the system of protection for asylum seekers and refugees run by local governments can accommodate only a relatively small number.

Asylum applications have also been on a rise with up to 123 thousand applications in 2016<sup>6</sup>. Five hotspots have been activated (Pozzallo, Porto Empedocle, Trapani, Lampedusa, Taranto), with capacity for 1,800 people. They provide for the identification of migrants in collaboration with officials of Easo, Frontex and Europol, proving Italy's effort to fully implement EU rules at the external borders. The procedures for the construction of two new hotspots in Mineo and Messina are underway, and the realization of other identification and sorting centers in Calabria, Apulia and Sardinia is being evaluated.

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<sup>2</sup> The increasing trend is confirmed by mid-January data: in the first ten days of 2017, 729 people landed on Italian coasts, against 268 people in the first ten days of 2016 and 1,310 in 2015.

<sup>3</sup> Currently governed by EU Regulation No. 604/2013 of 26 June 2013 (Dublin III) which establishes the criteria for determining the Member State responsible for reviewing an application for international protection presented in one of the Member States by a citizen of a third country or a person without citizenship.

<sup>4</sup> [http://www.governo.it/sites/governo.it/files/ASharedPolicyStrategy\\_20160222.pdf](http://www.governo.it/sites/governo.it/files/ASharedPolicyStrategy_20160222.pdf).

<sup>5</sup> Source: Ministry of internal affairs.

<sup>6</sup> Source: Ministry of internal affairs, data as of 15 December 2016.

On the other hand, implementing the EU relocation plans foreseen by the Justice and Internal Affairs Council last year<sup>7</sup> has proved more difficult than expected and Italy has been forced to take further measures to relieve local governments in areas with high density of migrants. To this purpose, a new national 'reception plan' was introduced. The plan aims at achieving a fairer distribution of migrants and refugees across the territory (on the basis of proportionality and sustainability criteria) and it takes into account the need to adopt specific legislation to allow for community work, training and integration. To accompany the scheme, additional 100 million euro were allocated to grant municipalities up to 500 euro for each refugee they agree to accommodate<sup>8</sup>.

These circumstances support the fact that Italy's financial effort to face the refugee crisis cannot be evaluated in terms of year-on-year expenditure increase alone. It must be assessed relative to the situation Italy would experience if it were not at the frontline of the Union's borders.

As recently detailed in the Draft Budgetary Plan, rescue operations, first provision of health care assistance, shelter and education for unaccompanied minors are estimated, net of EU contributions, at 3.3 billion euro in 2016 and 3.8 billion euro (0.22 percent of GDP) in 2017, in a steady-state scenario. Should the influx continue to grow, as the trends experienced in the last few months suggest, expenditure could reap up to 4.2 billion euro (0.24 percent of GDP). These figures do not include an additional 200 million euro (0.02 percent of GDP) for the 'Fund for Africa' appropriated in the 2017-2019 budget law and specifically dedicated to investment in key countries of transit and origin of the flows<sup>9</sup>.

At this rate, Italy's outlays are already about 2 to 3 times above the average expenditure recorded in the period 2011 to 2013, before the burst of the current emergency<sup>10</sup>. The differential between the expenditure, net of EU contributions, estimated for 2017 and the one supported in the years 2011-2013 is worth between 2.9 and 3.2 billion (respectively, 0.17 to 0.19 percent of GDP)<sup>11</sup> and about 8 to 8.4 billion in cumulative terms since 2014.

Most of the costs incurred are related to rescue at sea, identification, shelter, clothes and food. On an accounting basis, they translate into higher personnel costs, operating costs and amortization of the costs for ships and aircraft. A detailed quantification of the expenditure items by ESA and functional categories, gross and net of the EU contributions

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<sup>7</sup> The EU relocation plan foresaw a total of 160,000 transfers from Greece and Italy by September 2017. The plan assumes the transfer of 40 thousand asylum seekers from Italy to other EU countries in the first year and an additional transfer of around 12,000 people afterwards. Compared to these figures, as of December 30th 2016, only 2,654 asylum seekers have been relocated from Italy to other EU countries (about 7 percent of the total), cfr. [https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-migration/press-material/docs/state\\_of\\_play\\_-\\_relocation\\_en.pdf](https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-migration/press-material/docs/state_of_play_-_relocation_en.pdf) and Ministry of internal affairs

<sup>8</sup> Article 12, Decree law 193/2016.

<sup>9</sup> Unlike other Member states, Italy's estimates do not include the additional cost of social integration for migrants, as these are not directly related to the management of the 'European border.'

<sup>10</sup> Comparison with the average 2011-2013 expenditure is calculated net of the 'Arab Spring' peak which resulted in extraordinary wave of refugees between late 2011 and 2012.

<sup>11</sup> With the publication of the Winter Forecasts, the European Commission announced it would be carefully monitoring the situation related to expenditure for the refugees, on the basis of the data supplied by the authorities of the Member States affected, so as to determine eligible amounts, including for the calculation of the structural borrowing, as provided by Article 5.1 and Article 6.3 of the EC Regulation No. 1466/97, and Article 3 of the Fiscal Compact. The information will be used for an ex-post evaluation of possible deviations from the 2015 and 2016 objectives due to the additional costs related to the refugee emergency. So far the change in expenditure in GDP of 0.03 percent in 2015 over the previous year and 0.04 percent in 2016 compared to 2015 has been considered "eligible".

(e.g. for the External Borders Fund, the Return Fund, Refugee Fund and Integration Fund for non-EU country nationals), was presented in the tables of the Draft Budgetary Plan.

Overall the 0.22 to 0.24 percent of GDP estimated for 2017 is consistent with the forecast provided by international organizations on this subject: the fiscal impact of the expenditure for migrants in Italy carried out by the International Monetary Fund is even higher, up to 0.24 percent of GDP in 2016<sup>12</sup>.

### **VI.3 PREVENTION OF ANTI-SEISMIC RISK, HYDROGEOLOGICAL INSTABILITY AND SECURING SCHOOLS**

The wave of earthquakes in Central Italy has caused a large number of casualties and extensive damages to private and public buildings, roads and the historical and artistic heritage. In 2017 the country will incur considerable expenses for immediate relief and to tackle the start of reconstruction in the affected areas.

Italy has been living with natural disasters for a long time. Its morphological features, wide geophysical activities of the subsoil and strong propensity for hydrogeological instability, expose the country to the risk of destructive events and frequent landslides. The impact of catastrophes is amplified by the lack of surface planning, the inadequacy of maintenance works, and disregard for the environment. These factors put the population at risk and represent an economic and budgetary risk for the future.

Besides the measures to support the recovery of the affected areas, the implementation of an extraordinary plan meant to overcome the vulnerability of the national territory in front of the frequency of these destructive events has become urgent (the so-called 'Casa Italia').

Therefore, in addition to the *one-off* expenditure directly allocated for the direct costs of the earthquakes, the Budget law has increased tax incentives for seismic proof prevention and rehabilitation measures, targeting mainly private housing. These include a 50 percent deduction of costs for maintenance aimed at securing buildings used for primary residence, secondary dwellings, condos and productive activities in seismic risk areas (extended to include to zone 3). It will be usable over an extended period - from January 1, 2017 to December 31, 2021 - with a 96 thousand euro annual ceiling and delivered in five equal annual instalments (instead of the usual ten). Moreover, in case the result of those interventions produces a reduction of seismic risk with the transition to a lower-risk class, tax is up to 70 percent deduction of costs, whereas with the transition to two lower-risk classes is up to 85 percent deduction of costs.<sup>13</sup>

The deduction of costs 50 percent is immediately effective and the High Council of Public Works is meant to complete - by end of February 2017 - guidelines related to evaluating and certifying the risk class of buildings. The budgetary cost in 2017 of tax

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<sup>12</sup> International Monetary Fund (2016), *The Refugee Surge in Europe: Economic Challenges*. The fiscal costs for asylum seekers are estimated to Italy as a percentage of GDP for the years 2014-2016: 0.17 percent of GDP for the year 2014, 0.20 percent of GDP for the year 2015, 0.24 percent of GDP for the year 2016.  
<https://www.imf.org/external/pubs/ft/sdn/2016/sdn1602.pdf>.

<sup>13</sup> Article 1, paragraph 2 of the 2017-2019 Budget Law

incentives related to securing buildings is estimated at 2 billion euro, representing a down payment in the same year of about 15 percent of the total forecasted expenditure<sup>14</sup>.

Moreover, the 2017-2019 Budget has established a special multiannual ‘investment fund’<sup>15</sup>, a relevant share of which will be allocated in 2017 to securing schools and public offices and taking action to prevent anti-seism risk and hydrogeological instability (estimated 0,5 billion euro). Decrees of the President of the Council of Ministers will determine which projects will be financed, on the basis of proposals made by central administrations and with the possibility of recurring to the European Investment Bank, the Council of Europe Development Bank and Cassa Depositi e Prestiti.

Finally, at the local level, the 2017-2019 Budget law favours further action to foster the safeguard of the territory, address seismic risk and make the country more secure, by granting Regions and municipalities additional margins for investment (estimated 0,5 billion euro), some of which are specifically earmarked for schools<sup>16</sup>. Indeed, the process for allocating resources to schools has already started, calling upon local governments to submit their financial needs for “shovel ready” projects by end of February on a dedicated web platform<sup>17</sup>.

Taken together, increased anti-seismic tax incentives and public investment measures entail budgetary costs of close to 0.2 percent of GDP.

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<sup>14</sup> These include specific anti-seismic interventions and an approximate 30 percent of the expenditure on rehabilitation, energy upgrading and renovations that, according to an analysis of data from recent tax returns, can be attributed to basic securing and safety of the buildings.

<sup>15</sup> Article 1, paragraph 140 of the 2017-2019 Budget Law.

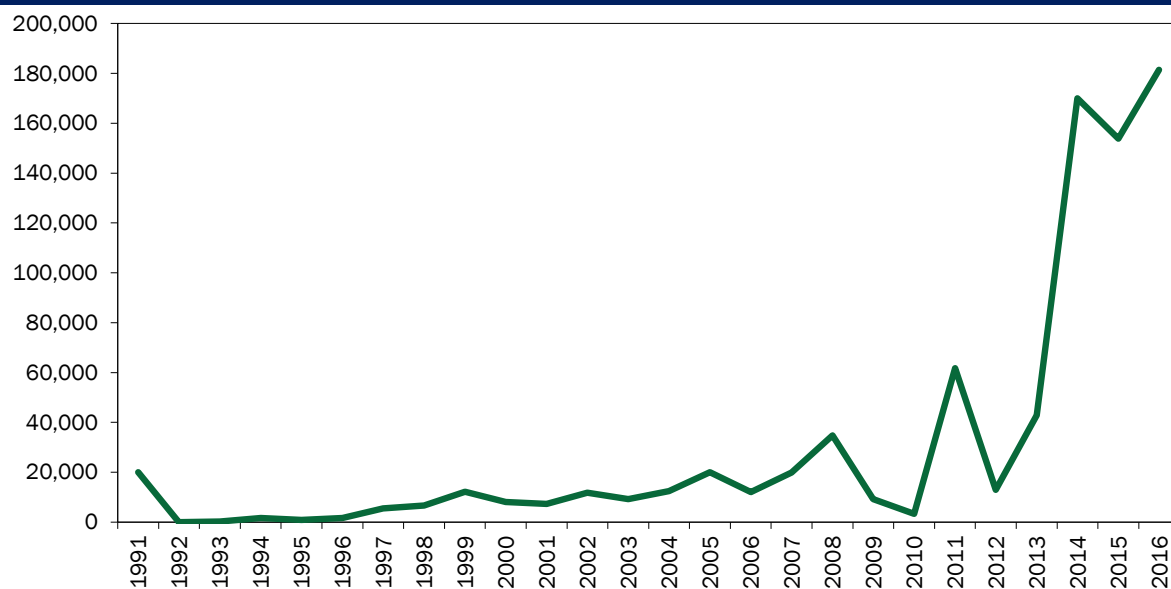
<sup>16</sup> Article 1, paragraph 485 and 495 of the 2017-2019 Budget Law.

<sup>17</sup> <http://pareggiobilancio.mef.gov.it>



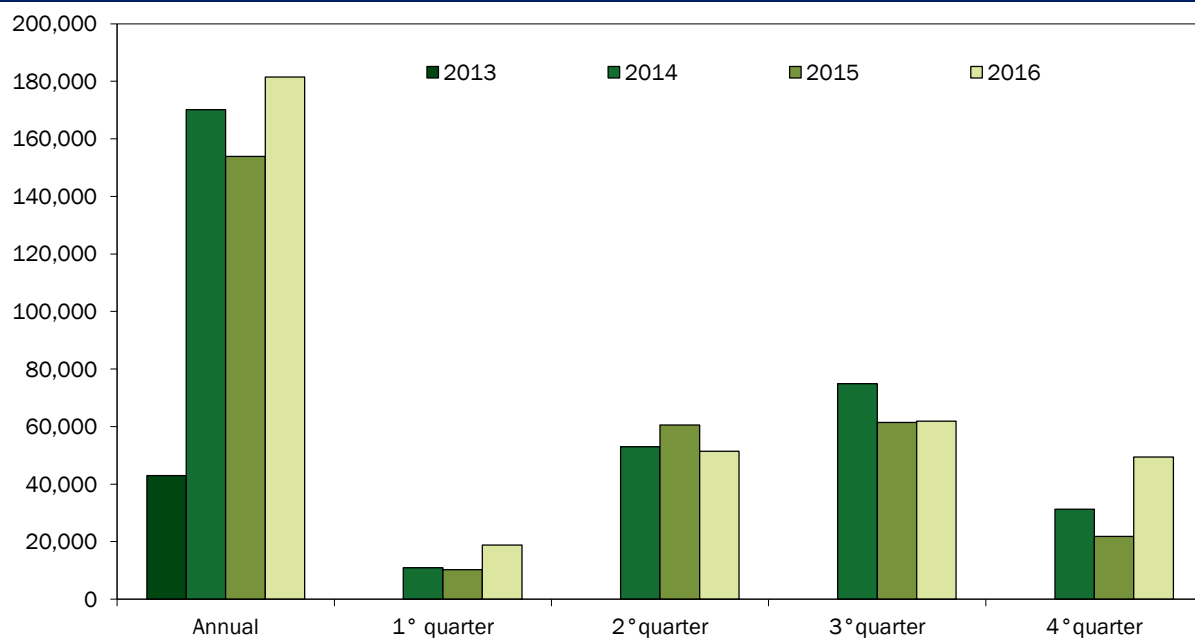
## APPENDIX

**FIGURE A.1: ARRIVALS OF MIGRANTS ON ITALY'S COASTS. YEARS: 1991-2016**

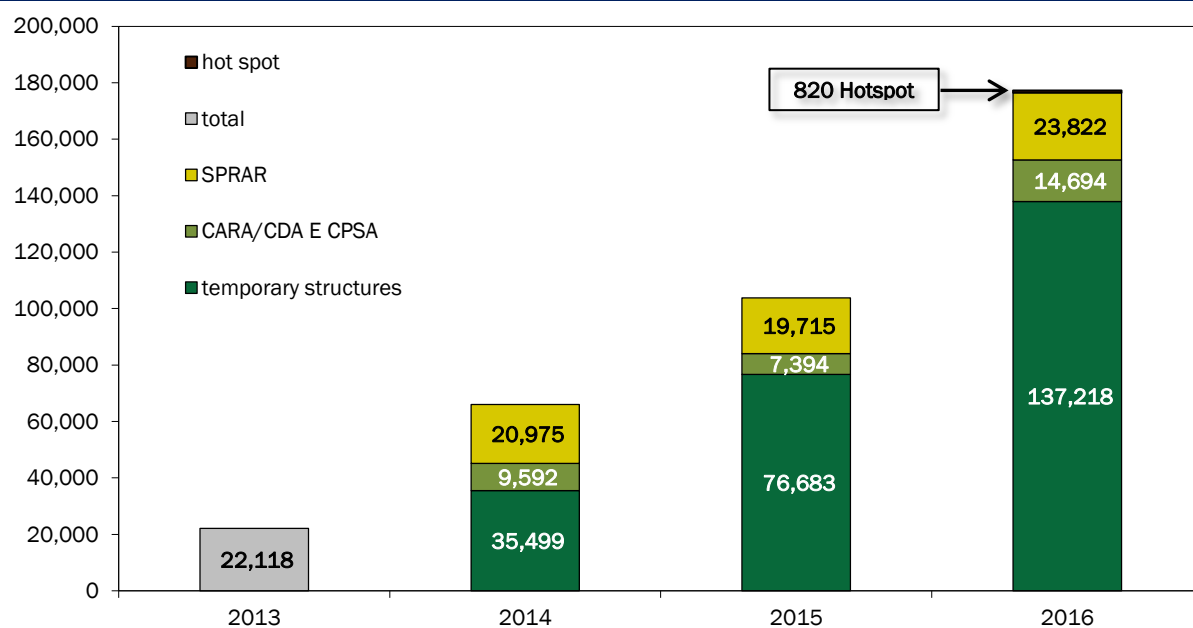


Source: Port authorities and Ministry of Internal affairs.

**FIGURE A.2: ARRIVALS OF MIGRANTS ON ITALY'S COASTS. ANNUAL AND QUARTERLY DATA. YEARS: 2013-2016**

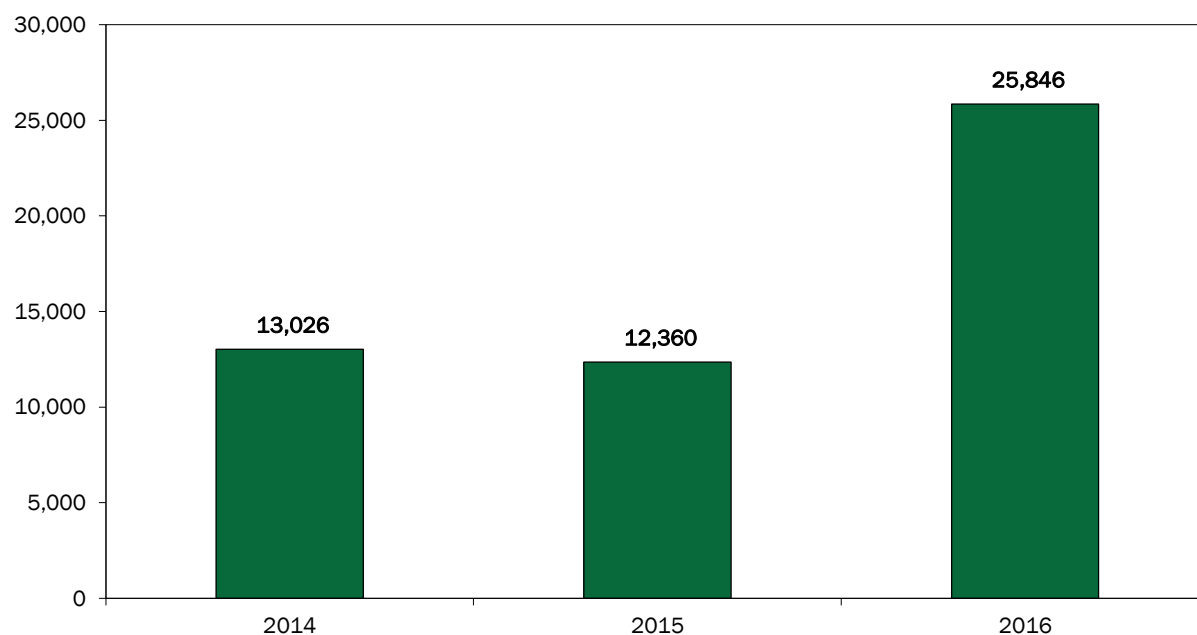


Source: Port authorities and Ministry of Internal affairs.

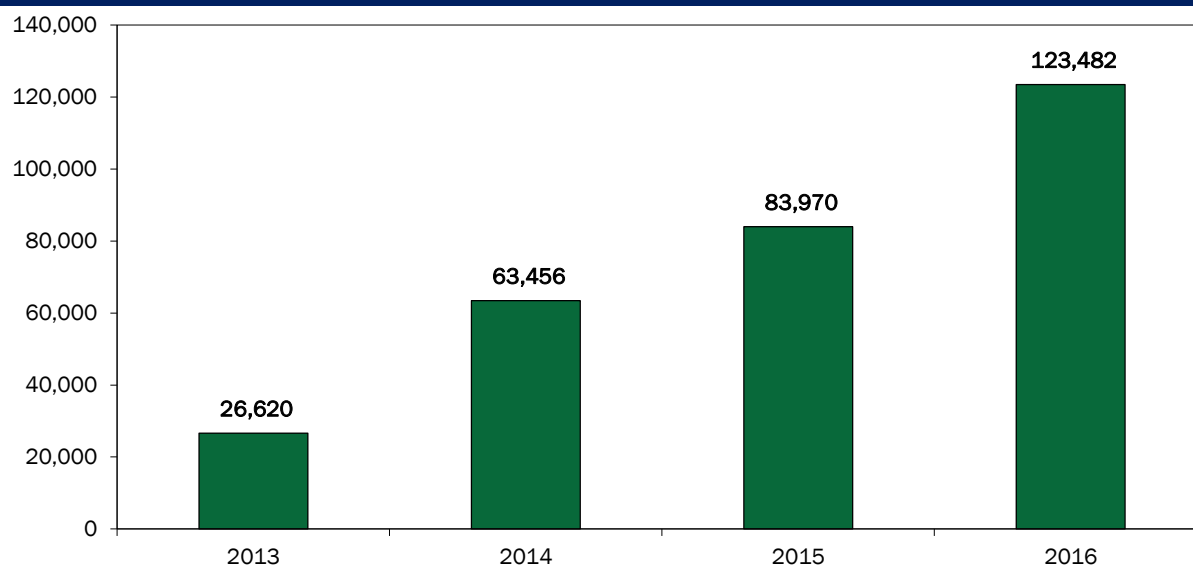
**FIGURE A.3: MIGRANTS IN RECEPTION FACILITIES. YEARS: 2013 – 2016**

Legend: CPSA: Emergency healthcare and reception facilities; CDA: Reception facilities, CARA: Reception facilities for asylum seekers; SPRAR: System of protection for asylum seekers and refugees run by local entities; Hotspot: facility where first reception of migrants and refugees takes place.

Source: Ministry of Internal affairs.

**FIGURE A.4: UNACCOMPANIED FOREIGN MINORS. YEARS: 2014-2016**

Source: Ministry of Internal affairs.

**FIGURE A.5: ASYLUM SEEKERS IN ITALY. YEARS: 2013-2016**

Source: Ministry of Internal affairs.

**TABLE A.1: ESTIMATE OF EXPENDITURE INCURRED FOR MIGRANT CRISIS. YEARS: 2011-2017**

	2011	2012	2013	2014	2015	2016 DPB Forecast	2016 End-of- year estimate	2017 DPB Forecast
<b>In € mn</b>								
<b>Total steady state scenario</b>	<b>922.1</b>	<b>898.6</b>	<b>1,355.8</b>	<b>2,204.7</b>	<b>2,735.6</b>	<b>3,430.6</b>	<b>3,542.9</b>	<b>3,914.1</b>
<b>Total growth scenario</b>					<b>2,735.6</b>	<b>4,227.2</b>	<b>4,239.6</b>	<b>4,261.7</b>
<b>In % of total</b>								
<i>Sea rescue</i>	32.8	22.5	35.4	44.5	28.6	25.4	24.6	20.8
<i>Welcome</i>	36.2	43.6	41.5	33.1	51.2	58.3	59.6	64.9
<i>Healthcare and education</i>	31.0	34.0	23.1	22.4	20.2	16.3	15.8	14.3
<b>In % of total</b>								
<i>Current</i>	95.7	93.0	78.7	84.6	90.7	87.7	88.6	90.0
<i>Capital</i>	4.3	7.0	21.3	15.4	9.3	12.3	11.4	10.0
<b>In € mn</b>								
EU subsidies	94.3	65.2	100.7	160.2	120.2	112.1	112.1	87.0
<b>Total, net of EU subsidies steady state scenario</b>	<b>827.8</b>	<b>833.5</b>	<b>1,255.0</b>	<b>2,044.5</b>	<b>2,615.4</b>	<b>3,318.5</b>	<b>3,430.8</b>	<b>3,827.1</b>
<b>% of GDP</b>								
<i>Total, net of EU subsidies</i>	0.05	0.05	0.08	0.13	0.16	0.20	0.21	0.22
<i>Diff. respect to t-1</i>	0.00	0.00	0.03	0.05	0.03	0.04	0.05	0.026
<b>Total, net of EU subsidies growth scenario</b>						<b>4,115.1</b>		<b>4,174.6</b>
<b>% of GDP</b>								
<i>Total, net of EU subsidies</i>						0.25		0.24
<i>Diff. respect to t-1</i>						0.09		

Note: The data do not include the expenditure related to the North African emergency, which was classified as such in 2011 and was officially ended on 1 January 2013. The growth scenario considers the arrival of: another approximately 1,000 minors each year at an average cost of €45 per day; another approximately 62,000 people at the government's reception and temporary facilities, at an average cost of €32.50 per day; and approximately 3,500 asylum seekers and refugees added to the protection system at an average cost of €35 per day.

End-of-year estimates include additional 100 million euro allocated to 2016 budget and in course of being distributed among municipalities which receive refugees.

Source: Analyses by MEF, State General Accounting Department.

**TABLE A2: IMPACT ON THE HEADLINE BALANCE OF EXPENDITURE INCURRED FOR MIGRANT CRISIS IN STEADY STATE SCENARIO - BREAKDOWN BY ESA CATEGORIES. 2011-2017 (in € mn)**

	2011	2012	2013	2014	2015	2016 DPB Forecast	2016 End of year estimate	2017 DPB Forecast
1. Compensation of employees (D.1)	97.1	82.7	81.0	84.3	88.1	89.1	89,2	88.9
2. Intermediate consumption (P.2)	190.0	198.6	218.0	346.8	429.6	349.1	388,4	388.0
3. Social payments (D.62, D.63)	149.1	160.2	306.0	636.6	1,172.3	1,720.9	1.812,7	2,215.2
4. Subsidies (D.3)	-	-	-	-	-	-	-	-
5. Gross fixed capital formation (P.51)	39.5	62.7	288.7	340.1	253.7	423.0	404,2	391.5
6. Capital transfers (D.9)	-	-	-	-	-	-	-	-
7. Other	446.5	394.4	462.1	797.0	791.7	848.4	848,4	830.6
<b>8. Total impact on headline deficit (8) = Σ(1..7)</b>	<b>922.1</b>	<b>898.6</b>	<b>1,355.8</b>	<b>2,204.7</b>	<b>2,735.6</b>	<b>3,430.6</b>	<b>3.542,9</b>	<b>3,914.1</b>
9. Compensation from EU	94.3	65.2	100.7	160.2	120.2	112.1	112,1	87.0
<b>10. Total impact on headline deficit net of EU contributions (10) = (8) - (9)</b>	<b>827.8</b>	<b>833.5</b>	<b>1,255.0</b>	<b>2,044.5</b>	<b>2,615.4</b>	<b>3,318.5</b>	<b>3.430,8</b>	<b>3,827.1</b>
11. Total impact on headline deficit net of EU contributions (% GDP)	0.05	0.05	0.08	0.13	0.16	0.20	0,21	0.22

Note: The data do not include the expenditure related to the so-called "Arab Spring emergency", initiated during 2011 and officially ended on 1 January 2013. Approximations made when unit costs were not available by ESA category. More specifically, the ongoing costs of Defense are considered entirely as intermediate consumption and education, health, contributions to Turkey (excluded from the EU budget) and EU funds and national co-financing related are classified as other expenditures.

Source: State General Accounting Department.

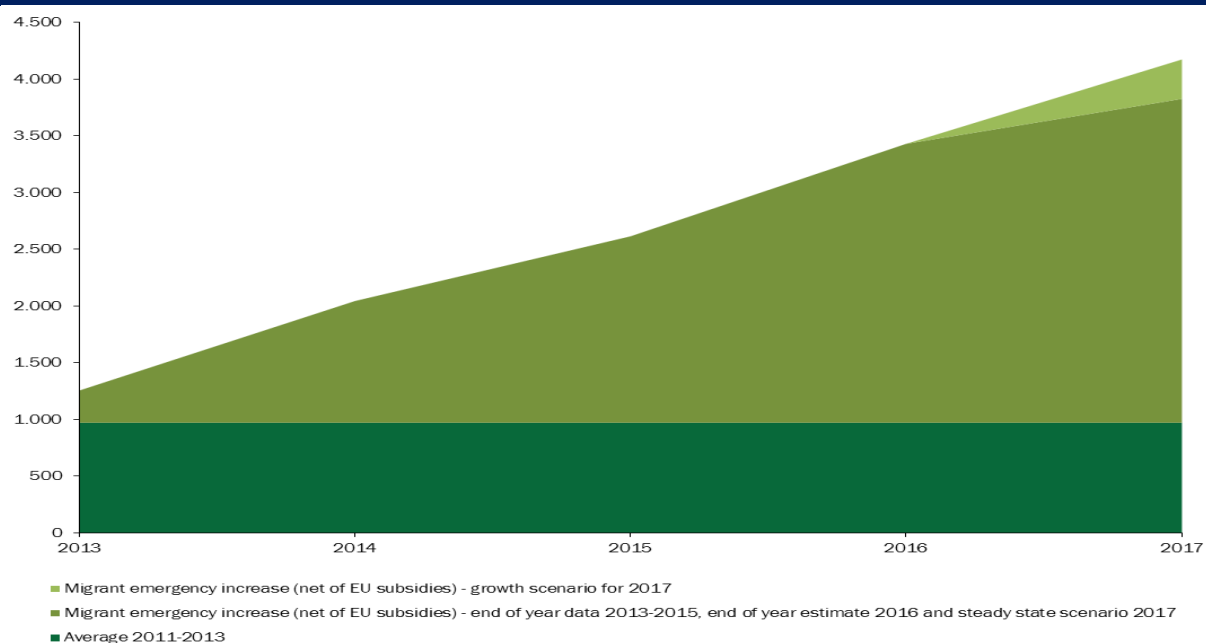
**TABLE A.3: IMPACT ON THE HEADLINE BALANCE OF EXPENDITURE INCURRED FOR MIGRANT CRISIS IN STEADY STATE SCENARIO - BREAKDOWN BY ESA CATEGORIES. 2011-2017 (in € mn)**

	2011	2012	2013	2014	2015	2016 DPB Forecast	2016 End of year estimate	2017 DPB Forecast
1. Initial reception costs*	244.6	269.7	479.0	683.5	1,304.1	1,883.7	1.968,2	2,364.0
2. Transport (including rescue operations)	347.4	280.5	525.6	982.7	837.5	881.7	913,0	860.8
3. Health-care	74.6	86.5	137.7	207.8	243.7	250.0	250,0	250.0
4. Administrative costs (including processing applications for asylum)	44.2	43.2	38.5	43.7	40.3	38.5	35,1	30.4
5. Contributions to Turkey Facility (excluding through EU Budget)	0.0	0.0	0.0	0.0	0.0	66.6	66,6	98.9
6. Other costs and measures**								
education	211.2	218.7	174.9	287.1	310.0	310.0	310,0	310.0
<b>7. Total impact on headline deficit (7) = Σ(1..6)</b>	<b>922.1</b>	<b>898.6</b>	<b>1,355.8</b>	<b>2,204.7</b>	<b>2,735.6</b>	<b>3,430.6</b>	<b>3.542,9</b>	<b>3,914.1</b>

Note: The data do not include the expenditure related to the so-called "Arab Spring emergency", initiated during 2011 and officially ended on 1 January 2013.

Source: State general Accounting Department.

**FIGURE A.6: COMPARISON BETWEEN SPENDING FOR MIGRANTS SUPPORTED OVER THE YEARS FROM 2013 TO 2017 AND THE AVERAGE SPENDING INCURRED IN THE PERIOD 2011 – 2013 (benchmark period net of emergency)**



Source: : Analyses by MEF, State General Accounting Department.

