## THE MACROECONOMIC IMPACT OF STRUCTURAL REFORMS

In this section we document our estimates of the macroeconomic impact of structural reforms by focusing on a scenario where only the most recent reforms are considered, namely those eligible for the application of the structural reforms clause recently introduced by the European Commission. In particular, this scenario envisages only the new reforms of the Government, both approved and in the process of approval, which are expected to generate their effects starting from 2016. 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). Moreover, the simulation results for this scenario of the recent reforms take into account some methodological revisions pertaining to the ways in which the provisions in each reform are translated into corresponding modifications of some of the relevant structural parameters of the models<sup>1</sup>. The main areas of reforms 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>2</sup> and the 'Finance for growth' have been included further relative to the NRP 2015.

	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
of which: Reduction of tax wedge (IRAP-IRPEF)	0.4	0.4	0.4
Increase in the taxation of capital income + VAT	-0.2	-0.2	-0.2
Spending Review	-0.2	-0.3	0.0
Nonperforming loans	0.2	-	-
Finance for growth	0.2	0.4	1.0
TOTAL	2.2	3.4	8.2

In Table 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 2.2 per cent in 2020 and of 3.4 per cent in 2025. In the long run, the estimated impact on output is a 8.2 per cent increase.

<sup>&</sup>lt;sup>1</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).

<sup>&</sup>lt;sup>2</sup> L. 132/2015 and more recently the D.L. 18/2016 and AC 3671/2016.

## **Macroeconomic Impact of Finance for Growth measures**

The economic crisis of recent years has exacerbated the problem of the credit crisis and, more generally, the difficulties for companies in raising funds. Credit market rigidities represent a major obstacle on the path of recovery and a strong limitation for investment and employment expansion. The constraint is particularly burdensome for the peculiarities of the production structure of the country, characterised by a large network of small and medium-sized enterprises, which represent the real backbone of the Italian economy. In a context in which public resources tend to be scarce, it is crucial to implement the effective incentives to improve the propensity to invest of private enterprises.

MEASURES	RELATED LEGISLATION
Measures for innovation	
Enlargement of the pool of innovative startup and simplification measures	art. 4 of D.L. 3/2015 (Investment Compact)
Tax credit for R&D activities	art. 3 of D.L. 145/2013, modified by art. 1, subparagraphs 35 - 36 of Law 190/2014 (LDS2015)
Patent box	art. 1, subparagraphs 37 – 45 of Law. 190/2014 (LDS 2015) modified by art. 5, subpar. 1 of D.L. 3/2015
	art. 1, subparagraph 148 Law 208/2015 (LDS2016)
PMI (SME) Innovative	D.L. 3/2015 (Investment Compact) art. 4
Incentives for productive investments	
Revision of New Sabatini	art. 2 of D.L. 69/2013, Law 190/2014 (LDS2015), art. 1, subparagraph 243, D.L. 3/2015 Art. 8
Guidi - Padoan provision	art. 18 D.L. 91/2014
Super amortisation	art. 1, subparagraphs 1 91 -94 of Law 208/2015 (SL2016)
Access to capital market	
Minibond	art. 32 of D.L. 83/ 2012, (Decree for Development) modified by art. 36, of D.L. 179/ 2012, (Decree for Development bis) and by art. 12 of D.L 145/ 2013, (Destinazione Italia), art. 21 of D.L 91/2014
Simplification measures for SMEs going public	art. 20 of D.L. 91/2014
Introduction of multiple vote securities and loyalty shares	art. 20 of D.L. 91/2014
Introduction of multiple vote securities and loyalty shares Development of <i>Equity Crowdfunding</i>	art. 20 of D.L. 91/2014 art. 4 of D.L. 3/2015 (Investment Compact)
	•
Development of Equity Crowdfunding	art. 4 of D.L. 3/2015 (Investment Compact)
Development of <i>Equity Crowdfunding</i> <b>Measures for credit liberalisation</b> Direct lending for credit funds, insurance companies and	art. 4 of D.L. 3/2015 (Investment Compact)
Development of Equity Crowdfunding  Measures for credit liberalisation  Direct lending for credit funds, insurance companies and and securitization vehicles	art. 4 of D.L. 3/2015 (Investment Compact)  If art. 22 of D.L. 91/2014,  Investment platforms  art. 8 - 8 bis of D.L. 3/2015
Development of Equity Crowdfunding  Measures for credit liberalisation  Direct lending for credit funds, insurance companies and and securitization vehicles  System of public guarantees, FCG, Confidi and Juncker in	art. 4 of D.L. 3/2015 (Investment Compact)  If art. 22 of D.L. 91/2014,  Investment platforms  art. 8 - 8 bis of D.L. 3/2015
Development of Equity Crowdfunding  Measures for credit liberalisation  Direct lending for credit funds, insurance companies and and securitization vehicles  System of public guarantees, FCG, Confidi and Juncker in Guarantee Fund for SME	art. 4 of D.L. 3/2015 (Investment Compact)  If art. 22 of D.L. 91/2014,  Investment platforms  art. 8 - 8 bis of D.L. 3/2015  Reg. (UE) 2015/1017, Art. 1, subparagraphs 822-830 of
Development of Equity Crowdfunding Measures for credit liberalisation Direct lending for credit funds, insurance companies and and securitization vehicles System of public guarantees, FCG, Confidi and Juncker in Guarantee Fund for SME Juncker investment platforms	art. 4 of D.L. 3/2015 (Investment Compact)  If art. 22 of D.L. 91/2014,  Investment platforms  art. 8 - 8 bis of D.L. 3/2015  Reg. (UE) 2015/1017, Art. 1, subparagraphs 822-830 of
Development of Equity Crowdfunding Measures for credit liberalisation Direct lending for credit funds, insurance companies and and securitization vehicles System of public guarantees, FCG, Confidi and Juncker in Guarantee Fund for SME Juncker investment platforms Incentives to capitalization	art. 4 of D.L. 3/2015 (Investment Compact)  If art. 22 of D.L. 91/2014,  Investment platforms  art. 8 - 8 bis of D.L. 3/2015  Reg. (UE) 2015/1017, Art. 1, subparagraphs 822-830 of Law 208/2015 (LDS2016)  art. 1. of D.L 201/2011 (Salva Italia), modified by art. 1, subparagraph 138 of Law 147/ 2013 (LDS2014) and
Development of Equity Crowdfunding Measures for credit liberalisation Direct lending for credit funds, insurance companies and and securitization vehicles System of public guarantees, FCG, Confidi and Juncker in Guarantee Fund for SME Juncker investment platforms Incentives to capitalization ACE Deductibility of goodwill	art. 4 of D.L. 3/2015 (Investment Compact)  If art. 22 of D.L. 91/2014,  Investment platforms  art. 8 - 8 bis of D.L. 3/2015  Reg. (UE) 2015/1017, Art. 1, subparagraphs 822-830 of Law 208/2015 (LDS2016)  art. 1. of D.L 201/2011 (Salva Italia), modified by art. 1, subparagraph 138 of Law 147/ 2013 (LDS2014) and art. 19 of D.L. 91/2014  art. 1, subparagraphs 95 and 96 of Law 208/2015 (SL 2016)
Development of Equity Crowdfunding Measures for credit liberalisation Direct lending for credit funds, insurance companies and and securitization vehicles System of public guarantees, FCG, Confidi and Juncker in Guarantee Fund for SME Juncker investment platforms Incentives to capitalization ACE	art. 4 of D.L. 3/2015 (Investment Compact)  If art. 22 of D.L. 91/2014,  Investment platforms  art. 8 - 8 bis of D.L. 3/2015  Reg. (UE) 2015/1017, Art. 1, subparagraphs 822-830 of Law 208/2015 (LDS2016)  art. 1. of D.L. 201/2011 (Salva Italia), modified by art. 1, subparagraph 138 of Law 147/ 2013 (LDS2014) and art. 19 of D.L. 91/2014  art. 1, subparagraphs 95 and 96 of Law 208/2015 (SL 2016)  roject bonds
Development of Equity Crowdfunding Measures for credit liberalisation Direct lending for credit funds, insurance companies and and securitization vehicles System of public guarantees, FCG, Confidi and Juncker in Guarantee Fund for SME Juncker investment platforms Incentives to capitalization ACE Deductibility of goodwill Easier investment in infrastructure, real estate and p	art. 4 of D.L. 3/2015 (Investment Compact)  If art. 22 of D.L. 91/2014,  Investment platforms  art. 8 - 8 bis of D.L. 3/2015  Reg. (UE) 2015/1017, Art. 1, subparagraphs 822-830 of Law 208/2015 (LDS2016)  art. 1. of D.L 201/2011 (Salva Italia), modified by art. 1, subparagraph 138 of Law 147/ 2013 (LDS2014) and art. 19 of D.L. 91/2014  art. 1, subparagraphs 95 and 96 of Law 208/2015 (SL 2016)
Development of Equity Crowdfunding Measures for credit liberalisation Direct lending for credit funds, insurance companies and and securitization vehicles  System of public guarantees, FCG, Confidi and Juncker in Guarantee Fund for SME Juncker investment platforms  Incentives to capitalization  ACE  Deductibility of goodwill  Easier investment in infrastructure, real estate and p  Revision of the legislation on project bond	art. 4 of D.L. 3/2015 (Investment Compact)  If art. 22 of D.L. 91/2014,  Investment platforms  art. 8 - 8 bis of D.L. 3/2015  Reg. (UE) 2015/1017, Art. 1, subparagraphs 822-830 of Law 208/2015 (LDS2016)  art. 1. of D.L 201/2011 (Salva Italia), modified by art. 1, subparagraph 138 of Law 147/ 2013 (LDS2014) and art. 19 of D.L. 91/2014  art. 1, subparagraphs 95 and 96 of Law 208/2015 (SL 2016)  roject bonds  art. 1 of D.L. 83/2012 and art. 13 of D.L. 133/2014
Development of Equity Crowdfunding Measures for credit liberalisation Direct lending for credit funds, insurance companies and and securitization vehicles  System of public guarantees, FCG, Confidi and Juncker in Guarantee Fund for SME Juncker investment platforms  Incentives to capitalization  ACE  Deductibility of goodwill  Easier investment in infrastructure, real estate and p Revision of the legislation on project bond Revision of the legislation on SIIQ (REIT)  Measures to attract investments	art. 4 of D.L. 3/2015 (Investment Compact)  If art. 22 of D.L. 91/2014,  Investment platforms  art. 8 - 8 bis of D.L. 3/2015  Reg. (UE) 2015/1017, Art. 1, subparagraphs 822-830 of Law 208/2015 (LDS2016)  art. 1. of D.L 201/2011 (Salva Italia), modified by art. 1, subparagraph 138 of Law 147/ 2013 (LDS2014) and art. 19 of D.L. 91/2014  art. 1, subparagraphs 95 and 96 of Law 208/2015 (SL 2016)  roject bonds  art. 1 of D.L. 83/2012 and art. 13 of D.L. 133/2014
Development of Equity Crowdfunding Measures for credit liberalisation Direct lending for credit funds, insurance companies and and securitization vehicles System of public guarantees, FCG, Confidi and Juncker in Guarantee Fund for SME Juncker investment platforms Incentives to capitalization ACE  Deductibility of goodwill  Easier investment in infrastructure, real estate and p Revision of the legislation on project bond Revision of the legislation on SIIQ (REIT)	art. 4 of D.L. 3/2015 (Investment Compact)  If art. 22 of D.L. 91/2014,  Investment platforms  art. 8 - 8 bis of D.L. 3/2015  Reg. (UE) 2015/1017, Art. 1, subparagraphs 822-830 of Law 208/2015 (LDS2016)  art. 1. of D.L 201/2011 (Salva Italia), modified by art. 1, subparagraph 138 of Law 147/ 2013 (LDS2014) and art. 19 of D.L. 91/2014  art. 1, subparagraphs 95 and 96 of Law 208/2015 (SL 2016)  roject bonds  art. 1 of D.L. 83/2012 and art. 13 of D.L. 133/2014  art. 20 D.L. 133/2014 (Sblocca Italia)
Development of Equity Crowdfunding Measures for credit liberalisation Direct lending for credit funds, insurance companies and and securitization vehicles  System of public guarantees, FCG, Confidi and Juncker in Guarantee Fund for SME Juncker investment platforms  Incentives to capitalization ACE  Deductibility of goodwill  Easier investment in infrastructure, real estate and p Revision of the legislation on project bond Revision of the legislation on SIIQ (REIT)  Measures to attract investments  International standard ruling Consulting services for foreign investors provided by	art. 4 of D.L. 3/2015 (Investment Compact)  If art. 22 of D.L. 91/2014,  Investment platforms  art. 8 - 8 bis of D.L. 3/2015  Reg. (UE) 2015/1017, Art. 1, subparagraphs 822-830 of Law 208/2015 (LDS2016)  art. 1. of D.L 201/2011 (Salva Italia), modified by art. 1, subparagraph 138 of Law 147/ 2013 (LDS2014) and art. 19 of D.L. 91/2014  art. 1, subparagraphs 95 and 96 of Law 208/2015 (SL 2016)  roject bonds  art. 1 of D.L. 83/2012 and art. 13 of D.L. 133/2014  art. 20 D.L. 133/2014 (Sblocca Italia)  art. 8 of D.L. 269/2003  Provision of the Revenue Agency no. 149505 of 16  December 2013 (envisaged in D.L. 145/2013 art. 10

New tools available to businesses have been then introduced to facilitate access to credit, to promote productive investment and innovation, to encourage the capitalization and stock exchange listing. New measures have broadened the variety of alternative sources of financing to the traditional ones: mini-bonds, credit-funds, equity crowdfunding and stock market. This represents a fundamental cultural shift, because access to the capital market implies more growth for firms which take advantage of them. Similarly new incentives for productive investment and capitalization of the companies have been set, along with measures to support innovation.

A recent study by the European Commission shows how the financial distortions are particularly restrictive for some types of businesses, such as start-ups, innovative companies and small businesses<sup>3</sup>. The empirical analysis, based on an extensive survey of various European countries, documents how during the recent crisis the financial factors have greatly constrained the investment decisions of firms, although in a rather different way for countries and regions and depending on type of enterprise (in particular, the negative effects are different among micro-enterprises, companies in the manufacturing and high-tech companies).

MACROECONOMIC EFFECTS OF FINANCE FOR GROWTH MEASURES (percentage deviation from the baseline)					
	2020	2025	Long run		
GDP	0.2	0.4	1.0		
Consumption	0.1	0.4	0.8		
Investment	0.6	1.4	3.3		

An impact assessment of the measures contained in the Finance package for Growth is reported in the Table. The simulation of these measures has been implemented with the IGEM model, assuming a rise in capital accumulation induced by easier access to credit businesses. In particular, it is assumed that in the long run the enhanced conditions of access to credit will result in a greater willingness of companies to invest. The assumption used in the simulation incorporates estimates by the European Commission (EC) about the impact on investment of an expansion in the availability of capital credit enterprise. In detail, it is considered the estimated impact of the increase of the flow of credit in the long term on the tangible investment, which, according to the EC of the estimates, is equal to 0.144.

It was therefore suggested that the full implementation of these rules over a period of ten years (until 2025) gives rise to an increase in the flow of loans to enterprises up to 10 percent, which translates into an overall change in investments equal to 1.4 percent. In IGEM model, this increase in investment has been achieved through an increase in the growth rate of physical capital by 0.07 per cent in four years.<sup>5</sup>

The results of the model simulations show how the positive effects of these measures translate into higher investments by 0.6 per cent already in 2020 and into higher GDP by 0.2 per cent. In the long run, investments increases by 3.3 per cent and GDP grows by 1.0 per cent compared to the baseline scenario.

 $<sup>^3</sup>$  European Commission, European Competitiveness Report, 2014 Report: Helping Firms Grow, chapter 2, available online at:

http://ec.europa.eu/growth/industry/competitiveness/reports/eu-competitiveness-report/index\_ehtm

<sup>&</sup>lt;sup>4</sup> See the Table on p. 58 of the cited paper.

<sup>&</sup>lt;sup>5</sup> In the IGEM model the increase in the growth rate of physical capital is induced by an increase in the value of installed capital and therefore an increase of capital per unit of investment. In the simulation exercise the variation in the growth rate of capital (set at 0.07 percent in four years) is such to generate an overall increase of investment equal to 1.4 percent in ten years.

## The macroeconomic effects of the reforms for reducing nonperforming loans (NPL) in the bank balance sheets

In this note we document the macroeconomic effects of three Government measures adopted between 2015 and 2016 with the aim of reducing the stock of nonperforming loans (NPL) in the bank balance sheets (D.L.  $18/2016^6$ ) and increasing the speed and efficiency of the insolvency and liquidation procedures (D.L.  $83/2015^7$  and AC  $3671/2016^8$ ).

The first measure envisages the possibility of providing a State guarantee to banks for securitization operations with nonperforming loans as the underlying assets (GACS). The State guarantees on NPLs can be requested by banks which securitize in return for a commission to be paid to the Treasury whose amount is a percentage on the guaranteed assets. The price of the guarantee is in line with market prices. This provision is temporary, as the opportunity of requesting state guarantees in the securitizations of NPLs has been introduced over a 18-month period, with the possibility, however, of extending the application of the provision for other 18 months (until February 2019).

The other two measures are aimed at reforming the legislative tools for managing the company crises, on the one side, and at reforming the bankruptcy, civil and civil procedure legislation as well as the functioning of the judicial system, on the other. In particular, important provisions have been introduced to reduce the foreclosure times and the length of the insolvency and liquidation procedures. This enhances the efficiency of the judicial procedures for debt recovery, thus increasing the prices that investors are willing to pay for the NPLs.

The macroeconomic effects of the first decree, the one on the bankruptcy legislation aimed at accelerating the liquidation procedures, have already been documented in the Draft Budgetary Plan (DBP) and they are now amplified as a result of the recent draft Law delegating the Government to pursue further reforms on this area. In the simulation exercise with the ITEM model to assess these effects, we assumed that those reforms would induce an increased incidence of disposed nonperforming loans and a parallel reduction of the gap between book values on bank balance sheets and the price that investors are willing to pay (*pricing gap*). This was implemented in the simulation of the model through a gradual reduction of the discount that investors require for purchasing the nonperforming loans.

In addition to the effects from the measures in the first decree, the new provision introducing a state guarantee on securitization operations for NPL's is likely to amplify the incidence of disposed nonperforming loans. In particular, the assumption in the simulation associated with the first decree was an increase in the amount of disposed NPLs as a fraction of its overall stock (in net value) by 10 percentage points (from 5 to 15 per cent). In light of the new provisions of 2016, the increase in the incidence of disposed NPLs is assumed to be more pronounced, reaching 30 per cent in 2019.

Moreover, the higher easiness in disposing NPLs and reducing their burden in banks' balance sheets, combined with the interventions on bankruptcy law to accelerate the judicial procedures for debt recovery, may induce banks to ameliorate the cost of lending. In the simulation we therefore assumed a reduction by 10 basis point of the bank lending rate with respect to the baseline scenario up to 2019.

The improvement in the banks' financial conditions due to the increased incidence of disposed NPLs has a positive impact on the credit supply to the economy. This increase,

<sup>&</sup>lt;sup>6</sup> It is in the process of being converted into law.

<sup>&</sup>lt;sup>7</sup> Converted with modifications into L. 6, August 2015, no. 132).

<sup>&</sup>lt;sup>8</sup> Draft law (DDL) delegating the Government on the overall reform of the legislative tools to manage company crises and insolvency procedures. It has been approved by the Council of Ministers in February 10th 2016 and is currently under approval at the Chamber of Deputies (A.C. 3671).

combined with the slight drop of the bank lending rate, would imply an increase of output with respect to the baseline scenario reaching 0.2 percentage points in 2020, driven by higher investment (0.7 per cent) and consumption expenditure (0.2 per cent). A possible reduction of credit, however, might be obtained in the first year of simulation (2016) with respect to the baseline scenario, as a negative effect on loans is induced by the reduction of total assets following the realized losses associated with the larger number of disposals of nonperforming loans. The impact on GDP would be therefore slightly negative in the first year, with a 0.1 per cent reduction with respect to the baseline scenario, driven primarily by a drop of investment by 0.4 per cent. In the subsequent years, on the contrary, the expansionary effects on credit supply and output would prevail. Given the temporary nature of the mechanism for providing state guarantee to banks in the securitization operations, the simulation exercise does not extend its focus beyond 2020.

Table 2 reports the effects of the interventions eligible for the flexibility clause associated to structural reforms with a focus on the main macroeconomic variables. The expansionary character of these reforms clearly emerges, 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 was also possible to calculate the impact of the reforms on public finance and the results point to an improvement in the indicators of the performance of public finance with the only exception of 2016, when a short-run deterioration of the deficit-to-GDP and a slight improvement of the debt-to-GDP ratios is obtained with respect to the baseline scenario.

TABLE 2: MACROECONOMIC EFFECTS OF REFORMS (percentage deviation from the baseline scenario)				
	2020	2025	Long run	
GDP	2.2	3.4	8.2	
Consumption	2.7	4.2	6.3	
Investment	3.3	4.8	11.5	
Labour	1.5	2.1	3.7	