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Italy: Toward a Growth-Friendly Fiscal Reform

by Michal Andrle, Shafik Hebous, Alvar Kangur, and Mehdi Raissi

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Italy: Toward a Growth-Friendly Fiscal Reform[1]

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Abstract

Published in late 2017, the Italian medium-term fiscal plan aims to achieve structural balance by 2020, although concrete, high-quality measures to meet the target are yet to be specified. This paper seeks to contribute to the discussion by (i) assessing spending patterns to identify areas for savings; (ii) evaluating the pension system; (iii) analyzing the scope for revenue rebalancing; and (iv) putting forward a package of spending cuts and tax rebalancing that is growth friendly and inclusive, could have limited near-term output costs, and would achieve a notable reduction in public debt over the medium term. Such a package could help the authorities balance the need to bring down public debt and, thus, reduce vulnerabilities while supporting the economic recovery.

JEL Classification Numbers: E27, E62, H55.

Keywords: Growth-friendly fiscal policy, public pensions, dynamic stochastic general equilibrium models, Italy.

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I. INTRODUCTION

The Italian fiscal plans published in late 2017 commit to achieving a balanced budget in the medium term. The Update to the Economic and Financial Document 2017 (DEF) as well as the 2018 Draft Budgetary Plan emphasize this commitment. The Update to the DEF, which lays out the policy intentions for the next three years, projects the headline deficit to decline from 2.1 percent of GDP in 2017 to 1.6 percent of GDP in 2018, 0.9 percent of GDP in 2019, and 0.2 percent of GDP in 2020. The related structural deficit, i.e., the deficit adjusting for the economic cycle, is expected to decline from about 1.3 percent of GDP in 2017 to 1 percent of GDP in 2018, 0.6 percent of GDP in 2019 and 0.2 percent of GDP in 2020. However, concrete plans to achieve these targets were not specified, beyond identifying broad areas, such as cuts to follow spending reviews, the fight against tax evasion, and rationalizing tax expenditures.

This paper identifies growth-friendly options for achieving fiscal balance and putting debt on a firm downward path. It is divided into four parts:

- *Public spending trend and composition.* An analysis of spending over the past two decades reveals (i) in the decade following euro accession, spending grew faster than potential output, owing in large part to the rapid growth of pensions; (ii) since the global financial crisis, spending has been broadly controlled, mainly through a freeze on hiring and wages and cuts in capital spending. Pension spending though has continued to rise; (iii) despite the recent spending control, the pre-crisis spending excesses have not been reversed; and (iv) achieving sizable and durable expenditure savings may require lowering the large pension spending. Improving the efficiency of health spending, especially at the local level and in some geographical areas, is also warranted.

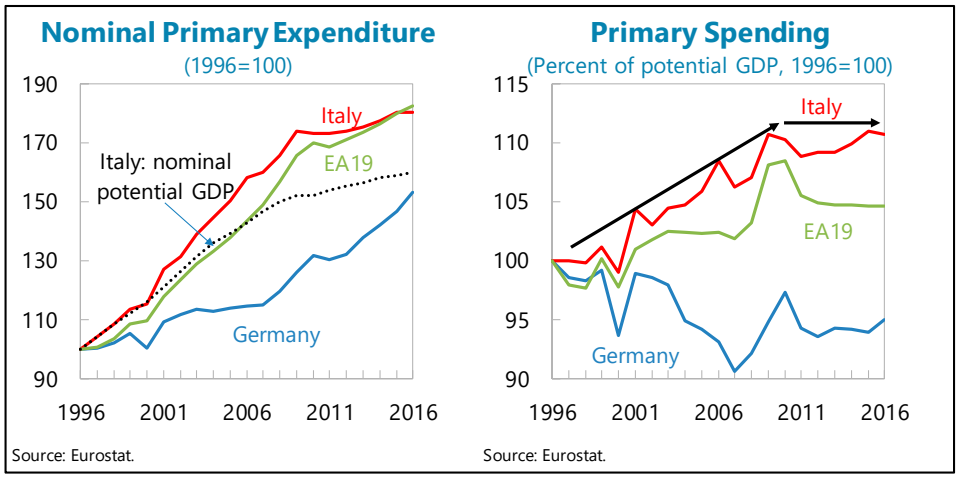
- *Pension system.* Over half of current primary spending is social benefit spending, which is dominated by pension spending. At around 16 percent of GDP, pension spending in Italy is the second highest in the euro area after Greece. The authorities have legislated several reforms. However, before the full effect of these reforms is evident over the very long run, fiscal pressures are likely to persist and weigh on Italy's goal of achieving and maintaining a balanced budget. The second part of this paper finds (i) despite past reforms, there remain generous parts of the system where Italy is a clear outlier, pointing to areas of potential savings; and (ii) pension projections rest on optimistic assumptions of (a) employment, specifically that Italy will go from having among the highest to very low unemployment rates; and (b) Italy will maintain much higher real GDP growth rates for decades to come than has been its experience and policy settings. Relaxing these assumptions implies a notable rise in projected spending over the coming decades until the full benefits of past reforms become evident.

- *Revenue rebalancing.* The tax system is characterized by a high tax wedge, a relatively narrow tax base, and significant tax arrears. A fiscal devaluation strategy—a shift from taxing productive factors to taxing consumption and property—reveals the scope to (i) decrease the tax wedge significantly; (ii) reduce value-added tax gaps (both compliance and policy), by harmonizing the reduced VAT rates and improving the tax collection performance; (iii) rationalize tax expenditures; and (iv) raise revenues by re-introducing a modern property tax on primary residences.

- *Toward a growth-friendly policy mix.* The last part of this note simulates, using the IMF's Global Integrated Monetary and Fiscal (GIMF) model, the impact of a growth-friendly mix of spending and revenue measures along a gradual fiscal consolidation path that puts Italy's debt-to-GDP ratio on a firm downward trajectory. The model simulations show that a revenue-neutral and less distortionary tax reform, alongside current spending cuts and capital spending increases, can generate sizable output gains and a sustainably lower public debt ratio over the medium to long term. Short-term output costs of this fiscal package, if implemented credibly, are limited.

II. Public Spending Trends and Composition

Over the past two decades, primary spending in Italy has grown faster than potential output. This was particularly the case in the years after euro accession. From 1999 to 2007, Italy's nominal current primary expenditure grew faster than the euro area average, and well above the country's average nominal potential growth—driven mainly by social benefit spending (primarily pensions), intermediate consumption (goods and services), and wages (in general services, defense and health). Capital spending rose in line with that of the euro area average. From 2008 to 2016, however, Italy's nominal current primary expenditure grew at 1.8 percent per year on average, below the euro area average of 2.6 percent.[2] The deceleration after the global financial crisis was driven mainly by the decline in the public sector wage bill—reflecting the freezing of nominal wages from 2010 to 2015 and a reduction in the number of public sector employees from 3.6 million in 2007 to around 3.3 million people in 2015; and a severe cut in capital expenditure, which declined by about 28 percent in nominal terms between 2009 and 2016. Nevertheless, even with these exceptional measures, total primary spending grew above the country's average nominal potential GDP growth over this period. Italy has been unable to reverse its past overspending (especially those related to the pre-crisis period).



[2] The high cost of servicing public debt implies total public expenditure in Italy about 2 percent of GDP above the euro area average (at 50.4 percent of GDP versus 48.5 percent). Interest on debt (4.2 percent of GDP in 2015) absorbs more resources than spending on education (4 percent of GDP), and is over 3½ times as much as on defense (1.2 percent of GDP).

Rising social benefits have dominated public spending. Social benefits have dominated all other categories of spending, rising by about 43 percent cumulatively from 1999 to 2007 and by a further 33 percent since then. It constitutes half of total primary spending, up from 40 percent at the time of euro accession. The bulk of social benefits spending is in pensions (see next section), reflecting both a high share of elderly population and generous pension benefits with high replacement rates. However, non-pension social benefit spending in Italy is low, fragmented, and poorly targeted in comparison to other EU countries. The latter is evidenced in the disproportionately low share of social transfers accruing to the low-income working age population (Box 1). There is also a higher reliance on intra-family transfers for social assistance, even as there is underspending related to social inclusion, family/child benefits, and housing relative to the euro area average. Reducing the fragmentation of anti-poverty programs and improving their targeting are therefore warranted.

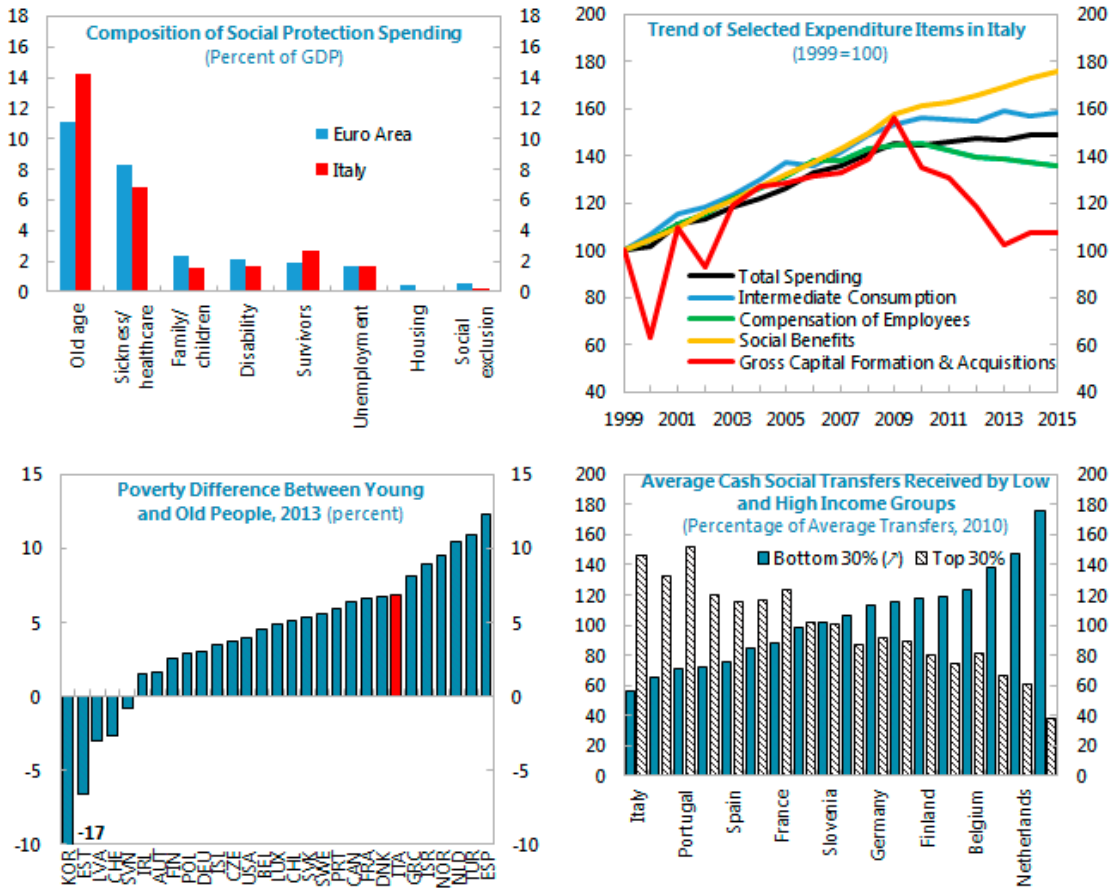
Box 1. Poverty Reduction Measures

Designing and implementing poverty-reduction policies has largely been delegated to local governments, with nationwide programs tailored mostly toward the elderly and people with disabilities. This has left a large share of the population, especially the young and children, weakly protected. One of the early efforts to tackle poverty has been the Minimum Insertion Income which was introduced in 1999 on an experimental basis. As an emergency measure to provide limited support to low-income families affected by the financial crisis, the government introduced a social card in 2008, which was subsequently re-designed and broadened in scope in 2011 to provide a mix of cash transfers and social services.

The government launched the SAI (Support for Active Inclusion) program in 2013, targeting low-income families with children/disabilities and in a limited number of municipalities. With the 2016 Stability Law, Italy set up, for the first time, a Fund for Combating Poverty and Social Exclusion with the aim of introducing a minimum-income program at the national level by 2018. In the meantime, the SAI program was extended nationwide in 2016 and its eligibility requirements were relaxed in 2017.

The SIA program and other pre-existing income support measures will be replaced, as of January 2018, by a new program called *Inclusion Income* (Reddito di inserimento, REI)—introduced within an enabling law in 2017, which is expected to increase the number of households receiving help (from 160,000 households in SIA to 660,000 households in REI). Benefits are given to those households with children under 18 years old, pregnant women, and unemployed people above 65 years of age that are experiencing economic hardship (an equivalent financial situation index of €6,000 or less, per a top-up formula), and based on a comprehensive evaluation of need that considers both income and wealth. Benefits are conditional on a personal plan of work, and social inclusion prepared by local administrations: the applicant must participate in a personalized work/social program that could encompass any civic service—from the municipalities to employment centers, from schools to healthcare services—with the involvement of the services sector. The REI program, once fully operational, will have annual funding of about €1.8 billion. Apart from tackling poverty, the program aims to re-organize welfare services and improve coordination among social services.

Figure 1. Italy: Social Benefits



Source: Eurostat, Haver, OECD, and IMF staff.

There are other areas of overspending relative to the euro area average. Although much has already been written about the subject in Italy (Box 2), a decomposition of spending—using standard economic and functional classifications at the general and local government levels (Tables 1–4)—reveals some essential points:

- As noted above, social benefits spending (see the social protection column in Table 1) is the area of largest overspending relative to the euro area average. Interest payments exceed the euro area average by 1.6 percent of GDP, given Italy's high stock of public debt.

- Other areas of overspending include intermediate consumption spending (primarily on goods and services) in the health sector; compensation of employees in defense, public order and safety, and health; subsidies in the economic affairs sector; and capital transfers in general services and economic affairs.

- It is notable that although overall public health spending in Italy is in line with the euro area average, the bulk of it is for compensation of employees and intermediate consumption, in contrast with the euro area average. This points to room for potential efficiency savings, at

the local-government level.[3] Medeiros and Schwierz (2015) highlight regional differences and show that the output of public spending is lower in southern regions based on health-related variables, such as life expectancy at the age of 65.

- The main areas where Italy underspends is in education (i.e., in the provision of goods and services and in total compensation). The public education expenditure gap is especially concentrated at the tertiary level, as highlighted in OECD (2015). As for economic classification, underspending is in gross capital formation.

There is room to improve the spending mix to make it more growth friendly and inclusive. The above simple presentation indicates that rising social spending (primarily pensions) has crowded out spending in areas such as education and capital spending. Achieving a more growth-friendly and inclusive spending policy mix, while making space to achieve the medium-term objective, will likely require rationalizing total social benefit spending; improved targeting of non-pension social benefit spending to those who need the resources most; better efficiency in health spending at the local level; and reallocation of spending toward capital spending and education, while also improving the efficiency of outcomes in both areas. Protection of the vulnerable could be further improved through complementary measures such as more intense use of active labor market policies and a modern social safety net.

Box 2. Spending Reviews

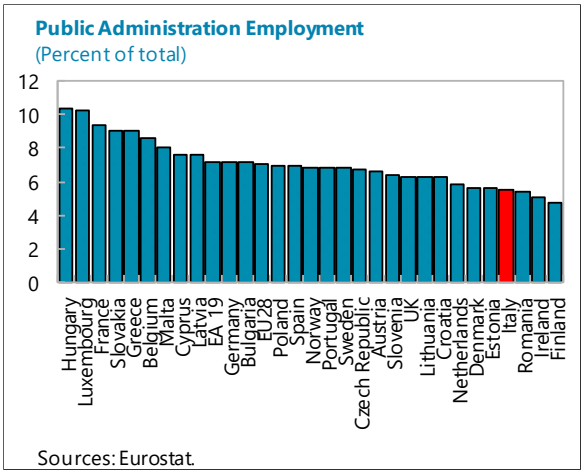
Recent governments conducted comprehensive Spending Reviews with the aim of finding cost-efficient ways to cut spending.

The first plan was presented in April 2012—the so-called "Giarda spending review report"—with a focus on (i) large territorial differences in the production costs of public services across all sectors and government levels; and (ii) very diverse territorial scope of the entities to which the same administrative functions are assigned, thereby leading to inefficiencies and high variability of unit costs because of scale economies. The report proposed different pathways for expenditure rationalization, from more radical reforms such as privatizing public services on efficiency grounds to more targeted actions aimed at enhancing public spending efficiency.

A second major spending review was conducted by Carlo Cottarelli with a plan to achieve savings worth up to 0.4 percent of GDP in 2014, 1 percent of GDP in 2015, and 2 percent of GDP in 2016 compared to a trend scenario based on unchanged legislation. The so-called "Cottarelli spending review report," made public in March 2015, analyzed a broad range of spending items and proposed priority actions to rationalize spending, including (i) more centralized public procurement, including in healthcare; (ii) streamlining and digitizing of all public administrations; (iii) cuts in the number of state-owned enterprises, particularly at the local level; (iv) reduction in specific forms of public support to firms; (v) rationalization in the provision of certain public services; and (vi) interventions on pension entitlements, including de-indexation.

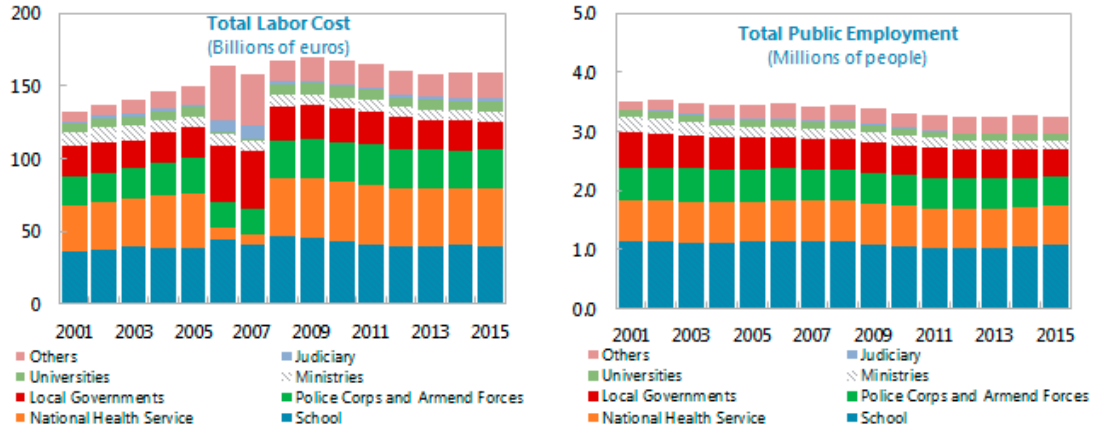
In 2016, the reform of the accounting law envisaged the integration of the spending review into the economic-financial planning cycle.

[3] An outline for the rules of fiscal federalism was approved by parliament in 2009, but much of the detail related to standard costs has yet to be agreed. The only part operating in practice is the system for calculating central finance for health expenditure and for municipalities, per an increasing share of total grants. From 2017, the use of expenditure needs and standard tax capacity is also used as a criterion to set consolidation targets for ordinary statutory regions and autonomous provinces. Health expenditure accounts for around half of sub-national government spending. For regional administrations, it accounts for about 85 percent of spending.



Following sharp cuts in capital spending and with the wage bill/GDP at its lowest in two decades, rationalizing social benefits spending appears unavoidable. In recent years, the authorities have pursued a strategy of notably cutting capital spending and curtailing the wage bill, which at 9.8 percent of GDP is at its lowest level in several years. This strategy may be close to its limit, however, and may be neither sustainable nor desirable. There is a need for public investment to support stronger, sustained growth.[4] Moreover, as a share of total employment, public sector employment is below the euro area average; the age structure of public employees is titled toward older workers, implying the need to refresh the skill mix without reducing the headcount further (there have been recent announcements for hiring sizable numbers of new staff, in education and local offices); and, after years of wage freezes, wage increases are planned.[5] This suggests limited room, if any, for further cuts in the overall wage bill or in capital spending, going forward, and thus for little alternative but to tackle the sizable social benefits spending.

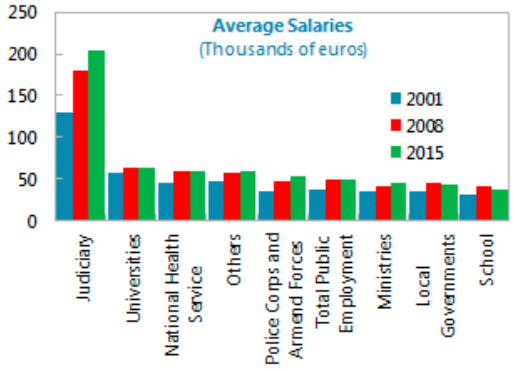
Figure 2. Italy: Dimension of the Civil Service Workforce

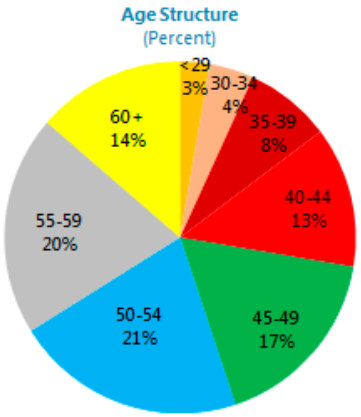


[4] OECD (2015) argues that public investment in Italy is inefficient owing to overlapping responsibilities between levels of government, insufficient attention to cost effectiveness in the selection of projects and in implementation, and the lack of technical capacity in evaluation and implementation. The Bank of Italy (2012) also highlights higher unit costs and slower delivery on road and rail projects, adjusting for objective differences, than in other European countries.

[5] The wage freeze was put in place when the economy went into a deep recession and has remained through a period of weak nominal growth. To keep it broadly in place when stronger nominal growth is expected could be difficult, not least as the constitutional court has also noted that wage increases need to be given.

Figure 2. Italy: Dimension of the Civil Service Workforce (Concluded)





Sources: Italian Department for Public Administration and IMF staff estimates.

Table 1. Italy and Euro Area: *General* Government Spending, 2005–2014, and 2015

(Percent of GDP)

Functional Classification

Economic Classification		Total Expenditure		General Services		Defense		Public Order and Safety		Economic Affairs		Environmental Protection		Housing		Health		Rec/Culture		Education		Social Protection	
Total Expenditure	Italy	49.3	50.4	8.8	8.4	1.3	1.2	1.9	1.9	4.3	4.1	0.9	1.0	0.7	0.6	7.1	7.1	0.8	0.7	4.3	4.0	19.3	21.5
	EA	48.4	48.5	7.0	6.6	1.3	1.2	1.7	1.7	4.6	4.5	0.8	0.8	0.8	0.6	7.1	7.2	1.1	1.1	4.8	4.7	19.2	20.1
Intermediate Consumption	Italy	5.9	6.1	1.1	1.0	0.2	0.1	0.4	0.4	0.4	0.3	0.5	0.7	0.2	0.2	1.9	2.1	0.2	0.3	0.7	0.6	0.4	0.3
	EA	5.4	5.4	0.9	0.9	0.3	0.3	0.3	0.4	0.8	0.8	0.4	0.4	0.2	0.2	1.0	1.0	0.3	0.3	0.7	0.7	0.5	0.5
Compensation of Employees	Italy	10.4	9.8	1.5	1.4	0.8	0.8	1.4	1.4	0.4	0.4	0.1	0.1	0.2	0.1	2.3	2.2	0.2	0.1	3.2	3.0	0.3	0.3
	EA	10.4	10.3	1.5	1.5	0.7	0.7	1.2	1.3	0.7	0.7	0.2	0.2	0.2	0.2	1.6	1.6	0.3	0.3	3.2	3.1	0.8	0.8
Property Income	Italy	4.7	4.2	4.6	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	EA	2.9	2.6	2.8	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subsidies	Italy	1.4	1.7	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
	EA	1.3	1.5	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
Other current transfers	Italy	1.6	1.5	1.0	1.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1
	EA	2.2	2.3	1.1	1.2	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.2	0.2	0.4	0.4
Other social benefits	Italy	20.9	23.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.4	0.0	0.0	0.0	0.0	18.4	20.5
	EA	21.8	23.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	4.1	4.3	0.0	0.0	0.2	0.2	17.4	18.4
Capital Transfers	Italy	1.5	1.9	0.2	0.7	0.0	0.0	0.0	0.0	1.1	0.9	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
	EA	1.4	1.3	0.2	0.2	0.0	0.0	0.0	0.0	0.8	0.7	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Gross Capital Formation	Italy	2.8	2.3	0.3	0.3	0.2	0.2	0.1	0.1	0.9	0.8	0.2	0.1	0.2	0.2	0.3	0.3	0.1	0.1	0.2	0.2	0.0	0.0
	EA	3.1	2.7	0.4	0.4	0.2	0.2	0.1	0.1	1.1	0.9	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.1	0.1

Color code: at least 5% less | upto 10% more | > 10% | Long-term average

Table 2. Italy and Euro Area: *Local* Government Spending, 2005–2014, and 2015

(Percent of GDP)

Economic Classification		Functional Classification: Total Expenditure		General Services		Defense		Public Order and Safety		Economic Affairs		Environmental Protection		Housing		Health		Rec/Culture		Education		Social Protection	
Total Expenditure	Italy	15.2	14.5	2.2	2.1	0.0	0.0	0.3	0.2	2.2	1.9	0.7	0.9	0.6	0.5	7.0	7.0	0.4	0.3	1.1	0.9	0.7	0.7
	EA	10.1	9.9	1.8	1.7	0.0	0.0	0.3	0.3	1.6	1.5	0.6	0.6	0.5	0.4	1.5	1.4	0.7	0.6	1.4	1.4	1.7	1.9
Intermediate Consumption	Italy	4.2	4.3	0.6	0.5	0.0	0.0	0.1	0.1	0.3	0.2	0.5	0.7	0.2	0.2	1.8	2.1	0.1	0.1	0.4	0.3	0.2	0.2
	EA	2.5	2.5	0.5	0.5	0.0	0.0	0.1	0.1	0.3	0.3	0.3	0.4	0.2	0.1	0.4	0.4	0.2	0.2	0.4	0.4	0.2	0.2
Compensation of Employees	Italy	4.4	4.0	0.9	0.8	0.0	0.0	0.2	0.1	0.3	0.2	0.1	0.1	0.2	0.1	2.3	2.2	0.1	0.1	0.4	0.3	0.1	0.1
	EA	3.2	3.2	0.7	0.7	0.0	0.0	0.2	0.2	0.3	0.3	0.1	0.1	0.1	0.1	0.5	0.5	0.2	0.2	0.6	0.7	0.4	0.4
Property Income	Italy	0.3	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	EA	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subsidies	Italy	0.6	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	EA	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other current transfers	Italy	0.4	0.6	0.1	0.3	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0
	EA	0.7	0.7	0.2	0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2
Other social benefits	Italy	2.8	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.4	0.0	0.0	0.0	0.0	0.4	0.4
	EA	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.0	0.0	0.0	0.1	1.0	1.1
Capital Transfers	Italy	0.9	0.6	0.1	0.1	0.0	0.0	0.0	0.0	0.5	0.4	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	EA	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gross Capital Formation	Italy	1.6	1.3	0.3	0.2	0.0	0.0	0.0	0.0	0.5	0.4	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.0	0.0
	EA	1.4	1.2	0.2	0.1	0.0	0.0	0.0	0.0	0.5	0.4	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.0	0.0

Color code: at least 5% less; upto 10% more; > 10%; Long-term average

Table 3. Italy and Euro Area: *General* Government Spending, 2005–2014, and 2015

(Percent of Potential GDP)

Economic Classification		Functional Classification: Total Expenditure		General Services		Defense		Public Order and Safety		Economic Affairs		Environmental Protection		Housing		Health		Rec/Culture		Education		Social Protection	
Total Expenditure	Italy	48.6	48.9	8.6	8.1	1.2	1.2	1.9	1.8	4.2	3.9	0.8	0.9	0.7	0.6	7.0	6.9	0.8	0.7	4.2	3.9	19.0	20.8
	EA	48.0	47.7	7.0	6.5	1.3	1.2	1.7	1.7	4.6	4.4	0.8	0.8	0.8	0.6	7.0	7.1	1.1	1.1	4.7	4.6	19.0	19.8
Intermediate Consumption	Italy	5.9	5.9	1.1	0.9	0.2	0.1	0.4	0.4	0.4	0.3	0.5	0.7	0.2	0.2	1.8	2.1	0.2	0.3	0.7	0.6	0.4	0.3
	EA	5.3	5.3	0.9	0.9	0.3	0.3	0.3	0.3	0.8	0.8	0.4	0.4	0.2	0.2	1.0	1.0	0.3	0.3	0.7	0.7	0.5	0.5
Compensation of Employees	Italy	10.3	9.5	1.5	1.3	0.8	0.8	1.4	1.4	0.4	0.4	0.1	0.1	0.2	0.1	2.3	2.1	0.1	0.1	3.2	2.9	0.3	0.3
	EA	10.3	10.1	1.5	1.5	0.7	0.6	1.2	1.2	0.7	0.7	0.1	0.1	0.2	0.2	1.6	1.6	0.3	0.3	3.1	3.0	0.8	0.8
Property Income	Italy	4.6	4.0	4.5	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	EA	2.8	2.6	2.8	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subsidies	Italy	1.4	1.6	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
	EA	1.3	1.4	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
Other current transfers	Italy	1.6	1.5	1.0	0.9	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	EA	2.2	2.2	1.1	1.1	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.4	0.4
Other social benefits	Italy	20.6	22.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.3	0.0	0.0	0.0	0.0	18.1	19.9
	EA	21.6	22.5	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	4.0	4.2	0.0	0.0	0.2	0.2	17.2	17.9
Capital Transfers	Italy	1.5	1.8	0.2	0.6	0.0	0.0	0.0	0.0	1.1	0.9	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
	EA	1.4	1.2	0.2	0.2	0.0	0.0	0.0	0.0	0.8	0.7	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Gross Capital Formation	Italy	2.8	2.2	0.3	0.3	0.2	0.2	0.1	0.1	0.9	0.8	0.2	0.1	0.2	0.2	0.3	0.3	0.1	0.1	0.2	0.2	0.0	0.0
	EA	3.1	2.7	0.4	0.4	0.2	0.2	0.1	0.1	1.1	0.9	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.1	0.1

Color code: at least 5% less; upto 10% more; > 10%; Long-term average

Table 4. Italy and Euro Area: *Local* Government Spending, 2005–2014, and 2015

(Percent of Potential GDP)

Economic Classification		Functional Classification: Total Expenditure		General Services		Defense		Public Order and Safety		Economic Affairs		Environmental Protection		Housing		Health		Rec/Culture		Education		Social Protection	
Total Expenditure	Italy	15.0	14.1	2.1	2.0	0.0	0.0	0.3	0.2	2.2	1.8	0.7	0.9	0.6	0.5	6.9	6.7	0.4	0.3	1.1	0.9	0.7	0.7
	EA	10.0	9.7	1.7	1.7	0.0	0.0	0.3	0.3	1.6	1.4	0.6	0.6	0.5	0.4	1.4	1.4	0.7	0.6	1.4	1.4	1.7	1.9
Intermediate Consumption	Italy	4.1	4.2	0.6	0.5	0.0	0.0	0.1	0.1	0.3	0.2	0.5	0.7	0.2	0.2	1.8	2.0	0.1	0.1	0.4	0.3	0.2	0.2
	EA	2.5	2.5	0.5	0.5	0.0	0.0	0.1	0.1	0.3	0.3	0.3	0.4	0.2	0.1	0.4	0.4	0.2	0.2	0.4	0.3	0.2	0.2
Compensation of Employees	Italy	4.3	3.9	0.8	0.7	0.0	0.0	0.2	0.1	0.3	0.2	0.1	0.1	0.1	0.1	2.3	2.1	0.1	0.1	0.4	0.3	0.1	0.1
	EA	3.1	3.1	0.7	0.7	0.0	0.0	0.2	0.2	0.3	0.3	0.1	0.1	0.1	0.1	0.5	0.5	0.2	0.2	0.6	0.6	0.4	0.4
Property Income	Italy	0.3	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	EA	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subsidies	Italy	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	EA	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other current transfers	Italy	0.4	0.6	0.1	0.3	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0
	EA	0.7	0.7	0.2	0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2
Other social benefits	Italy	2.8	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.3	0.0	0.0	0.0	0.0	0.4	0.4
	EA	1.4	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.0	0.0	0.0	0.1	1.0	1.0
Capital Transfers	Italy	0.8	0.6	0.1	0.1	0.0	0.0	0.0	0.0	0.5	0.4	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	EA	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gross Capital Formation	Italy	1.6	1.3	0.3	0.2	0.0	0.0	0.0	0.0	0.5	0.4	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.0	0.0
	EA	1.4	1.2	0.2	0.1	0.0	0.0	0.0	0.0	0.5	0.4	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.0	0.0

Color code: at least 5% less; upto 10% more; > 10%; Long-term average

III. The Italian Pension System: A Deeper Look

Past Reforms and the Current System

Since 1992, the pension system in Italy has undergone multiple reforms. These include pro-rata replacement of the old Defined Benefit (DB) scheme with a Notional Defined Contribution (NDC) scheme (1995), periodic updates based on mortality rates (2007), tightening of eligibility requirements (1992, 1995, 1997, 2004, 2007, 2011), alignment of the statutory retirement age of women with that for men (2010, 2011), and indexation of the retirement age to life expectancy. (The fundamental differences between a DB scheme and an NDC scheme are outlined in Box 3.)

The transition from the old DB system to an NDC scheme divides pension beneficiaries into two categories, based on years of insurance accumulated by end-1995:

- Insured with at least 18 years of contributions accumulated by end-1995 will largely maintain the DB formula. For these insured, the old pension rules are grandfathered for contributions accumulated until 2011. For contributions accrued after 2011, the NDC scheme applies.

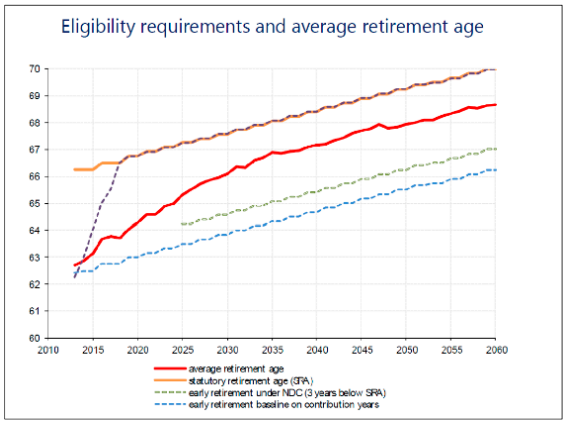
- Insured with less than 18 years of contributions accumulated by end-1995 are subject to a pro-rated scheme. For these insured, contributions accumulated up to 1995 will be subject to the DB formula, whereas contributions accumulated after 1995 will be subject to the NDC scheme.

The average contribution period in Italy for *new pensions* is about 33 years (expected to increase to 35 years) and life expectancy at 65 is about 20 years. Thus, by about 2030, all *new retirees* entering the pension system will be fully subject to the NDC formula, whereas by about 2050, the old DB should be fully phased out also from the stock of existing retirees.

Eligibility requirements have been tightened considerably in a series of reforms, notwithstanding repeated attempts to weaken them. Both statutory and early retirement ages are set to increase further over time as part of the 'Fornero' reform (L. 214/2011).[6]

- *Statutory Retirement Age* (SRA) is gradually increasing to 67 years by 2019. In 2017, the SRA was 66 years and 7 months for men and for female employees in the public sector. It was 65 years and 7 months for female employees in the private sector and 66 years and 1 month for female self-employed, but they are set to catch up with the SRA of other workers by January 1, 2018.

- *Early Retirement* is allowed regardless of age based on minimum years of service of 42 years and 10 months for men and 41 years and 10 months for women in 2017 (these will increase to 43 years and 3 months for men and 42 years and 3 months for women in 2019). Under NDC, workers may retire up to 3 years earlier than the SRA with minimum 20 years of contributions and a pension of at least €1,200 per month.



- *Indexation*. From 2013 onwards, the eligibility requirements are linked to changes in life expectancy at 65 (every three years up to 2019 and two years starting from 2021).

- *"Pathways to early retirement."* While eligibility requirements have been significantly tightened over time, occasionally pathways to early retirements were eased or implementation of stricter rules were postponed (see below an example from the 2017 budget). Special treatments and incentives for early withdrawal from the labor market should be avoided in both DB and NDC schemes (see also IMF, 2010).

Minimum and targeted pensions are not excessively high. The minimum contributory pension level in 2016 stood at €6,524.57 annually; any contributory pension would be topped up to reach this level. This forms about 70 percent of the relative 60 percent poverty level that in 2015 reached €9,508 for a single person. Although most OECD countries do not define minimum contributory pensions, the minimum pension in Italy is not excessively high. For example, the minimum income guarantee for working age people in the EU generally falls

[6] Following the 'Fornero' reform, the pension system (i) adopts an actuarial computation of pension benefits using an implicit rate based on the accrued contributions, and automatically adjusted to mortality developments; and (ii) introduces periodic increases in all eligibility requirements for retirement in line with longevity developments.

into a range of 50–80 percent of the poverty level. A social pension of €5,824.91 annually (in 2016) is provided at an age of 65 years and 7 months that increases with life expectancy. Retirees above 70 years of age will receive an additional monthly pension (or social purchase card), which increases the annual social pension to €8,298.29.

Box 3. A Quantitative Primer on the Mechanics of DB and NDC Pension Schemes

Defining the benefit. The DB system requires the policy makers to define at least four key parameters: (i) the accrual rate (*a*), that is the pension entitlement for a full year's coverage as a share of earnings; (ii) a measure of earnings (*w*) that usually is lifetime average earnings; (iii) valorization factor (*u*), that is, the way how the earnings of earlier years are adjusted to reflect changes in standards of living between the year of retirement and these earlier years; and (iv) the retirement age (*T*). The benefit is then defined as:

$$DB = \sum_{t=0}^{T} w_t (1+u)^{T-t}\, a. \quad (1)$$

Defining the notional contributions. In the NDC system, each individual paying contributions at rate (*c*) accumulates notional capital (in individualized accounts) that by end of any period (*T*) is:

$$K_{t,T} = \sum_{t=0}^{T} c\, w_t (1+\rho)^{T-t}, \quad (2)$$

where ρ is the notional interest rate or the internal rate of return (IRR). In computing the annuity at retirement, the accumulated capital stock is divided by the annuity factor (G) that in turn is a function of life expectancy (LE) at retirement and the IRR:

$$NA = \frac{K}{G[LE,\rho(LE)]} = \sum_{t=0}^{T} \frac{c\, w_t}{G[\dots]} (1+\rho)^{T-t}, \quad (3)$$

The internal rate of return. The core of the NDC system is the IRR that in the pure NDC scheme is derived such that:

$$PV(L_t) = PV(A_t). \quad (4)$$

This says that, in the pure NDC system, the internal rate of return is chosen to equalize the *overall system's* financial balance where the present value of *overall system* assets (A) equals the present value of *total system* liabilities (*L*). Total liabilities are the sum of workers accumulated capital (K) and pensioners' annuity (NA). The present value of assets is the present value of the stream of future contributions (plus technical reserves). In practice, this true IRR is only known ex post. However, it has to be parameterized ex ante (to calculate the annuity) that is perhaps the single most important choice to make. Since NDC is still financed as PAYG, the natural choice for the notional IRR is the implicit return of the PAYG scheme, that is, the growth rate of the wage bill:

$$\rho = n + g, \quad (5)$$

where *n* is the growth rate of labor force (population) and *g* is the productivity growth.

Steady-state equivalence. It should be immediately obvious from equations (1) and (3) that the structure of the two systems is very similar. When the rate of valorization in the DB and the internal rate of return in the NDC system are equal (i.e., $u=n$) and the accrual rate (*a*) is set to equal the ratio of contribution rate to the annuity factor (c/G), the systems can, in fact, be identical. Therefore, although the two systems appear rather different, they are nothing else but closely related variants of formulae-based earnings-related pension plans. The main differences relate to the manner the schemes react to shocks and in available policy instruments to counter these shocks.

Rules versus discretion. In the NDC, pension benefits adjust *automatically* to shocks like a sudden decline in fertility (lower contributions) or an increase in life expectancy (that determines the annuity factor G). This is not to say that the DB system cannot cope with such shocks; there is nothing in the DB system that would prevent linking the formulae or retirement ages to life expectancy. Reversing the accounting system also reverses the parameters that policy makers can more easily control: examples of these in the NDC are IRR computation rules, minimum retirement age, life expectancy tables, and methods to calculate annuity. In the DB scheme, many such parameters are absent or non-discretionary.

Issues

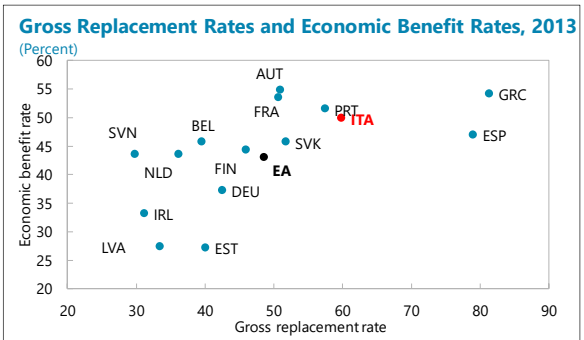
In the short to medium run, the pension system continues to provide very high benefits compared to actuarially fair values. The existing DB scheme is overly generous on many accounts:

- *Accrual rates.* The DB scheme uses a weighted average accrual rate of 2 percent (MEF, 2014) that is multiplied by the years of contributions and the reference wage (pensionable earnings) to obtain the monthly pension benefit. An accrual rate of 2 percent is high by international comparison, compared to about 1.5–1.7 percent in the EU/euro area.

- *Reference wage or pensionable earnings.* For insurance years before 1992, the reference wage is defined as the last monthly wage for civil servants or an average wage of the last 5 to 10 years in the private sector, based on different sources and occupations. For contribution years after 1992, the number of annual wages involved in the calculation increases gradually until it covers the last 10 years for employees and the last 15 years for the self-employed. But the periods over which pensionable earnings are calculated are still too short and tend to inflate the pension benefits of the DB scheme. On the other hand, the NDC (by definition) covers total lifetime contributions.

- *Early retirement penalties (actuarial corrections).* Under the DB scheme, the early retirement penalty is 1 percent at the age of 61, 2 percent at the age of 60, and a further 2 p.p. for each year below 60. These penalties are rather lenient—Queisser and Whitehouse (2006) calculate that, for Italy, the actuarially neutral reduction in benefits for each year of early retirement is in the order of 7.5 percent.

The DB or the mixed system provide high replacement rates that do not seem actuarially fair and place the adjustment burden disproportionately on future retirees. The replacement rates under the current DB/mixed scheme in Italy are high compared to other countries (chart). The difference from the euro area average, according to EC (2015), is around 10 percentage points. The simplest solution would be to reduce spending in DB/mixed schemes equivalent to the thirteenth pension payment (i.e., the Christmas bonus) that would constitute a 7.7 percent cut in average pensions of the DB component. In the case of the wholly NDC scheme, it should be noted, however, that the thirteenth payment by itself does not constitute a departure from actuarial fairness since the calculation of the annuity considers 13 payments. Another option that would improve intergenerational fairness is to recalibrate existing pensions based on the steady-state NDC formula or equivalent accrual rates.



Sources: Eurostat, 2015 Aging Report, and IMF staff calculations.
Note: Gross replacement rate is a ratio of the average first pension to the average wage at retirement. Economic benefit rate is defined as a ratio of pension spending per individual aged 65 and older to GDP per working aged population.

Although the long-run design is rooted in the NDC accounting scheme that screens out many past excesses, the annuity factor is based on a too high internal rate of return and the burden of adjustment falls on future pensioners only.

- The NDC (Box 3) (i) is based on the total lifetime earnings history instead of the average of the last few years; (ii) cuts benefits (and thus implicit accrual rates) automatically in case of lower contribution rates/payments or demographic shocks; (iii) and thus also ensures neutral adjustment factors (implicit early retirement penalties). However, this is not to say the NDC is automatically sustainable or not open to interference that can operate via different sets of parameters (e.g., fourteenth pension, annuity factor). As in any PAYG-financed system, sustainability also depends on demographic trends and whether growth and employment outcomes materialize as currently parameterized (see the next subsection).

- Under current policies, however, the annuity factor is based on a too high internal rate of return. In a "pure" NDC, the internal rate of return (IRR) should be chosen to ensure actuarial balance between the system-wide assets and liabilities (Box 3). In steady state, the IRR converges to the rate of economic growth.[7] While in the Italian NDC the IRR that credits the notional capital each period is the moving average of nominal GDP growth over the past five years, the discount rate used to derive the annuity factor, defined as the ratio of the IRR to a rate of inflation indexing, is set at a rate of 1.5 percent, based on an expected long-run real growth rate.[8] Absent comprehensive and decisive structural reforms, such a real rate of return is considerably above Italy's current growth potential.

- In the Italian pension system, the adjustment to macro-demographic conditions (such as the periodic revisions in the transformation coefficient) affect future generations of retirees only, leaving current retirees unaffected. The IRR that credits the notional capital is linked to past performance. It would therefore be important to introduce an automatic adjustment (or sustainability) factor that links current pension payments to a measure of a long-term actuarial balance to shield against unforeseen shocks and improve intergenerational equity (see Barr and Diamond, 2011, for a discussion on such a "break" mechanism in Sweden).

Deviations from general rules can also undermine past reforms. For example, the 2017 budget provided for an annual fourteenth pension payment to low-income persons as well as for temporary cash benefits to elderly workers until their retirement, raised the tax-free threshold for pensioners, facilitated portability for public mandatory pensions, temporarily extended the voluntary early retirement loan program, facilitated early retirement of certain categories of workers (arduous and hazardous workers, and young workers with contribution histories before 19 years of age), and abolished a limited set of early retirement penalties introduced with the 2011 reform. While some measures such as enhanced pension

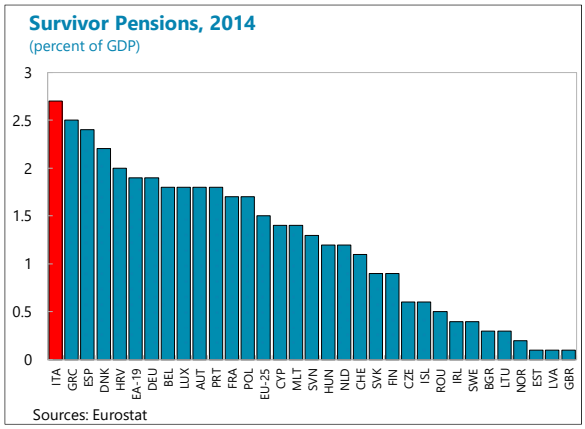
[7] Here we abstract from the adjustment factor derived by Settergren and Mikula (2006) that can arise in non-steady state and in practice captures payment timing and system noise.

[8] A higher discount factor leads to a lower annuity factor, increasing the calculated annuity at retirement.

portability are structurally welcome (although similar measures should also be applied to occupational pensions), the fourteenth pension payment and the higher tax-free thresholds together are costly and depart from actuarial fairness.

The pension system would benefit from separating the insurance and social protection/welfare functions. Additional welfare benefits to retirees, as well as the fourteenth pension, are badly targeted as retirees have a lower incidence of poverty than the working age youth or the unemployed. Providing welfare benefits through, for instance, a national and universal anti-poverty scheme would better target those in need. Similarly, the NDC scheme in Italy effectively credits the notional capital of women with children with additional insurance time by granting them a higher transformation coefficient corresponding to 3 months higher retirement age for each child up to one year. While providing such benefits is a socio-political choice, from the perspective of the design of the pension system, such benefits are not transparent nor in the nature of insurance, especially since the years of maternity leave or spent for childcare also count as pensionable time of insurance. Similar support would be better targeted and more efficient by means of direct family benefits or childcare support.

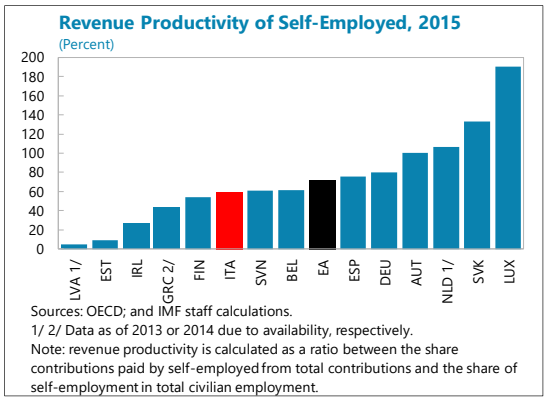
At around 2¾ percent of GDP, spending on survivor pensions is the highest in the Europe. According to Eurostat, the average monthly survivors benefit per inhabitant (at constant prices) in Italy was €608 compared to about €500 in the euro area in 2014—the second highest in the euro area after Luxembourg and the third highest in Europe after Luxembourg and Denmark. Similarly, survivor pensions in Italy have very wide coverage: the number of survivor pensions forms about 28 percent of total pensions in Italy and is much higher compared to about 18 percent in the EU on average. The eligibility for a surviving spouse in Italy does not appear to be constrained by an age limit, the absence of which can also dis-incentivize return to the labor market, especially for women. Survivor pension payments to family members other than surviving spouse or orphans should be strictly limited.[9]



Revenues collected from the self-employed could be increased. At 33 percent, the pension contribution rates on wage earners are high. Of the contribution rates on wage earners, about one-third is borne by the employee and two-thirds by the employer. For the self-employed and farmers, the contribution rate in 2014 was 22.2 percent, set to increase to 24 percent by 2018. One explanation for the difference in the contribution rates for employees and self-employed relates to differences in the gross base: for the self-employed, the gross

[9] SSA (2016) documents that 15 percent of the old-age or disability pension is paid to each parent, brother, or sister if there is no surviving spouse or orphans.

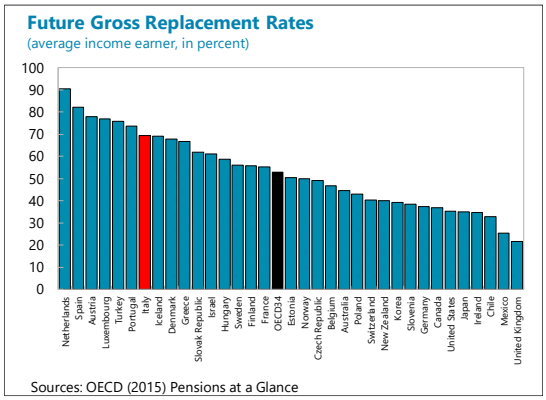
contribution base includes all contributions whereas for workers only one-third (the employees' share). However, even then, the "neutral" contribution rate for the self-employed should be at least 27 percent.[10] The self-employed in Italy exhibit below average revenue productivity compared to their peers in the euro area. This is indicative of the need to further harmonize the contribution rates as well as strengthen collection and payment compliance.



Sources: OECD; and IMF staff calculations.
1/ 2/ Data as of 2013 or 2014 due to availability, respectively.
Note: revenue productivity is calculated as a ratio between the share contributions paid by self-employed from total contributions and the share of self-employment in total civilian employment.

The tax burden on pensions is favorable to retirees. According to the OECD (2015), both the gross and net replacement rates in Italy are on average about 17 percentage points higher than for the OECD average retiree. The extension of the non-taxable area for retirees, as was the case in the 2017 budget, will further widen the gap. Compared to wage earners, retirees in Italy are subject to preferential tax treatment in terms of a higher tax-free allowance and full exemption on health contributions on pensions. Compared to retirees in other OECD countries, Italy offers tax relief on pension income from private schemes.

Although the NDC in the very long run is expected to reduce pension spending, by itself it is not sufficient to deal with Italy's fiscal problems. According to OECD (2015), Table 6.1, future gross replacement rates in Italy would still remain one of the highest in the OECD (text chart) with both gross and the net replacement rates about 15–20 percentage points above the OECD average, depending on the average pensionable wage. Similarly, EC (2015) projects Italy's pension spending to remain more than 3 percent of GDP above the average of other European countries. This is partly due to many features described above, including high discount factor, survivor pensions, and transformation coefficient for women with children, but also due to the very high pension contribution rate of 33 percent. Rapid aging will also put strong pressure on spending on health and long-term care that, according to EC (2015), is expected to increase by about 1½ percent of GDP by 2060 (net of lower spending on education).



Sources: OECD (2015) Pensions at a Glance

Long-Run Simulations

In the latest report by the Department of the State Accountant General (RGA) of the Ministry of Economy and Finance, long-term pension spending is projected to remain subdued, supported by the implementation of the above-mentioned past pension reforms and strong recovery in employment and productivity.

[10] For contributions rates of 11 percent for employees and 22 percent for employers, the "neutral" rate for self-employed is approximately (0.11+0.22)/(1+0.22) ≈ 0.27.

- According to the RGA (2017) projections, pension spending as a ratio of GDP is expected to increase from 15.7 percent in 2015 to just above 16 percent in 2045 and decline afterwards, reaching 13.1 percent by 2070. Based on these findings, the pension system and overall public debt are understood to be sustainable over the long term, and it is argued that Italy is in much better stead than many other euro area members that have still to come to terms with age-related spending.

- There are several offsetting factors that contribute to these pension spending projections:

    - The RGA notes that adverse demographic trends as captured by rising old-age dependency are the main drivers of future pension increases, adding about 11½ percent of GDP to pension spending by 2050.

    - Over the next decade, until 2025, the benefit rate—the ratio of average pensions to GDP per worker—is expected to increase pension spending, owing to the generosity of the old though declining DB component compared to low productivity growth.

    - Thereafter, the share of retirees under the NDC scheme is projected to become sufficiently large to dominate the more generous older DB scheme, settling the benefit rate on a modest downward trend.

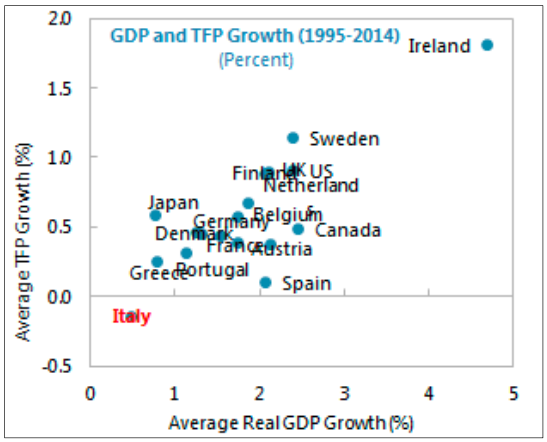
    - But the strongest savings in the RGA's projections stem from a sizeable pick-up in the employment rate, with a notable increase in labor force participation and a substantial decrease in unemployment, as well as from reforms to restrict early retirement and extend retirement ages (eligibility rate)—reducing pension spending by about 2½ and 6 percent of GDP over the long-run, respectively. With the unemployment rate reaching as low as 5.5 percent of GDP by 2050 (and remaining steady afterwards), Italy is expected to move from one of the worst to among the best performers in the labor market.

Relaxing some of the optimistic demographic and macroeconomic assumptions suggest spending would be notably higher (Figure 3). The simulation results indicate that for the RGA (2017) projections to materialize, the NDC system must cut average pensions of future retirees further by about 2½ percent of GDP (or by more than by 20 percent).

- *Employment rate.* The increase in the employment rate for the 15–64 age bracket in RGA (2017) appears optimistic, based on current policy settings. It increased from 56 percent in 2015 to 66½ percent in 2070, driven largely by a decline in the unemployment rate to about 5.5 percent by 2070.[11] However, Italy's long-run average unemployment rate has been around 9½ percent. Assuming Italy's unemployment rate settles at 9 percent, which implies an increase in the employment rate to about 60 percent in the long-term, the total pension spending increases by 1½ percent of GDP by 2070 (solid red lines in Figure 3).

[11] Note that employment levels are also assumed to be higher owing to an increase in the labor force.

- *Total factor productivity*. With strong employment recovery, the authorities are also expecting per capita real GDP and real labor productivity to grow at around 1¾ percent annually, far above what has been observed for the last few decades. Such projections appear very optimistic. Lower TFP growth would lower GDP growth immediately, but would impact pension benefits slowly—through wages that pass through to lower contributions and thus lower notional stock of pension capital:



  - According to the RGA (2016), 0.25 percentage points lower labor productivity growth would lead to about 0.5 percent of GDP higher pension spending in both 2040 and 2060, whereas 0.2 percentage points lower TFP alone would increase the pension spending to GDP ratio by 0.6–0.7 percent of GDP, respectively.

  - In response to a permanent negative labor productivity shock (of about ½ percentage points per year), staff simulations suggest that pension spending would be about 1 percent of GDP higher in both 2040 and 2060 (red long dash lines in Figure 3).[12]

- *Demographics.* The 2017 population projections by the United Nations Population Division point to more rapid aging in Italy compared to demographic projections with base year 2016 recently published by ISTAT, increasing the long-run pension spending further by about 1 percent of GDP at peak (red dotted lines in Figure 3).

The RGA (2017) also reports an additional set of pension projections based on the EC-EPC (AWG) 2018 assumptions (with a steady state unemployment rate of about 7½ percent as well as a faster achievement of 1 percent TFP growth by 2035). The result is an increase in pension spending by about 2 percent of GDP at peak (blue long dash lines in Figure 3) when compared to the national scenario.

In sum, taking more prudent assumptions for the employment rate, productivity growth, and demographics, which are closer to the historical record and based on current policy settings, pension spending as a percent of GDP is projected to reach 20.3 in 2045 (about 4 percent of GDP above the RGA's baseline projection for 2045) before decline to 15.7 in 2070 (about 2½ percent of GDP higher than RGA's baseline projection for 2070).

Reform Options

Consideration should be given to enacting measures that would yield savings in the near term and secure savings over the medium term, consistent with current policy settings. Near-term savings come from addressing the excessive generosity and lack of actuarial fairness in the DB and mixed schemes, and several options to this end are outlined below.

[12] A temporary negative labor productivity shock of the same size (over the period 2016–25) though would result in a 0.4 percent of GDP higher pension spending between 2025–40 before the impact of the shock fades away.

These could go toward creating the room for achieving higher primary surpluses that Italy needs to put public debt on a firm downward trajectory as well as to improve intra-generational equity by shifting the adjustment on retirees who thus far have been relatively better off. Longer-term savings come from using more realistic (or conservative parameters) that guide long-term pension benefit calculations as well as ensuring actuarial balance.

- *Eliminate the fourteenth pension payment fully and the thirteenth payment* with an equivalent reduction in annual benefits *for all retirees in the DB and mixed schemes.* Support for the most vulnerable—a justification provided for the introduction of the fourteenth pension payment to low income retirees in the 2017 budget—could be achieved through a modern well-targeted social safety net, in particular a national and universal anti-poverty scheme.

- *Introduce an age limit for a surviving spouse and limit any payments to relatives other than surviving spouse or orphan.* This would restrict eligibility for a survivor pension, reduce spending, and incentivize labor force participation.

- *Recalibrate existing pensions based on the steady-state NDC formula or equivalent parameters for accrual rates and/or pensionable earnings.* This would serve to reduce short- to medium-run pension spending by reducing benefits to those who have benefited from the generous DB scheme. It will not affect the long-run steady-state spending (given by the NDC).

- *Harmonize (effective) contribution rates of self-employed with those of wage earners.* Lower contribution rates for the self-employed constitutes preferential treatment. Although from a system-wide point of view lower contribution rates in the NDC eventually translate into lower pension benefits, it reduces the financing available to the pension system in the PAYG system and is a source of unfairness.

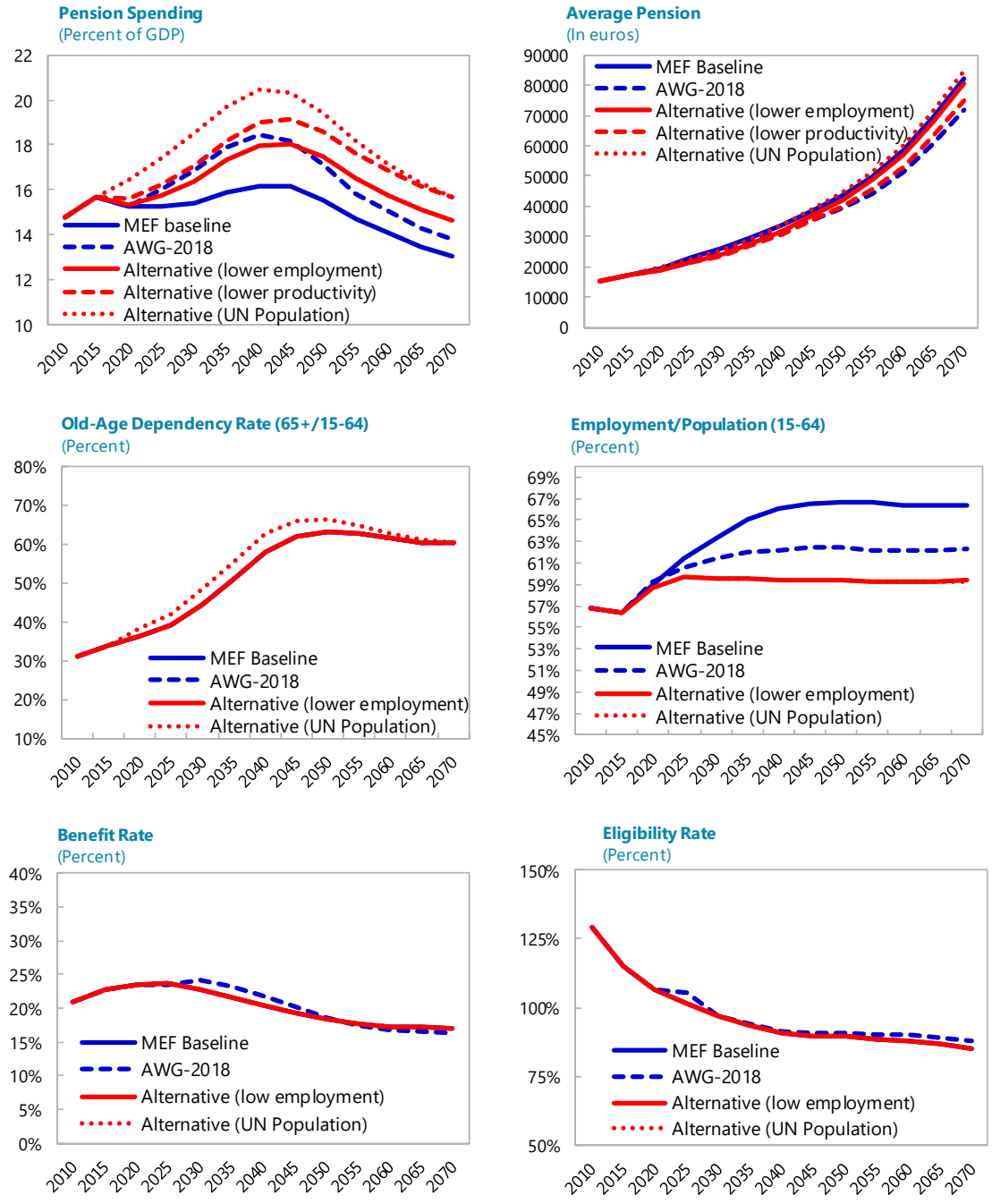
- *An option for reducing the high labor tax wedge—as part of a fiscal devaluation strategy—while lowering long-run replacement rates can rest on lowering employers' pension contributions.* This not only reduces the tax wedge on labor for current workers, but also translates into lower future pension spending via the NDC scheme. However, this is not the first-best policy choice from the point of view of a fiscal devaluation when there is a tight (and actuarially fair) link between contributions and benefits that can be imposed by the NDC, since in that case pension contributions are effectively deferred savings that are less distortionary than other contributions (e.g., health) that are more redistributive in nature. This option could be considered if future pension spending cannot be reduced by other means.

- *Subject pension benefits to health contributions and realign the tax-free threshold with wage earners.* Retirees should not be burdened with pension or unemployment contributions, although they are relatively more frequent consumers of health services and therefore should pay health contributions. Consideration should also be given to reversing the higher tax-free threshold for retirees introduced in the 2017 budget.

- *Adjust the NDC discount factor to reflect realistic growth potential and introduce an automatic adjustment mechanism that links pension spending to the long-term actuarial balance* (as, for example, done in Sweden, Canada, and Germany). The main purpose of such a mechanism is to allow for automatic adjustments in current pension payments as a response to permanent shocks, thus helping to keep the pension system solvent without a possible need to increase payroll taxes (that in turn would lead to increases in future benefits). The discount factor currently fixed at 1.5 percent annually is well above the Italy's long-term growth potential based on current policy settings.

A key implication of the above simulations is that Italy needs to pursue comprehensive growth-enhancing reforms as a matter of urgency to reduce nominal wage rigidities and increase productivity and long-run employment rates. In the absence of such reforms that will take time to yield gains and reduce existing imbalances, even the self-adjusting NDC cannot ensure the sustainability of the pension system and public debt. It would, therefore, be prudent to set the safeguards as well as the system-wide parameters to be in line with the economy's potential under current policies rather than the stronger growth rates assumed in the RGA (2017) projections. Such an approach would reduce the risk of needing to take painful, large adjustments over a short time and thus reduce policy uncertainty.

Figure 3. Italy: Pension Simulations Under the RGA, AWG, and Alternative Projections



Sources: 2018 Aging Report, Ministry of Economy and Finance; UN, and IMF staff calculations.

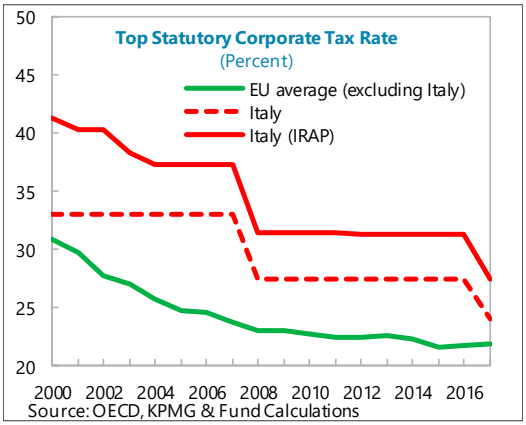
Notes: The alternative scenarios use IMF staff's employment projections, assumes permanetly lower labor productivity (by about ½ percent per year), and uses the UN's 2017 population projections. The blue dash lines use 2018 AWG assumptions.

IV. Revenue Rebalancing: Some Considerations

The Italian tax system has many aspects of a Dual Income Tax (DIT) regime.[13] It applies a flat tax rate of 26 percent on capital income (dividends, interest income, and capital gains on securities),[14] and 21 percent on rental income. Labor income is subject to a progressive scale with a starting rate on the first earned euro of 23 percent and a top tax rate of 43 percent for income exceeding €75,000 (the personal income tax is known as "IRPEF"). The corporate income tax (CIT) rate, the so-called "IRES," stands at 24 percent, but a surcharge of 3.5 percent is imposed on financial and insurance companies. In addition to the IRES, there is a "regional production tax"—an origin-based value-added tax known as the IRAP—imposed as a fixed rate of 3.9 percent on the net value of production.[15]

However, tax rates remain high and are applied on a relatively narrow base. Total government revenues—at 43.5 percent of GDP—compare favorably with the EU average of 37 percent (Table 5). Out of this, total tax revenues of 29.7 percent of GDP in 2015 also compare favorably with revenues in the region. This is based on:

- *High tax rates:*
  - The labor tax wedge is high. The average tax wedge in Italy for a single person earning an average income is 47.9 percent, well above the OECD average of 35.9 percent.[16] This pattern is observed across levels of income and types of households.[17] The ratio of the social security contributions (SSC) to GDP is 13.4 percent, which is 2 percentage points higher than the EU average. The share of personal income tax (PIT) in total taxes is among the highest in the EU at 41 percent.



[13] The essence of a DIT regime is to tax capital at a low single rate and labor income under a progressive schedule.

[14] The 26 percent flat rate applies in the case of non-qualified shareholding. If certain thresholds' requirements are met, then 49.72 percent of the (qualified shareholding) capital gains or dividends are subject to the progressive personal income tax scale. A reduced rate of 12.5 percent is applied to the share of capital income deriving from State securities; and a Tobin tax exists on financial transactions and stamp duties, consisting of taxes on stock of financial assets rather than incomes.

[15] Ten percent of the IRAP paid during a year can be deducted from the IRES. The labor cost for open-ended employees can be deducted from the IRAP tax base; there is a possibility for regions to reduce up to zero the tax rate of 3.9 percent or increase it by up to 0.9 pp.

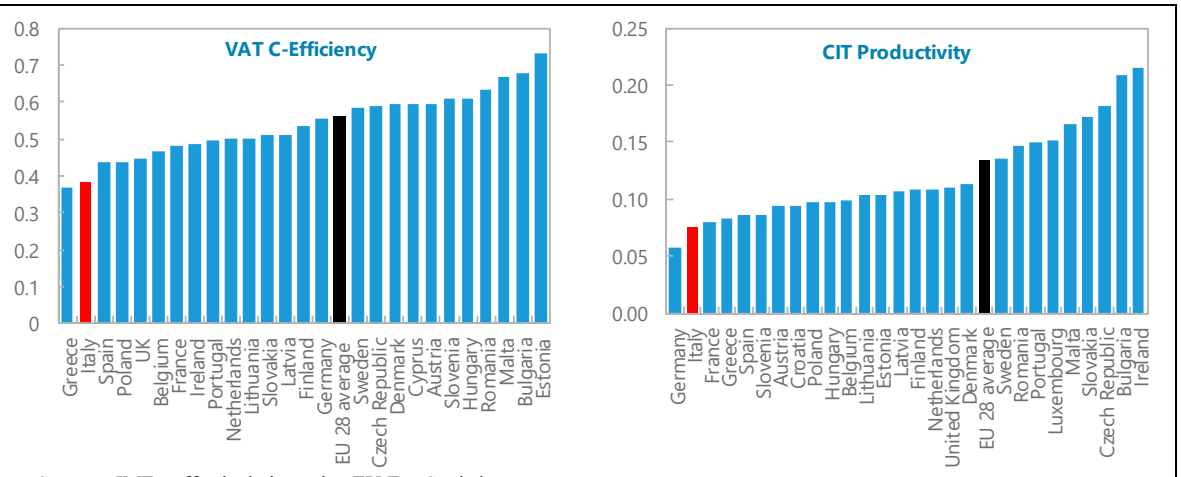
[16] The tax wedge is sum of taxes and SSCs paid by employees and SSCs paid by employers, minus family received benefits. The average tax wedge is the tax wedge divided by the total cost of labor for the employer. This measure can be computed at various levels of income and types of households (singles, couples, with or without children).

[17] To reduce the labor tax wedge, Italy has adopted several measures, including SSC exemptions, the €80 PIT reduction, and deduction from the IRAP tax base of the labor cost of hires with permanent contracts.

- The CIT to GDP ratio is about 2 percent, well below the EU average of 2.7 percent, even though the CIT rate is significantly higher than the current EU simple CIT average (excluding Italy) of 21.3 percent. With the IRAP, Italian companies are taxed at an even higher rate.

- The standard VAT rate is 22 percent compared to an EU average standard VAT rate of about 21.5 percent.

- *Relatively narrow base:*
  - Tax expenditures are quite large, estimated by Tyson (2014) at 6.5 percent of GDP, and by the "*Commissione Marè*" report on tax expenditures at 5.5 percent of GDP. A recent report from the Ministry of Economy and Finance (MEF) identifies 600 measures of this kind on a legal basis.
  - Italy has one of the weakest performing VAT systems in the EU, reflecting the presence of policy as well as compliance gaps. The VAT C-efficiency—an indicator of the departure of the VAT from a perfectly enforced tax levied at a uniform rate on all consumption—at about 40 percent is well below the EU average.[18] Combining this with a compliance gap of about 26 percent, as estimated by EC to be the fifth highest in EU, implies a policy gap of about 54 percent (the second highest in EU).[19]
  - Moreover, the CIT revenue productivity is only 7.4 percent compared to the EU average of 13.4 percent. Alternatively, the Implicit Tax Rate on Corporate Income in Italy was 25.9 percent in 2012 (the latest year available), as compared to 17.8 percent for Spain and 20.8 percent for the U.K.
  - Tax evasion is very high. On average and over the period 2012-2014, the amount of revenues forgone per year is estimated by the Ministry of Economy and Finance at around €110 billion. The stock of unpaid tax and SSC debt in 2016 was €614 billion.



Sources: IMF staff calculation using EU Tax Statistics.
Notes: C-efficiency is defined as the ratio of VAT revenue to the product of the standard VAT rate and consumption. CIT productivity is the ration of CIT revenues to the product of the CIT rate and GDP.

[18] See Keen (2013) for a detailed discussion of the C-efficiency measure.

[19] The policy gap can be further decomposed into those arising from exceptions and rate dispersion.

A shift in the tax burden from productive factors to property and consumption, with support for investment, would make for a growth-friendly mix:

- "Fiscal Devaluation" (see De Mooij and Keen, 2012)—shifting the tax burden from labor income to less distortive tax bases by:

    a. Lowering employers' SSC rate to closer to the EU average.

    b. Using well-designed targeted instruments to increase labor supply, such as replacing the family ("dependent spouse") tax credit with an in-work tax credit.

    c. Introducing a modern property tax on primary residences and updating cadastral values; and lowering the VAT policy and compliance gaps, e.g., by harmonizing the reduced VAT rates, reducing the range of items subjected to reduced rates or exemptions, and considering a moderate increase in the standard VAT rate.

    d. Eliminating inefficient tax expenditures (e.g., abolishing the mortgage interest tax credit).

    e. Making the newly introduced self-employment regime compulsory.

    f. Strengthening capital gains taxation by ensuring Italy's right in the domestic law to tax capital gains from offshore indirect transfers of assets.

- Encouraging investment through more effective, efficient, and credible tax provisions, building on measures such as adoption of an Allowance for Corporate Equity (ACE) regime since 2012[20] and several internationally-required anti-tax-avoidance provisions:[21]

    a. Streamlining targeted tax incentives to encourage innovation and R&D investment.

    b. Improving the design of ACE, e.g., by providing a higher ACE rate for start-ups.

    c. Abolishing the intellectual property (IP) box regime.

    d. Improving the overall investment climate by addressing uncertainty in tax matters that dampen taxpayers' confidence and investment, e.g., by making the R&D tax credit permanent and credibly announcing the non-extension of enhanced depreciation.

- Reforming tax administration, including by restoring autonomy to fiscal agencies, strengthening enforcement, relaxing legal constraints to tackle tax debt, and bringing instalment arrangements in line with international best practice.

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[20] The ACE rate was reduced from 4.5 percent to 2.3 percent in 2017 and 2.7 percent in 2018.

[21] Examples include rules to limit interest deduction for the CIT (*an earning-stripping rule*) and rules to limit profit shifting through Italian-controlled companies located in low tax ("black-listed") jurisdictions (*controlled foreign company rules*).

Table 5. Tax Structure in Selected Countries, 2015

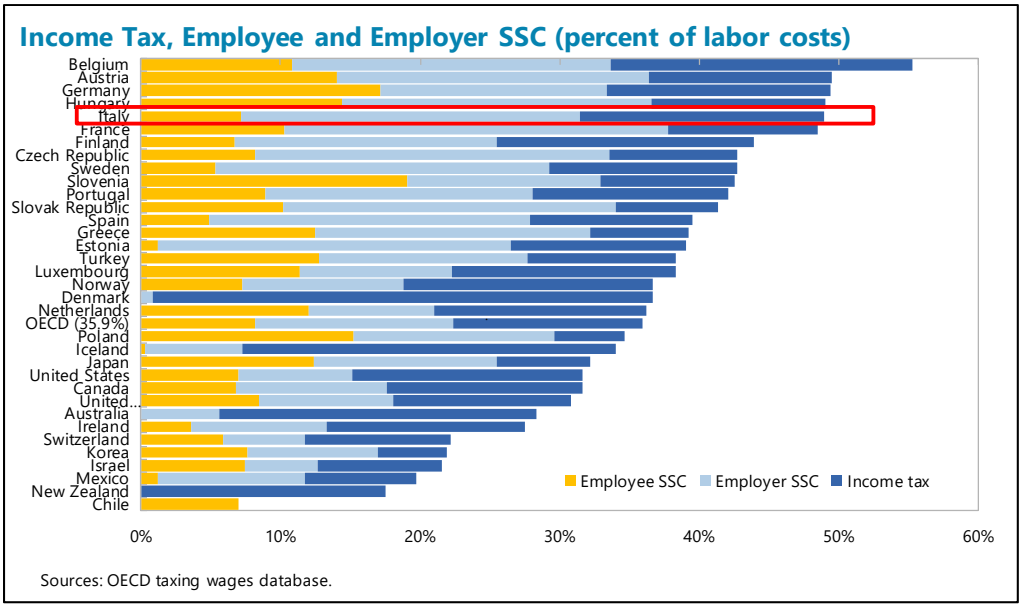
	General Government Revenue Structure (percent of GDP)											
		Tax Revenue										
Country	**Total**	**Total**	**Taxes on Income and Profits**				**Taxes on Goods and Services**				**Capital**	**Social Contribution**
			Total	PIT	CIT	Other	Total	VAT	Import	Other		
Austria	44.6	28.2	13.6	11.0	2.4	0.3	14.6	7.8	0.1	6.7	0.0	15.5
Belgium	46.9	29.9	16.1	12.5	3.4	0.2	12.9	6.7	0.6	5.5	0.9	16.6
Bulgaria	29.0	21.1	5.6	3.1	2.1	0.4	15.6	9.0	0.2	6.4	0.0	7.9
Croatia	37.5	25.2	5.6	3.6	1.9	0.1	19.6	13.0	0.0	6.6	0.0	11.9
Cyprus	33.3	23.8	8.9	2.5	6.0	0.4	14.9	8.7	0.2	6.0	0.0	8.5
Czech Republic	34.2	19.4	7.1	3.6	3.4	0.0	12.3	7.3	0.1	5.0	0.0	14.6
Denmark	48.4	46.6	29.7	27.0	2.7	0.0	16.6	9.6	0.0	7.0	0.3	1.0
Estonia	33.6	22.2	7.9	5.8	2.1	0.0	14.3	9.2	4.4	0.7	0.0	11.4
Finland	44.1	30.0	15.5	12.9	2.2	0.5	14.2	9.1	0.1	5.1	0.3	12.9
France	47.8	28.0	11.5	8.8	2.7	0.0	15.9	6.9	0.1	8.9	0.6	18.9
Germany	39.8	22.8	11.8	9.9	1.7	0.2	10.8	7.0	0.8	3.0	0.2	16.5
Greece	39.4	24.3	8.2	5.4	2.2	0.6	16.1	7.3	0.2	8.5	0.1	13.9
Hungary	39.4	25.8	6.9	5.0	1.9	0.0	18.9	9.8	0.0	9.1	0.0	13.3
Ireland	24.3	19.3	10.4	7.5	2.7	0.3	8.8	4.7	1.5	2.6	0.2	4.5
Italy	43.5	29.7	14.4	12.1	2.1	0.3	15.3	6.2	0.1	8.9	0.1	13.4
Latvia	29.4	20.4	7.6	6.0	1.6	0.0	12.8	7.7	0.2	4.9	0.0	8.7
Lithuania	29.3	17.3	5.4	3.9	1.6	0.0	11.8	7.8	0.3	3.8	0.0	12.0
Luxembourg	38.4	25.6	13.5	9.1	4.4	0.0	12.0	6.7	2.5	2.8	0.1	12.0
Malta	34.6	27.2	13.5	5.9	5.8	1.8	13.5	7.8	0.2	5.6	0.2	6.8
Netherlands	37.8	22.0	10.5	7.7	2.7	0.0	11.3	6.6	1.6	3.0	0.2	14.7
Poland	33.3	19.5	6.5	4.7	1.9	0.0	12.9	7.0	0.2	5.7	0.0	13.6
Portugal	37.0	25.0	10.5	7.3	3.1	0.0	14.6	8.6	0.6	5.4	0.0	11.6
Romania	28.0	19.5	6.2	3.7	2.4	0.2	13.3	8.1	0.1	5.1	0.0	8.1
Slovakia	32.5	18.0	7.1	3.2	3.8	0.2	10.9	6.9	0.2	3.8	0.0	14.1
Slovenia	37.0	21.5	6.6	5.1	1.5	0.0	14.9	8.3	0.1	6.4	0.0	14.8
Spain	34.3	22.1	9.7	7.2	2.4	0.1	11.8	6.5	0.2	5.2	0.6	12.2
Sweden	44.3	40.3	18.2	15.0	3.0	0.2	22.1	9.1	0.0	12.9	0.0	3.7
United Kingdom	34.8	24.7	11.7	8.9	2.3	0.5	12.8	6.9	0.2	5.7	0.2	7.8
EU 28 average including	37.0	25.0	10.7	7.8	2.7	0.2	14.1	7.9	0.5	5.7	0.2	11.5
EU 28 average excluding	**36.8**	**24.8**	**10.6**	**7.6**	**2.7**	**0.2**	**14.1**	**7.9**	**0.5**	**5.6**	**0.2**	**11.4**

Sources: IMF staff, Eurostat, and OECD. Components of Income Tax for Germany, Hungary, Estonia, and Spain are taken from OECD Revenue Statistics.

Fiscal Rebalancing/Devaluation

A "fiscal devaluation" is a revenue-neutral shift in the tax structure (e.g., from employers' social security contributions toward value-added and property taxes) with positive effects on employment and output. Nonetheless, it could present risks for pension financing.

Reducing employers' SSCs can stimulate labor demand in the short term. Given wage rigidities and being in a monetary union with major trading partners, cutting employers' SSCs can reduce labor costs (and producer prices, including those of exports) as well as increase labor demand in the short term. The resulting favorable effect on the trade balance could be temporary though, if nominal wages eventually adjust to fully offset the cut. However, the impact on employment and output may be longer lasting with a shift in the tax burden toward non-labor income (VAT and property taxes) that is also less distortionary.



Moderately increasing the share of employees' SSCs in total could, under certain conditions, partially finance the cut in the employers' SSC and ensure a stable stream of funding. Changing the composition of the SSCs by adjusting the employees' SSC share would address the risk of using general revenues to finance pension and social security obligations. However, there could be a negative effect on wages and labor supply, and thus the measure could best be introduced should the government decide to reduce personal income taxes and be complemented with other targeted measures.

Better use of targeted measures toward increasing labor supply, especially of low income earners, is recommended. Italy has the lowest labor supply of married women among EU countries. This is in part driven by a tax credit for non-working spouses that discourages their labor supply. A better-targeted design is replacing this tax credit with a tax credit for households if both spouses are employed (called working family tax credit or in-work tax credit), which can be increasing with the number of children (as, e.g., in the U.K. and the U.S.). Available evidence suggests that adopting in-work tax credits for low income earners, within a revenue-neutral reform, can have sizable impacts on the female labor-force participation and aggregate employment (Saez, 2002; De Mooij, 2008). For Italy, Colonna and Marcassa (2015) find that replacing the dependent-spouse tax credit with an in-work tax credit increases married women participation rate by 3 percentage points. However, although in-work tax credit alleviates the tax burden at the extensive margin, there is a risk of increasing distortion at the intensive margin of labor supply, which can be mitigated through an appropriate design of the in-work credit.

Re-introduction of a property tax on primary residences is a vital element of a modern tax system in Italy. The municipality property tax (known as "IMU") and the municipality tax on local services ("TASI") for primary residences were abolished in 2015, owing to their

unpopularity.[22] The property tax is an efficient instrument and can raise significant revenues. In 2015, recurrent taxes on immovable property raised 1.6 percent of GDP in Italy. Even if taxes on primary residence were reintroduced, to fully exploit the potential of the property tax, it is essential to reform the cadastral system and update the cadastral declared value of the property on the *Rogito* (deed of sale). Using municipal property taxes to finance local governments enables the central government to reduce transfers to local governments and free up resources to fund the lowering of employers' SSCs.

Lowering the VAT policy gap by harmonizing the reduced VAT rates can raise significant revenues. The VAT compliance gap as of 2015 was €35.1 billion, about 26 percent of total VAT liability (2.1 percent of GDP), significantly higher than the EU-27 average (12.8 percent). Halving this gap, while maintaining all tax rates unchanged, would increase revenues by 1.05 percent of GDP. Moreover, based on EU (2016), fully closing the policy gap, i.e., if no VAT reduced rates and exemptions were applied, would enable Italy to increase its VAT revenue by an additional 15 percent. This estimate, however, is based on a full compliance scenario. Adopting a lower number of reduced rates could be an intermediate step toward lowering this policy gap. Decreasing the range of items subjected to reduced rates or exemptions is also important for lowering the policy gap. For instance, instead of exempting taxi services from the VAT, they can be subject to the reduced rate; however, if taxis pay VAT on their inputs, a careful analysis is needed to assess the revenue impact.[23]

Concrete actions are required to tackle the causes of high tax arrears. Tax arrears are at an alarmingly high level reaching €614 billion (as of 2016). Toro and others (2015) suggest that a significant amount of arrears is not collectable (e.g., because 31 percent of debtors are out of business or bankrupt and 36 percent relate to cases where enforcement actions were taken but did not result in actual collection) calling for effective write-off arrangements. Recurrent tax concessions undermine voluntary compliance culture and the effectiveness of tax administration. About €31 billion of tax arrears is deemed recoverable. Enforcement actions are critical that could be supported with timely filing, modern payment arrangements, and relaxing legal constraints.

Italy embraces a large set of tax credits in part reflecting income redistribution mechanisms. For example, within the personal income tax, there are tax credits for dependent spouses, children, retirees, education and medical expenses. Other allowances/deductions within the tax structure include substitute tax on capital income, ACE allowances and participation exemption, reduced VAT rates and compulsory payroll tax deductions. The largest item of tax expenditures is the employment income tax credit for wage and self-employed income. This reflects the fact that the first bracket of income (from zero to 15,000 euro) is subject to a tax rate of 23 percent (i.e., there is no zero-tax bracket for low income). Thus, thep tax credit is warranted for redistribution. However, some other tax

[22] The IMU on luxury houses remains enacted, but the tax was reduced. The basic rate for the IMU for the primary residence was equal to 0.76 percent, but it varies depending on the location of the house by a maximum of +0.3 percent.

[23] Several measures were introduced in recent years to reduce the VAT gap. Examples include optional electronic invoicing, more frequent VAT invoice transmissions, and split-payment and reverse-charge mechanisms.

expenditures within the direct income tax should be revisited and could be gradually eliminated, including:

- *Mortgage interest tax credit.* The tax credit is equal to 19 percent of the mortgage interest payments. The upper limit of this tax credit is €4,000. Since capital gains on primary residence in Italy are exempt from the capital gains tax, and high household debt could be associated with stability risks (IMF, 2016a), the mortgage interest tax credit should be phased out or at the very least its generosity should be lowered.

- *Tax credit for medical expenses.* This tax credit is equal to 19 percent of medical expenses exceeding €129.11.[24] Yet, redistribution motives in this area can be better-targeted using government expenditures, and furthermore, currently, health services are either subject to a reduced VAT rate or exempted from the VAT in Italy. Hence, this tax credit can be revisited.

Supporting Investment

A simple and certain business taxation strategy is recommended that relies on two key elements: (i) innovation and allowance for corporate equity, and (ii) removal of inefficient incentives.

Improving the design of the ACE can support investment. In the main, these comprise technical adjustments to the ACE regime, rather than cuts to CIT rates.

- In the presence of ACE, changes to statutory CIT rates are less likely to impact investment decisions. The extent to which the revenue cost of the recent CIT rate cut from 27.5 to 24 percent can be compensated by increased investment and growth depends on:

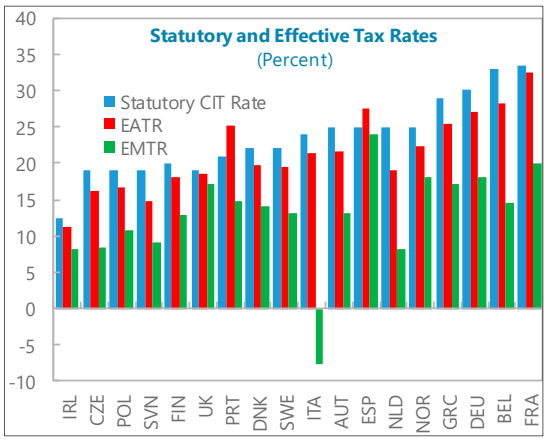
    - *Profit shifting.* The lower CIT rate can reduce incentives for profit shifting. However, this aspect is unlikely to be significant because, as discussed above, Italy has agreed to comply with the ATAD and the G20/BEPS minimum standards. These anti-avoidance measures help safeguard against profit shifting.

    - *Location choice.* The neutrality of the CIT with regard to ACE means that any impact on investment will come in effect from changed location by multinational companies, but the location decision depends on several other tax and non-tax factors (including labor regulations and labor supply). Firms that would have invested anyway would also benefit from the rate cut, adding to the fiscal cost but without benefit.

- ACE contributes to very low, perhaps even negative, marginal effective tax rates, thereby positively impacting investment. Effective tax rates summarize the impact of major elements of the tax base, such as depreciation allowances and the ACE, along with the rate of tax itself. In theory, the marginal effective tax rate (METR)—a measure of the tax burden on an investment that just yields the required rate of viable return—is zero in Italy

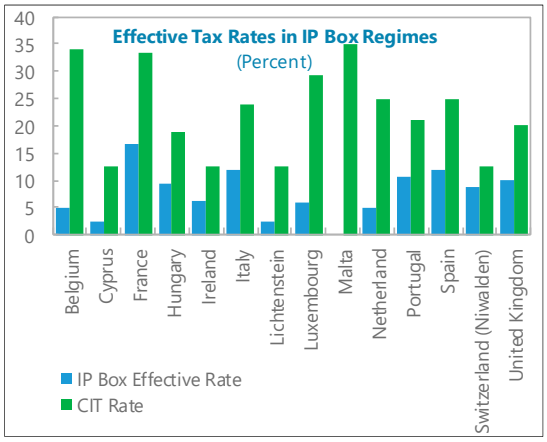
[24] A 2015 analysis of the tax credit for medical expenses based on tax returns statistics show that the beneficiaries, mostly with incomes below €55,000, are 17.3 million for a total amount of €16.2 billion of expenses.

because the ACE does not tax normal return.[25] In the text Figure, taken from the Oxford Center for Business Taxation, the METR is negative, suggesting that the marginal investment receives a subsidy in Italy (although these calculations must be interpreted with caution as the negative rate is driven by strong assumptions underlying the calculations). Another measure is the effective average tax rate (EATR), which is important for multinational companies' location choice for new affiliates (it measures the proportion of the present value of pre-tax profit that would be taken in tax). The EATR in Italy compares favorably to several EU member states including Spain, France, Germany, and Portugal.



- The impact of the ACE on investment could be enhanced, for instance, by providing a higher ACE rate for small businesses (perhaps contingent on an age requirement), re-linking the rate to government bond yields, and a premium to reflect risks, and introducing a minimum rate of 2 to 3 percent in line with the EU Common Consolidated Corporate Tax Base (CCCTB) proposal to enhance tax certainty.[26]

Well-designed R&D tax incentives can have a sizable impact on productivity. Taxation can incentivize private R&D activities through the input side—in the form of an R&D tax credit or deduction—or the output side in the form of a reduced tax rate on IP income ("IP box"). While Italy has measures on both sides, the former measures are more efficient.[27] Empirical evidence suggests that one euro spent by the government on R&D tax incentives, on average, increases domestic private R&D by one euro, whereas one euro spent on an IP box can, at best, increase R&D by less than one euro (IMF, 2016b; Dumont, 2015). Bloom and others (2002) estimate that a 10 percent reduction in the



[25] The METR considers the size of allowances and deductions in determining taxable profit and measures the proportionate increase in the required rate of return on an investment project.

[26] Within the 2017 supplementary budget, the base of the ACE tax deduction was changed from "the increase in equity since 2011" to "the increase in equity in the last five years before the tax year considered".

[27] The strategy followed by Italy to scale-up investment and enhance productivity includes: i) tax credits for R&D investments; ii) accelerated depreciations, such as super and hyper-amortizations; ii) subsides to SMEs to repay loans and agreements with banks to promote access to credit, as envisaged by the so-called Nuova Sabatini Law; iii) specific credits and crowdfunding for start-up and SMEs; iv) tax allowances, such as ACE; v) State guarantees on loans of SMEs; vi) a reduced tax rate on incomes from the direct use or license for IP incomes (the so-called Patent Box); and vii) targeted incentives to innovative start-ups.

cost of R&D increases the level of R&D by about 1 percent in the short run and 10 percent in the long run. Griffith and others (2014) estimate that IP regimes have resulted in lower revenues from IP in the Benelux countries and the U.K. Not all EU countries adopt an IP box, while the tax rates for those that apply an IP regime are shown in the text figure. Italy exempts 50 percent of qualified IP income from taxation, and taxes the remaining 50 percent of that income at the statutory CIT rate of 24 percent implying an effective tax rate of about 12 percent.

In general, there are fundamental conceptual concerns with IP boxes. The IP tax relief:

- *Rewards only success.* Successful R&D outputs are a function of many non-R&D related inputs (including management) that are not characterized with market failure. IP regimes may discriminate against potentially important R&D activities that may not be successful quickly.

- *Is proportional to the amount of qualifying IP income, and not connected to the level of R&D expenditure.* That is, two patents may generate the same income, thereby receiving the same benefits from the IP regime, even if they have different levels of R&D input.

- *Cannot perfectly target the location of R&D.* There is a distinction between the legal ownership of patents (and know-how assets) and the location of R&D activities that led to the patents. IP boxes can influence the location of the legal ownership of the know-how assets (within the multinational group) with little effect on domestic R&D investments. Essentially, large enterprises particularly in the manufacturing sector benefit the most from this scheme.

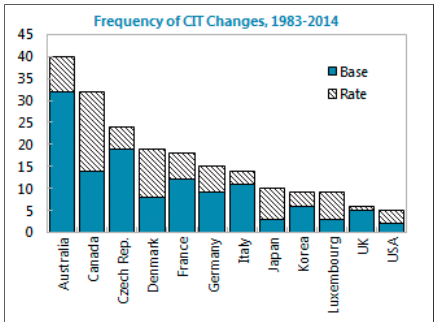
Options to streamline the existing R&D and investment incentives in Italy include:

- Abolish the IP box regime. The October 2016 European CCCTB proposal envisages a super deduction for R&D expenditures. If implemented, the CCCTB would phase out IP regimes. The 2017 supplementary budget attempts to harmonize the Patent box regime to OECD standards.

- Make the tax credit for R&D expenses permanent.

- Credibly announce that temporary super depreciation rules will not be renewed (starting from a given date).

- Periodically assess the effectiveness of the allowances for investment in innovative startups. Potentially, this measure should not be size-based and apply only to startups.



Source: IMF staff calculations. On average, there are 17 significant policy changes per country over the sample period: a little more than one every eighteen months. There is, however, significant variation in this frequency. It is greatest in France and Italy (with 40 and 32 changes respectively) and least in Denmark and Korea (9 and 10 changes). In most countries, significant base changes have been noticeably more common than rate changes.

Frequent changes to tax policy and administration, and excessive use of temporary provisions can be an important source of uncertainty (IMF/OECD, 2017). The frequency of tax changes in Italy is high compared to other G20 countries, and introducing or renewing

temporary measures with varying conditions is prevalent. Temporary measures generate uncertainty when their expiry date is either unclear or not credible. Such uncertainty risks creating a hold-up problem, as firms defer investment until the uncertainty is resolved.[28]

V. A Growth-Friendly Fiscal Policy Mix

The IMF's Global Integrated Monetary and Fiscal Model (GIMF) is used to illustrate the effects of the above-mentioned fiscal package (Figure 4). The scenario modeled assumes a permanent fiscal consolidation of about 2 percent of GDP (in the structural primary balance) over four years to achieve a small structural surplus, supported by a pro-growth mix of revenue and expenditure reforms, and is compared to a trend or no-policy-change baseline. Two types of growth-friendly revenue and spending measures are considered along the envisaged fiscal consolidation path: shifting taxation from direct to indirect taxes, and lowering expenditure and shifting its composition from transfers to investment.

- On the revenue side, a lower labor tax wedge (1.5 percent of GDP) is offset by higher VAT collections (1 percent of GDP) and introducing a modern property tax (0.5 percent of GDP).[29]

- On the expenditure side, spending on public consumption is lowered by 1.25 percent of GDP, while productive public investment spending is increased by 0.5 percent of GDP. The remaining portion of the fiscal consolidation, 1.25 percent of GDP, is implemented via reduced social transfers. In the model-based analysis, it is assumed that higher public investment spending and an associated higher level of government capital exert positive spillovers on private sector productivity.

The policy package would result in an output increase of around 2 percent and a lower debt-to-GDP ratio of around 13 percentage points in a decade. The increase in output is even larger in the long run (around 2½ percent higher than the baseline) while the debt-to-GDP ratio is more than 35 percentage points lower than the baseline. The positive response of the economy is a result of a less distortionary new tax structure, with lower labor tax wedges, and of the more productive spending, namely on public investment, and lower debt-service costs. Lower taxes on capital induce firms to increase investment and raise their desired level for the private capital stock. Lower labor income taxes encourage households to provide more labor. The net effect of lower income taxes and higher lump-sum as well as value-added taxes is positive on private consumption in the long term. The revenue-neutral tax reform on its own—with no change in the debt-to-GDP ratio—would result in higher private consumption and output owing to the economy moving towards less distortionary sources of taxation.

[28] Gulen and Ion (2016) find evidence that policy uncertainty is persistently and negatively correlated with corporate investment, with an important part of the negative effect of tax-related uncertainty measured as the presence of temporary measures where the expiration date or the possibility for renewal are unclear.

[29] The property tax is approximated by lump-sum taxes in the model-based analysis.

The increase in productive public investment and lower expenditure on public consumption and lower social transfers result in further output gains in the long run. The productive public spending stimulates private capital accumulation and the lower deficit and debt ratios result in significant savings on debt-service costs. In the short run, before the benefits of more productive investment and of lower debt fully materialize, the reduced social transfers and public consumption dampen somewhat private consumption and output. Short-term costs though are quite modest and are traded for significant longer-term benefits of permanently higher private consumption and output. The fiscal consolidation/composition shift scenario assumes that the measures are gradually phased in over the period of four years. If the announcement of the reform is fully understood by firms and households and fully believed, the short-term costs are even smaller than in the case when the general public considers permanent only the measures implemented in the given year and in the past, but do not believe that future reforms will be implemented. When households and firms believe the whole path of fiscal reforms they invest more from the outset and reap the long-term benefits of the fiscal consolidation sooner.

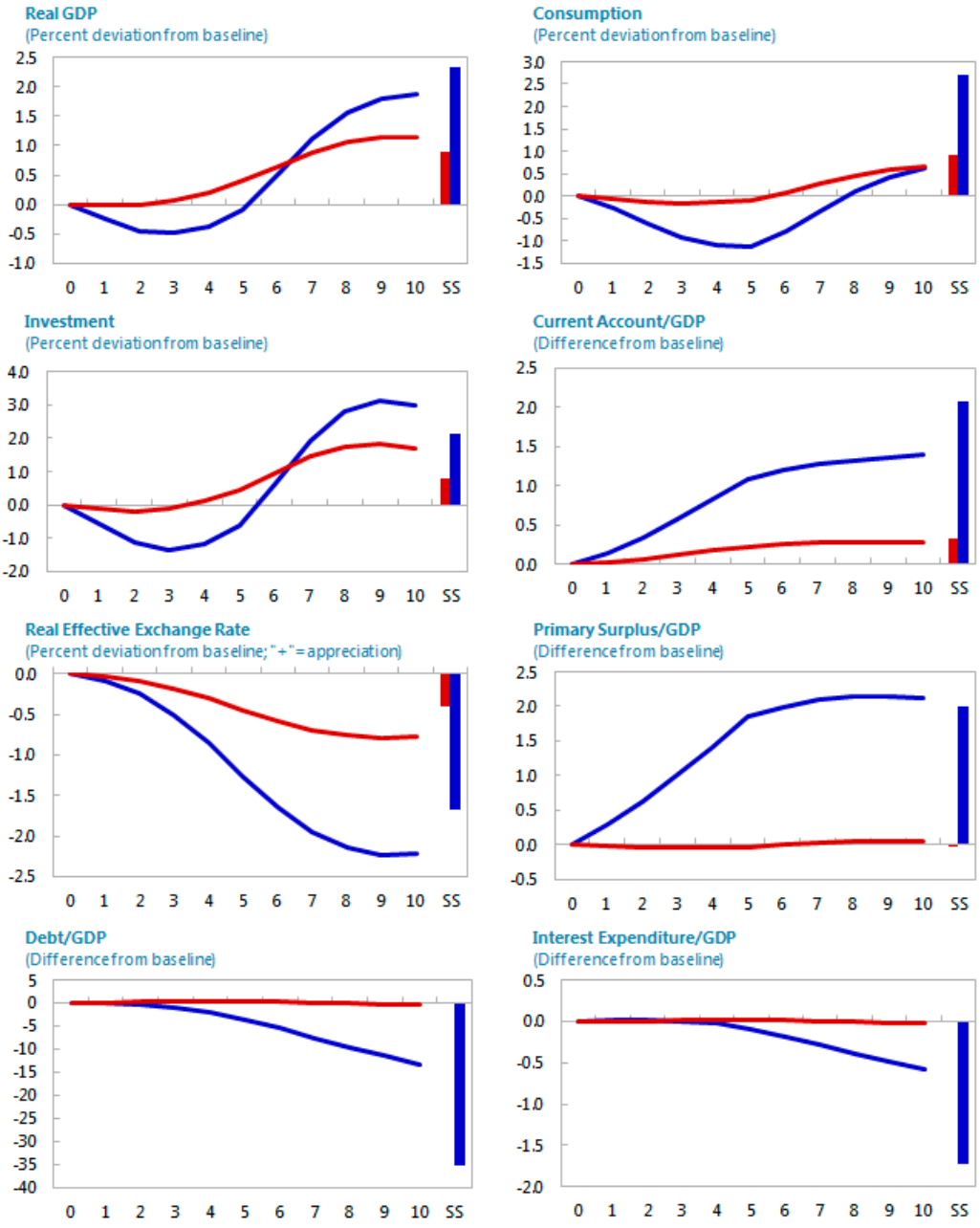
VI. CONCLUSIONS

This paper seeks to contribute to the fiscal policy discussions in Italy by: (i) assessing spending patterns from a long-term perspective to identify areas for savings; (ii) evaluating the pension system; (iii) analyzing the scope for revenue rebalancing; and (iv) outlining a package of spending cuts and tax rebalancing that is growth friendly and inclusive.

Regarding the pension system, the paper finds that (i) despite past reforms, there remain generous parts of the system where Italy is a clear outlier, pointing to areas of potential savings; and (ii) pension projections rest on optimistic assumptions of (a) employment, specifically that Italy will go from having among the highest to very low unemployment rates; and (b) Italy will maintain much higher real GDP growth rates for decades to come than has been its experience and under current policy settings. Relaxing these assumptions implies a notable rise in projected spending over the coming decades until the full benefits of past reforms become evident, with concomitant implications for higher debt levels.

Simulations of a comprehensive fiscal reform package show that a revenue-neutral and less distortionary tax reform, alongside current spending cuts and capital spending increases, can generate sizable output gains and a sustainably lower public debt ratio over the medium to long term. Short-term output costs of this fiscal package, if implemented credibly, are limited.

Figure 4. Italy: Simulated Fiscal Reform



Source: IMF staff estimates.
Notes: Horizontal axis=years, and SS=steady state. Red: revenue rebalancing. Blue: total impact.

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