

18-24 Impact of Italy's Draft Budget on Growth and Fiscal Solvency

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Italy's government is in a standoff with the European Commission. Rather than reducing the public deficit, as the previous government had promised, the new government plans to increase it significantly, mostly to allow higher social spending. Because Italy's debt is high—over 130 percent of GDP—and its structural (cyclically adjusted) fiscal balance still in deficit, the proposed budget violates EU fiscal rules. In late October 2018, the European Commission (2018b) announced that Italy's 2019 Draft Budgetary Plan (DBP) was not acceptable (Ministry of Economy and Finance 2018a). On November 13 the government submitted a revised DBP, which adjusted the estimated fiscal cost and descriptions of some measures and raised the 2019 privatization revenue target but left the deficit targets and growth assumptions un-

changed (Ministry of Economy and Finance 2018b). Pundits and markets are currently focused on how the Commission and the European Council will react.

This fight between the Commission and the Italian government, however, hides a more fundamental issue. Looking beyond the violation of EU fiscal rules, is the budget good or bad on its economic merits? Will it raise growth, in the short run and the long run? Is it consistent with debt sustainability?

This Policy Brief focuses on these questions and reaches two main conclusions.

The first one is pessimistic. The larger budget deficit will probably not increase growth. Under plausible assumptions, it may even reduce growth. Investors' worries about the government's policies in general, and about its fiscal strategy in particular, have led to a large increase in government bond spreads over the German bund. If Italian history is any guide, such large spreads will lead to tighter private sector borrowing conditions and lower investment, depressing output. This contractionary effect will offset, or perhaps more than offset, the direct effects of expansionary fiscal policy on demand.

The second is more optimistic. Even with assumptions about growth and implied deficits that are more realistic than those of the Italian government, and assuming that the spreads will remain high but not increase further, the debt ratio should remain roughly stable over the next three years. Going forward, Italy will require some fiscal adjustment to put its debt ratio on a downward trajectory, but the extent of that adjustment appears manageable.

Two implications follow.

First, by its own standards, the government would probably have fared better by pursuing its social objectives through a roughly fiscally neutral budget. This strategy would have led to lower interest rates and probably to higher growth. And it may not even have required a substantial sacrifice in noninterest spending, because it would have saved money that will now go toward higher interest expenditures—on the order of $\frac{1}{4}$ percent of GDP in 2019 and $\frac{1}{2}$ percent in 2020.

Second, even if the government sticks to its current budget plans, a crisis is not a foregone conclusion. While the increase in spreads and the higher deficit expected in the next few years increase fiscal risks, there is a narrow path on which stability could be maintained. At current spreads, the government can probably manage to steer the economy, achieve

some of its goals, and maintain debt sustainability. But further doubts, triggered by unrealistic claims or budgetary slippages, could quickly lead to unmanageable spreads and a serious crisis, including involuntary exit from the eurozone.

THE BUDGET PROPOSAL

To understand the likely impact of Italy's Draft Budgetary Plan, it is useful to go back to the Stability Programme (i.e., medium-term fiscal adjustment plan) proposed by outgoing finance minister Pier Carlo Padoan in late April 2018¹ (see top panel in table 1).

Following two years of fiscal loosening, leading to a rise in the structural deficit of 1.3 percent of GDP, the Stability Programme envisaged a modest fiscal tightening in 2018, followed by further tightening on the order of 0.6 percent in 2019 and 0.5 percent in 2020. Together with assumed average real growth of 1.4 percent between 2018 and 2020, this tightening would have reduced Italy's headline fiscal deficit to around zero by 2021 (for the first time since 1926, according to Paolo Mauro et al.'s [2013] historical public finance dataset).² Outside institutions such as the European Commission (2018a) and the International Monetary Fund (IMF 2018a) were less optimistic, but there was agreement that with continued low interest rates, the adjustment envisaged by the Stability Programme would lead to a steady decline in Italy's fiscal deficit and the debt-to-GDP ratio.

The essential difference between the April 2018 Stability Programme and the government's new fiscal plan, represented by the "policy scenario" in the new DBP (see table 1), is that the latter replaces the planned fiscal tightening of 0.6 percent of potential GDP with a planned structural fiscal *loosening* of 0.8 percent in 2019, with no further structural consolidation in 2020 and 2021.³ Hence, the difference between the structural deficits envisaged by the two plans is 1.4 percentage points of potential GDP in 2019.

At the same time, the new government assumes that the debt-to-GDP ratio will continue to decline, albeit more gradually than projected under the previous government—in spite of the higher structural deficit and in spite of the fact that it projects a higher interest rate bill as a result of both

the higher deficit and the rise in interest rates observed since April. The main reason for this is high assumed growth, 1.5 percent in 2019 and 1.6 percent in 2020 in real terms.

To see how the Italian government derives its numbers, consider the "baseline scenario" in the middle of table 1. This scenario is what the government assumes would have happened if the fiscal consolidation measures legislated by the previous government had simply been allowed to continue, taking into account new information as of early October—namely, slightly weaker growth in 2018 than was expected in April and much higher interest rates. For both reasons, the government reckons that growth would have turned out much lower during 2018–20 than what the old government had projected—namely, about 1 percent on average. In other words, the government assumes—incorrectly, as we argue below—that interest rates would have risen and thus growth would have declined even if it had stuck to the fiscal policies of its predecessor. In the "policy scenario," growth is projected to be high for 2019 and 2020 because the fiscal stimulus embedded in the new budget is assumed to offset—indeed, more than offset—the assumed lower baseline growth.

Turning to the composition of the new budget, all the new fiscal measures that underpin the government's budget for 2019 and beyond have already been legislated at the end of September. The total impact of the policy measures is estimated to be –1.2 percent of GDP in 2019 (i.e., an increase in the deficit by 1.2 percent of GDP compared with what would have happened under the old legislation), –1.4 percent in 2020, and –1.3 percent in 2021 in the revised DBP (Ministry of Economy and Finance 2018b, 22).⁴ The most notable measures are as follows:

- The full (for 2019) or partial (for 2020 and 2021) removal ("decommissioning") of the "safeguard clauses"

1. Italy's Stability Programme 2018 is available in Italian at https://ec.europa.eu/info/sites/info/files/2018-european-semester-stability-programme-italy-it_0.pdf.

2. The dataset is available at www.imf.org/external/np/fad/histdb/. Italy also came close to fiscal balance in the early 1960s.

3. Table 1 and the remainder of this Policy Brief are based on the revised DBP presented by the government on November 13, 2018 (Ministry of Economy and Finance 2018b).

4. The likely reason why the estimated impact of the policy measures listed in the DBP for 2019 is 1.2 percent rather than 1.4 percent (as one would expect from comparing the structural deficits targeted under the Stability Programme and the DBP) is that the former is based on a comparison of the fiscal impact of the old and new legislations under different GDP assumptions. The nominal (euro) budgetary impact of the newly legislated measures appears to be measured in percent of the GDP projected in the policy scenario. This can be seen from the fact that the total estimated budgetary impacts of the measures taken by the government for 2019–21, as shown in the last row of table III.1-12 in the revised DBP, is identical to the difference between the "baseline" and "policy" fiscal balances in percent of GDP as shown in table 1 and on page 4 of the revised DBP (Ministry of Economy and Finance 2018b), namely, 1.2, 1.4, and 1.3, respectively. If the impact of the old and new measures had both been expressed in percent of baseline GDP, these numbers would have been somewhat higher.

Table 1 Italy: Alternative fiscal and growth projections (percent of GDP unless otherwise specified)

Item	Actuals		Projections			
	2016	2017	2018	2019	2020	2021
Stability Programme, April 26, 2018						
Fiscal balance	-2.5	-2.4	-1.6	-0.8	0	0.2
Interest expenditures	4.0	3.8	3.5	3.5	3.5	3.5
Primary fiscal balance	1.5	1.4	1.9	2.7	3.5	3.7
Change in structural balance	-1.0	-0.3	0.1	0.6	0.5	0
Real growth (percent)	0.9	1.5	1.5	1.4	1.3	1.2
Gross debt	131.4	131.2	130.8	128.0	124.7	122.0
Revised budget proposal, November 2018						
Baseline scenario (existing legislation)						
Fiscal balance			-1.8	-1.2	-0.7	-0.5
Interest expenditures			3.6	3.6	3.7	3.8
Primary fiscal balance			1.8	2.4	3	3.3
Change in structural balance			0.1	0.7	0.3	-0.1
Real growth (percent)			1.2	0.9	1.1	1.1
Gross debt			130.9	129.2	126.7	124.6
Policy scenario (under proposed budget)						
Fiscal balance			-1.8	-2.4	-2.1	-1.8
Interest expenditures			3.6	3.6	3.7	3.8
Primary fiscal balance			1.8	1.2	1.6	2.0
Change in structural balance			0.2	-0.8	0	0
Real growth (percent)			1.2	1.5	1.6	1.4
Gross debt			130.9	129.2	127.3	126.0
International Monetary Fund, October 6, 2018						
Change in structural balance			0.3	-0.2	-0.3	-0.3
Real growth (percent)			1.2	1.0	0.9	0.8
European Commission, November 8, 2018						
Change in structural balance			0	-1.2	-0.5	—
Real growth (percent)			1.1	1.2	1.3	—

Note: Structural balance in percent of potential GDP. Table shows year-to-year changes in structural balance, rather than levels of structural balance, to better compare different methodologies for computing potential GDP.

Sources: European Commission (2018c); Italy's Stability Programme of April 2018; Italy's 2019 revised Draft Budgetary Plan of November 13, 2018, supplemented with data for 2020 and 2021 in Codogno (2018) based on Ministry of Economy and Finance projections published on October 4, 2018; IMF (2018b).

of the previous stability laws, which envisaged automatic increases in indirect taxes to meet the Stability Programme targets in 2019–21. The estimated budgetary cost is 0.68 percent of GDP in 2019, 0.29 percent in 2020, and 0.21 percent in 2021.

- A fund to establish a “citizenship income and pension” (*Reddito di Cittadinanza*, RdC). In the first version of the DBP (Ministry of Economy and Finance 2018a),⁵ this measure was described as aiming to guarantee a minimum income of €780 to all adults residing in Italy for at least five years, either as a “top up” for pensioners or the working poor or as a conditional benefit for the unemployed. It comes bundled with a reform of job placement centers and replaces an existing benefit introduced by the previous government at the beginning of 2018 (“inclusion income”), which had similar aims but was far less generous. The *net* cost of the three measures is expected to be 0.37 percent of GDP in 2019, 0.36 percent in 2020, and 0.35 percent in 2021 (presumably because benefits are set in nominal terms).
- A fund to revise the pension system to allow early retirement (“quota 100”).⁶ This change, which the government justifies as a way to facilitate generational turnover and free jobs for young people, is expected to cost about 0.37 percent of GDP per year.
- Extra funds for public investment at both the national and local levels: 0.19 percent of GDP in 2019, 0.3 percent in 2020, and 0.34 percent in 2021.
- A “flat tax” of 15 percent on individuals earning business income (self-employed) up to €65,000; to be extended, from 2020 onwards, by a 20 percent flat tax on individuals earning between €65,000 and €100,000 in business income. The estimated cost is just 0.02 percent of GDP in 2019, 0.1 percent in 2020, and 0.13 percent in 2021. This measure is combined with the repeal of a previously planned measure, the harmonization of the tax treatment of nonincorporated businesses and corporations at the current corporate income tax level of 24 percent as of January 2019. This repeal is expected to

generate offsetting savings of 0.11 percent of GDP in 2019, 0.07 percent in 2020, and 0.06 percent in 2021.

Part of the resources to finance these measures are expected to come from budgetary savings. In addition to the already mentioned repeal of the planned business tax harmonization, these include measures to increase tax compliance and simplify business taxation (about 0.05 percent of GDP in 2019, rising to about 0.1 percent in 2021), the “rationalization of expenditures of ministries” (0.08 percent of GDP in 2019, 2020, and 2021), and measures increasing the net tax burden on banks and insurance companies (0.17 percent of GDP in 2019), including “fiscal measures on banks” amounting to 0.07 percent of GDP in 2019. The latter are left unspecified in the DBP but reportedly refer to changing the tax treatment of some costs for banks (Bank of Italy 2018, 13).

A TENTATIVE ASSESSMENT

Assume, for now, that the budgetary measures outlined in the revised DBP are correctly costed and implemented exactly as specified. Under these assumptions—that is, both taking the budget at face value and evaluating it purely on its economic merits—would the net effect be good or bad for Italy?

Answering this question has microeconomic and macroeconomic dimensions. The former relates to the composition of the budget proposal and the latter to its impact on aggregate demand.

Composition

To start with the microeconomics, a key aim of this budget is to redistribute income. It is intended to benefit the poor and unemployed (particularly in the south of Italy, where benefits command higher purchasing power), microbusinesses, the self-employed, and people wishing to retire early. This redistribution will come at the expense of the young, future taxpayers, larger businesses, the north, and the financial sector.

We are sympathetic to at least some of these redistributive measures, particularly those directed at the poor. Furthermore, the main instrument designed to redistribute income, the “citizenship income and pension” (RdC), does not seem to be very different from similar topping-up schemes adopted in other European countries (such as “Hartz IV” in Germany)—except for its greater generosity. As Carlo Cottarelli (2018b) argues, the RdC would surpass any other minimum income scheme in the European Union in relation to both average income per capita (34 percent) and the national relative poverty line (100 percent). Cottarelli also points out that because the RdC targets a *national* relative poverty line, a poor person living in the south of Italy

5. The formulation used in the revised DBP lacks any implementation details, except for mentioning the target level of €780 for pensions in table III.1-14. Eligibility criteria are no longer mentioned. Unlike the first version of the DBP, where the RdC was classified as “immediately effective,” the revised version of the DBP states that the RdC is “to be defined by implementing law” (Ministry of Economy and Finance 2018b).

6. The revised DBP lacks any implementation details. The previous DBP stated that the minimum threshold for early retirement is 62 years of age and 38 years of contributions. Similar to the RdC, the November 13 version of the DBP states that the pension reform is “to be defined by implementing law” (Ministry of Economy and Finance 2018b).

will receive a more generous transfer, in purchasing power terms, than a poor person in the north.

The second important dimension of this budget, especially given the low potential growth, consists in its potential effects on the supply side of the economy. These include

- adverse effects of the RdC on employment: Particularly in the south, where the RdC is especially generous, wages are already too high relative to the north (Boeri 2018), and job offers that might reduce access to the RdC are less likely to be forthcoming;⁷
- adverse effects of early retirement on labor force participation;
- changes in incentives for private investment: While the budget creates some fiscal incentives, the net tax burden on all but the smallest businesses may rise,⁸ and the net increase in the fiscal burden of banks could be passed on to borrowers;
- beneficial effects of the RdC in increasing local demand and opportunities for skill-building and entrepreneurship; and
- benefits from additional funds for public investment.

While we are not in a position to evaluate these effects quantitatively, it is clear that they go in different directions. Our sense is that the negative effects dominate, particularly through the effects on labor force participation and employment, which could be exacerbated by the partial rollback, in August 2018, of a labor reform undertaken by former prime minister Matteo Renzi's government.⁹ Although it is not yet possible to assess the effects of the "quota 100" pension revision (the draft budget only earmarks the resources dedicated to the reform; the implementation will be subject to a sepa-

rate legislative act),¹⁰ estimates by the Italian Parliamentary Budget Office suggest that it could have a large one-off effect on the labor force.¹¹ Furthermore, as noted by Moody's (2018), there is a risk that the early retirement option—ostensibly available in 2019 only—will be extended into the future given likely political pressure.¹²

The only measure in the budget that would appear to be unambiguously good for supply is higher public investment (for a planned total of 0.8 percent of GDP over 2019–21). However, academic studies have questioned the effectiveness of higher public investment in countries with inefficient public investment institutions—a list of countries that unfortunately includes Italy (Abiad, Furceri, and Topalova 2016). Alessio Terzi (2018) argues that the public investment lever will be ineffective absent an effort to remove structural bottlenecks. So far nothing in this budget, or in any other announcement by the government, tackles these longstanding institutional or structural weaknesses.

Finally, the new budget will raise spending devoted to debt service, taking away public resources from other uses. Since mid-April 2018, Italian bond yields have risen by about 150 basis points on average, with higher increases in the center of the yield curve (4- to 10-year maturities) and smaller increases at both the short and the very long ends (figure 1). There is little question that the increase in spreads has been driven by fears about forthcoming economic policies, especially on the fiscal front, and that the DBP has confirmed many of these fears. Put another way, it is reasonable to assume that, had the government stuck with the adjustment in the April Stability Programme, for example, the signal it would have sent would have decreased spreads back to or even below their level when coalition negotiations started (since the expectation that the new government would overturn the April Stability Programme with some probability must have been already reflected in spreads at that time).

To get a sense of the expected rise in the overall interest cost—through both higher spreads and the higher projected deficit—one can compare the interest payments that were

7. OCPI (2018) also highlights the risk that a "citizenship pension" of €780 could create incentives for tax evasion by workers whose expected pension based on the contribution system would not be much higher.

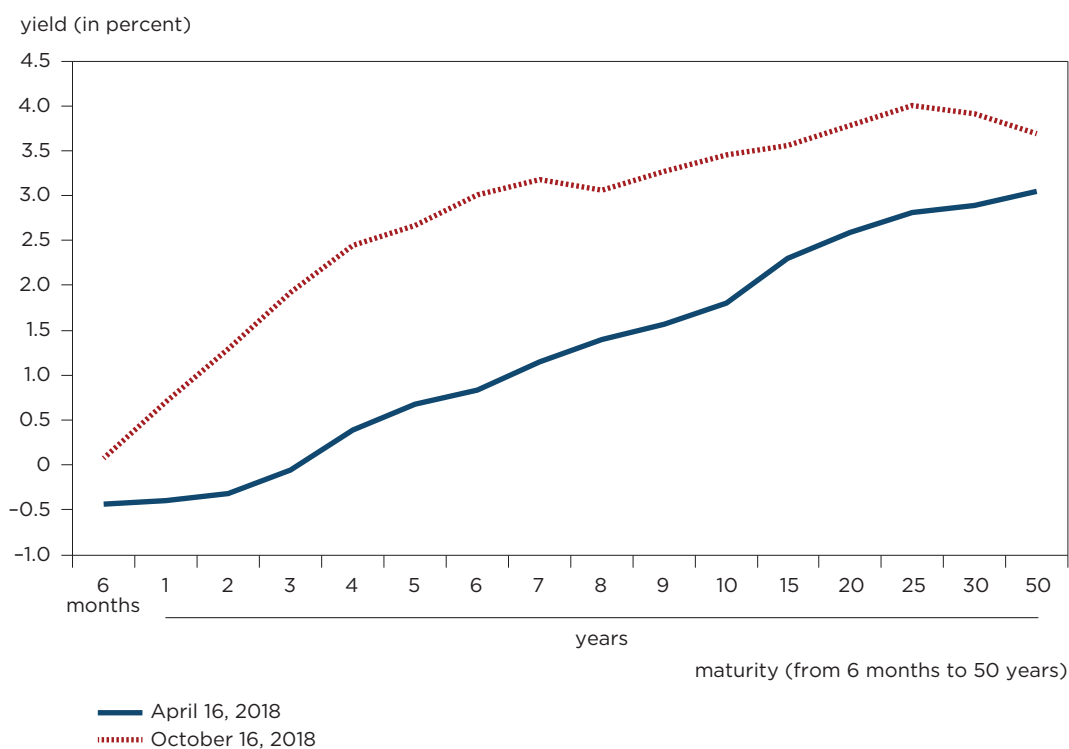
8. OCPI (2018) notices that several measures in the budget law go in the direction of increasing costs for firms with earnings above €100,000 and that the flat tax as currently legislated would not solve a long-standing issue in the Italian economy, i.e., firms tend to be very small.

9. This refers to the "Dignity Decree," described by Deputy Prime Minister Luigi Di Maio as an overturn of the Renzi government's "Jobs Act" (see video of Di Maio on the *La Stampa* newspaper website at www.lastampa.it/2018/07/03/italia/di-maio-approvato-il-decreto-dignit-licenziato-il-jobs-act-lj7SCYj0n8jL3BaXmXzkeN/pagina.html). The decree aims to reduce temporary employment (*precariato*) through provisions making it more difficult and expensive for employers to resort to temporary rather than permanent hiring. The decree has been criticized as unlikely to achieve its objective, with some commentators warning that it could increase labor costs and reduce employment instead (see Merler 2018).

10. See article 21 of the budget law text at www.termometro-politico.it/media/2018/11/legge-di-bilancio-2019-testo-bollinato-ufficiale.pdf.

11. According to Ufficio Parlamentare di Bilancio (2018), the measure could potentially apply to 437,000 workers in 2019. However, eligible workers opting for "quota 100" would face a reduction in their gross pension ranging between 5 percent (if retiring one year earlier) and 30 percent (if retiring more than four years earlier) compared with what they would be getting by staying in the existing regime. This reduction may limit the takeup by those who are closer to retirement.

12. See OCPI (2018) on this point and the latest rating decision by Moody's (2018).

Figure 1 Italy: Sovereign borrowing costs in April and October 2018, by maturity

Note: The weighted average difference between the two yield curves, based on the volume of bonds corresponding to each (residual) maturity, is 1.54 percentage points.

Source: Bloomberg Finance L.P.

projected in the previous government's Stability Programme with those that are now being projected under the new government's "policy scenario" (see table 1): Interest spending is expected to increase by 0.1 percent of GDP in 2019, 0.2 percent in 2020, and 0.3 percent in 2021. However, these figures are likely to be underestimates if a planned one-off reduction in debt through privatizations worth 1 percent of GDP does not materialize (the first draft of the DBP, which envisaged privatizations of only 0.3 percent of GDP, projected higher interest spending by 0.2, 0.3, and 0.4 percent of GDP for 2019, 2020, and 2021, respectively, compared with the Stability Programme).

To further explore the impact on interest expenditures, we undertook the following computation (see appendix A for details). We assumed that, as Italian treasury bills and bonds mature, they are replaced by new bills and bonds of the same original maturity.¹³ We then computed the interest cost of Italy's debt under two alternative borrowing cost scenarios: (1) assuming that the debt is rolled over at the yields pre-

vailing in mid-April 2018, when the previous government's Stability Programme became public information, and (2) assuming the yield curve immediately after the publication of the new government's DBP in October 2018. The results are somewhat larger than those obtained from table 1: The total impact of the new policies is to raise interest costs by 0.22, 0.43, and 0.59 percent of GDP in 2019, 2020, and 2021, respectively (table A.1 in appendix A). To put these numbers into perspective, note that the sum over the three years is larger than the spending on the RdC over the same three years in the proposed budget.

To summarize, the proposed budget will have some distributional effects that are desirable, some that are undesirable (particularly those at the expense of the young and future generations), and supply-side effects that range from neutral to negative. Whether these are strong enough to reduce Italy's long-term potential *growth* (rather than just the *level* of potential output) is unclear, but the risk is to the downside.

13. The exercise in appendix A ignores loans (about 15 percent of Italy's debt stock) because of lack of data. This is equivalent to assuming that loans do not mature within the three-year horizon of the experiment.

Macroeconomic Impact

The government's fiscal plan will impact aggregate demand and output through at least two channels: first, through its direct effects on public and private spending as well as any multiplier effects, abstracting from any offsetting effects through higher interest rates, and second, via higher government borrowing rates, which, until the budget was announced, reflected investors' anticipations of fiscal policy, anticipations that have largely been confirmed with the announcement of the DBP. These have already led to tighter borrowing conditions, and more is to come. The first effect is expansionary while the second is contractionary. In the following, we attempt to quantify these two effects and their joint implications.

Estimates of fiscal multipliers—the increase in output in response to a fiscal expansion—usually reflect all channels through which fiscal policy affects GDP, including induced changes in interest rates. Assessing the first effect, however, requires estimates that hold interest rates constant. We consider three.

- The IMF (2010) undertook a model-based simulation of a fiscal contraction that assumed interest rates could not fall. This simulation led to a multiplier of 1.1. The same study also presented empirical estimates that are consistent with a multiplier of about 1 for given interest rates.
- More recent studies, including Auerbach and Gorodnichenko (2012, 2013) and Bachmann and Sims (2012), looked at how the effects of an increase in real government spending differ in recessions and expansions. They find large spending multipliers in recessions (well above 1) and near-zero multipliers in expansions. The interpretation is that higher fiscal spending during expansions pushes up prices, since the economy is at full capacity, leading the central bank to raise interest rates and thus offsetting the stimulus to demand. This is not the case in recessions. Hence, the multipliers that these studies find for recessions can give a sense of what the effects of the planned fiscal expansion in Italy might have been if interest rates had remained unchanged. Based on Auerbach and Gorodnichenko's (2013) estimate for recessions and the increase in real government spending planned for 2019, Italy's GDP would rise by about 1.2 percent after one year.¹⁴ This increase corresponds to a

multiplier of 1.5 percent with respect to the increase in the structural deficit of 0.8 percent of GDP planned for 2019.

- Finally, it is easy to back out the fiscal multiplier that the Italian government itself assumed, for unchanged interest rates, by comparing the growth projections in the “policy” and “baseline” scenarios shown in table 1 (both scenarios assume the same interest rate path). In the policy scenario, 2019 growth is projected to be 1.5 percent, 0.6 percentage points higher than in the baseline scenario. This increase is attributable to the difference in the fiscal impulses in the baseline and policy scenarios: In the baseline scenario, the structural balance was assumed to rise by 0.7 percent of GDP, while in the policy scenario it is assumed to fall by 0.8 percent, a 1.5 percentage point difference. The implicit multiplier is hence 0.4 (0.6/1.5)—ironically, a far lower number than comes out of academic studies.

Based on these estimates and allowing for some uncertainty at both the bottom and top of the range, an agnostic view is that the relevant multiplier, for unchanged interest rates, is somewhere between 0.4 and 2, with a best guess around 1 or slightly higher. (Yes, this is an awfully wide range, but such is the state of knowledge on multipliers.)

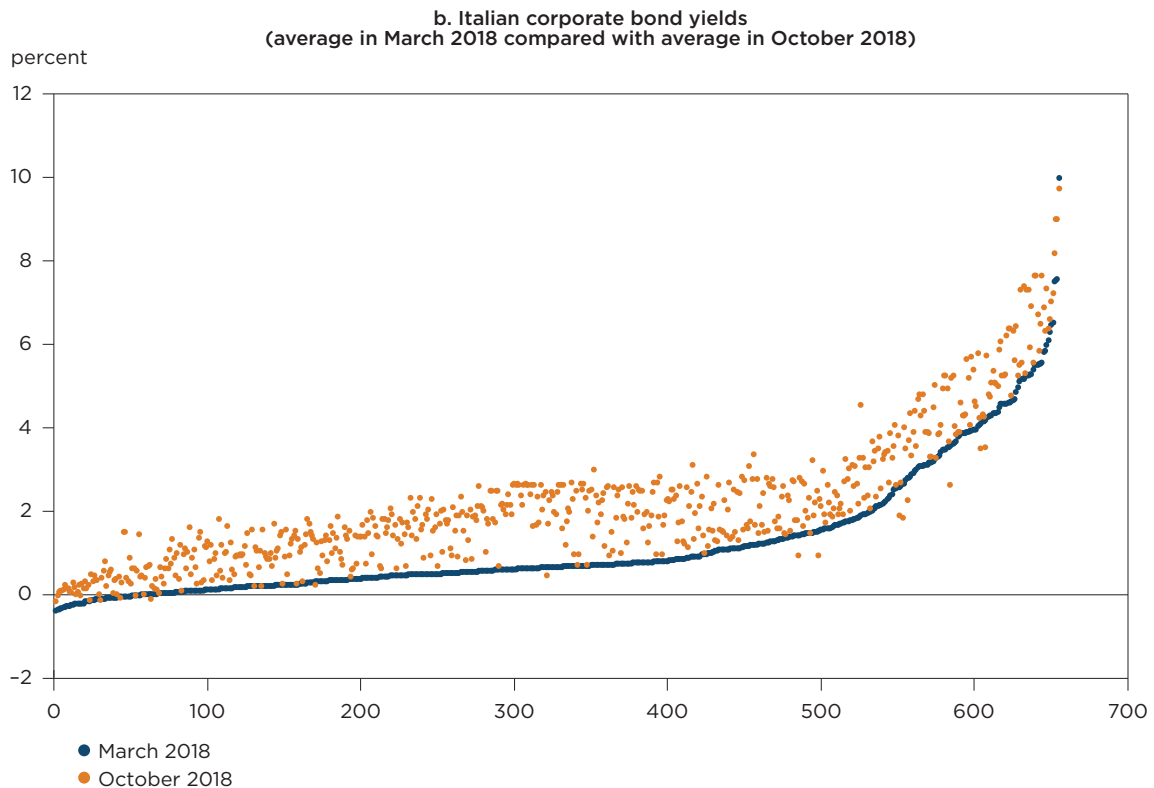
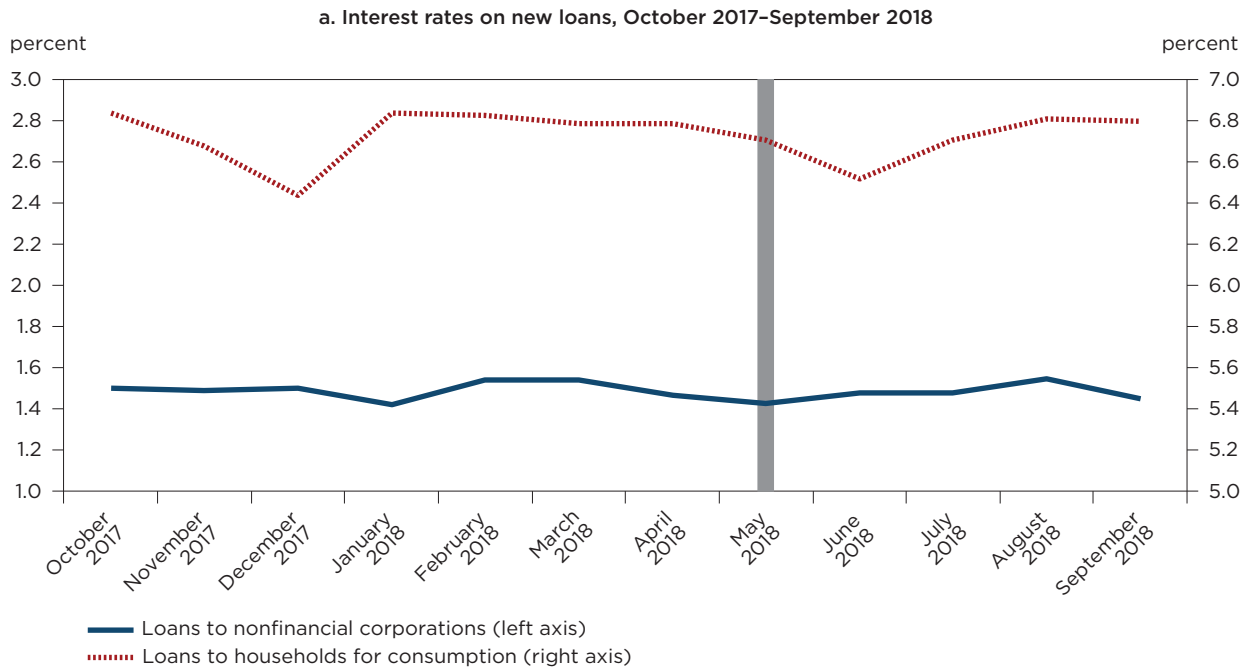
Next, consider the effect of the rise in government borrowing rates. How has it already affected and how will it further affect the Italian economy? The answer depends on whether and how higher government borrowing rates affect the borrowing conditions of consumers and firms.

Albertazzi et al. (2014) estimate that a 100-basis-point rise in Italian government borrowing spreads usually increases bank lending rates by around 20 basis points after three or four months, with higher increases in crisis times (70 basis points for loans to nonfinancial corporations). Figure 2 investigates the extent to which borrowing costs have increased already since government bond spreads started rising in May 2018. Panel A of figure 2 shows that, by September (the most recent available data point), bank lending rates had moved up only slightly. Average lending rates for consumers were just 10 basis points higher than May rates while lending rates for corporations were more or less unchanged. It could be because Italian banks are now better capitalized than they were during Albertazzi et al.'s (2014) estimation period, making them less susceptible to a change in the value of their Italian sovereign bond portfolio and dampening rises in funding costs and lending rates. Or it could be that the

14. As is common in this literature, Auerbach and Gorodnichenko (2013) estimate elasticities, i.e., the percent increase in real output for a 1 percent increase in real government spending (defined as the sum of real public consumption expenditure and real government gross capital formation). They find a mean response of real GDP of 0.46 percent to a 1 percent real spending increase. From tables III.1-2,

III.1-3, and III.1-9 of the revised DBP (Ministry of Economy and Finance 2018b), Italy is targeting a real government spending increase of about 2.6 percent in 2019. So, $0.46 \times 2.6 = 1.2$.

Figure 2 Italy: Recent changes in borrowing conditions



Note: Vertical bar in top figure indicates May 2018, when the new government was formed. In the bottom figure, the blue dots indicate the average yield of all corporate bonds of corporates listed in the FTSE MIB Index reported by Bloomberg Finance L.P. in March 2018, prior to the coalition negotiations, in increasing order of average yield. The orange dots indicate the average yields of the same bonds in October.

Sources: European Central Bank, Bloomberg Finance L.P.

passthrough takes time, with tighter credit reflected in credit rationing instead. The latest (October 2018) European Central Bank lending survey (ECB 2018) shows a substantial tightening of terms and conditions for loans and credit lines to enterprises in Italy during the third quarter of 2018, an increase specific to the country and not present in other eurozone countries. It may be a portent of higher rates to come.

Panel B of figure 2 shows the change in corporate bond yields, which—unlike bank lending rates—would be expected to respond instantly to new information. Indeed, they have risen much faster, by about 90 basis points on average between March and October. Over the same period, borrowing spreads rose 150 basis points. The response of corporate bond yields to the rise in government bond spreads was hence 0.6 to 1, almost as high as the response of corporate loan rates to government spreads documented by Albertazzi et al. (2014) for crisis times.

One should thus expect the increase in government borrowing rates to have a substantial effect on Italian GDP. But how much? The question can be approached from three angles.

First, the literature on the effects of monetary policy suggests that the average effect of an increase in short rates, due to monetary policy tightening, on output is roughly 1 for 1: A 100-basis-point increase in short rates leads to a 1 percent decline in real output after one to two years. Long- and medium-term government bond rates react to the same monetary policy shock by about 30 to 40 basis points (see Altavilla, Giannone, and Lenza 2016 for estimates for the euro area of this order of magnitude). By this measure, a sustained exogenous increase in government bond rates by about 150 basis points, as observed in Italy, could lower output by as much as 5 percent.

However, an increase in government bond rates due to an increase in risk spreads rather than to monetary policy is likely to have smaller effects. As we have seen, private borrowing rates have moved by far less than sovereign rates. For the purpose of applying the rules of thumb of the monetary policy literature, the corporate bond rate might be a better candidate. It rose by about 90 basis points on average between March and October, which would imply a decline in output by 3 percent—still very large.

Second, one can try to draw lessons from the way the Italian economy reacted to the sharp rise in sovereign borrowing spreads during the 2010–12 debt crisis. This exercise is hard, because it requires disentangling the effects of higher government borrowing rates from those of fiscal austerity and demand spillovers from other crisis countries. A recent paper by Balduzzi, Brancati, and Schiantarelli (2018) solves this problem by focusing on the investment behavior of firms. The authors show that Italian firms whose banks' financial

market valuations (credit default swap [CDS] spread, equity price, and equity volatility) were more severely affected by the sovereign debt crisis invested less than firms that borrowed from less affected banks. Their results imply that a rise in bank CDS spreads by 100 basis points leads to a fall in investment in manufacturing by 2.1 percent of manufacturing value added. Figure 3 shows that bank CDS spreads have risen by about 120 basis points since April. This rise in spreads hence implies a drop in manufacturing investment by 2.5 percent of manufacturing value added, which makes up about 15 percent of GDP. If we assume that the drop in investment is limited to manufacturing, this implies a drop in output of $2.5 \times 0.15 = 0.38$ percent of GDP. If we assume instead that all private sector investment will drop by 2.5 percent of private sector value added, and given a private sector share in GDP of about 61 percent,¹⁵ it implies a drop in output of about 1.53 percent of GDP. This range is wide, with the right answer being probably closer to the upper bound than to the lower bound.

Third, one can piggyback on Altavilla, Giannone, and Lenza (2016), who use a multicountry vector-autoregressive model for the euro area to analyze the impact on Italian output of changes in Italian government bond rates related to the ECB's Outright Monetary Transactions (OMT) program. The authors compare two scenarios, which differ with respect to the assumed level of the two-year government bond yield for Italy and Spain—by 175 and 209 basis points, respectively—but assume that ECB monetary policy remains unchanged. The same is true in the present situation: The recent rise in Italian bond yields was not the result of a monetary tightening but reflected a shock to Italian spreads. Their main finding is that, after about three years, Italian and Spanish outputs end up 1.5 and 2 percent higher, respectively, in the low-yield scenario compared with the high-yield scenario. Applying this finding to the observed rise in the two-year bond spread since May 2018, about 130 basis points, implies a decline in Italy's output by $130/175 \times 1.5 = 1.1$ percent. Given that the current shock occurred only in Italy (not in Spain also, as assumed in the simulation by Altavilla, Giannone, and Lenza), one would expect the output decline to be slightly lower in the current situation.

To summarize: The available empirical evidence suggests that the increase in government bond rates (by about 150 basis points on average) since April may lead, other

15. According to the latest (September 2017) release of the EU KLEMS Growth and Productivity Accounts, the share of Italian gross value added attributable to nongovernment, "market economy" activities is about 68 percent (www.euklems.net/, file "ITA Basic 2017"). This share is expressed in relation to a measure of total gross value added that is itself about 90 percent of GDP.

Figure 3 Italian 10-year sovereign spread and 5-year CDS spreads of major banks, October 2, 2017–October 29, 2018



CDS = credit default swap

Note: Vertical line indicates May 18, 2018, when the coalition agreement between M5S and Lega was published.

Sources: European Central Bank, Bloomberg Finance L.P.

things equal, to lower output by about 1 to 3 percent over the next one to three years, with our best guess being towards the bottom of the range (again, a wide range, reflecting the poor state of our collective knowledge).

Figure 4 puts the fiscal multiplier and contractionary interest effects together. Assuming that the right measure of the Italian expansion is the 0.8 percent increase in the structural deficit planned for 2019, the interest rate effect and fiscal multiplier effects would exactly offset each other if $y = 0.8m$, where y is the contractionary effect of higher interest rates in percent of GDP, shown on the y axis of figure 4, and m is the assumed fiscal multiplier (for given interest rates). The shaded area indicates the combination of the interest effect and the multipliers at which the budget would lead to a contraction. The “box” in the middle of the figure shows the ranges for the multiplier and the interest rate effect that were identified as plausible (0.4 to 2 for the multiplier, 1 to 3 percent of GDP for the output loss from a permanent rise in government borrowing rates by 150 basis points).

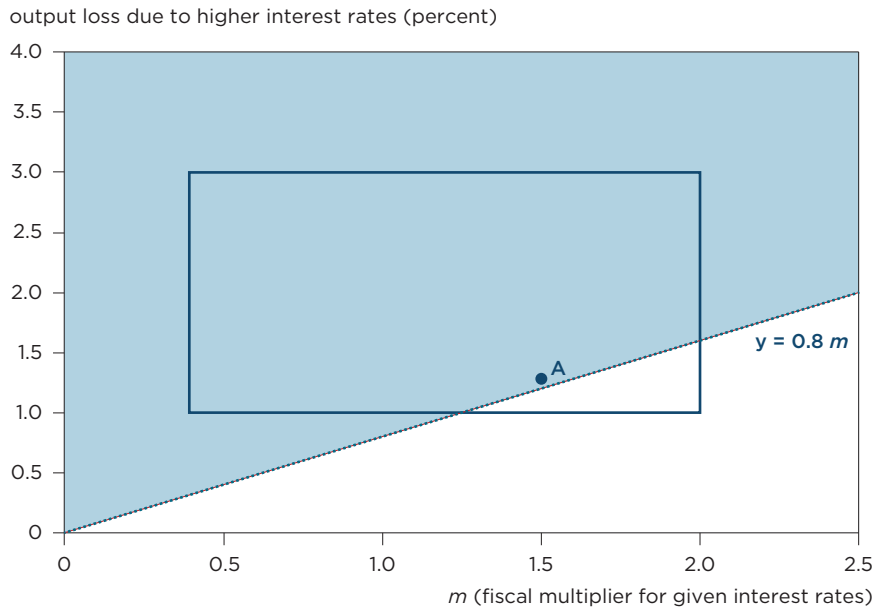
The bottom line is that the net impact of Italy’s expansionary fiscal policies is likely to be an output loss. Most of the area inside the “box” of plausible assumptions is north of the line. Point A shows the values two of us used in a previous blog, representing our best guesses (Blanchard and Zettelmeyer 2018), but the box gives a better sense of the plausible range of outcomes.

IMPLICATIONS FOR ITALY’S FISCAL SOLVENCY

Our argument implies that, once one takes into account the planned fiscal expansion’s effect on interest rates, its effects on output are likely to be at best neutral and probably negative. If this were the only factor affecting output, it would imply growth forecasts close to or slightly below the April forecasts. But, for other reasons—optimistic April forecasts in the first place, a worse external environment, higher policy uncertainty, or other factors—the growth forecasts have substantially deteriorated since April. The latest IMF forecasts, reported in table 1, are roughly in line with commercial forecasts. European Commission forecasts are slightly more optimistic than those of the IMF, namely 1.2 and 1.3 percent for 2019 and 2020, respectively. Indeed, growth has already begun to slow, with the preliminary estimate of GDP for the third quarter of 2018 showing zero growth over the second quarter.¹⁶

The question is to what extent slower growth will lead to a higher deficit than projected in the DBP. To answer this question, it is important to bear in mind that, according to

16. See Eurostat’s flash estimate for the third quarter 2018 at <https://ec.europa.eu/eurostat/documents/2995521/9378018/2-14112018-BP-EN.pdf/b4fd131d-8938-4ef6-9cb5-9c2f73d2809d>.

Figure 4 Net output effect of fiscal multiplier and higher interest rates

Note: Light blue shaded area denotes combinations of fiscal multiplier assumptions and assumed output losses due to higher interest rates that would produce a net reduction in output. The “box” at the center of the figure denotes plausible ranges for these assumptions.

Source: Authors, based on discussion in this section.

Minister of Economy and Finance Giovanni Tria’s October 22 letter to the European Commission¹⁷ and page 4 of the revised DBP (Ministry of Economy and Finance 2018b), nominal expenditure, revenue, and deficit projections are based on *baseline* nominal GDP in both the baseline and policy scenarios. Hence, the Italian government’s revenue forecasts are conservative in the sense that they do not take into account higher revenues that might arise if growth is faster than in the baseline scenario. At the same time, lower growth could still raise deficits as a percent of GDP above what is currently projected, through two channels.

- While the GDP path projected in the policy scenario is not used to project nominal deficits, it is used to express these deficits in percent of GDP. Hence, a lower GDP path than envisaged in the policy scenario would mechanically raise the deficit in percent of GDP even if the nominal deficit target were attained exactly.
- Furthermore, to the extent that actual GDP turns out to be lower than even in the baseline scenario, it will reduce revenue (and possibly raise expenditure) below what has been assumed, as tax revenues rise with GDP.

In addition to lower growth, there are two more reasons

why the deficit as a percentage of GDP might turn out worse than projected.

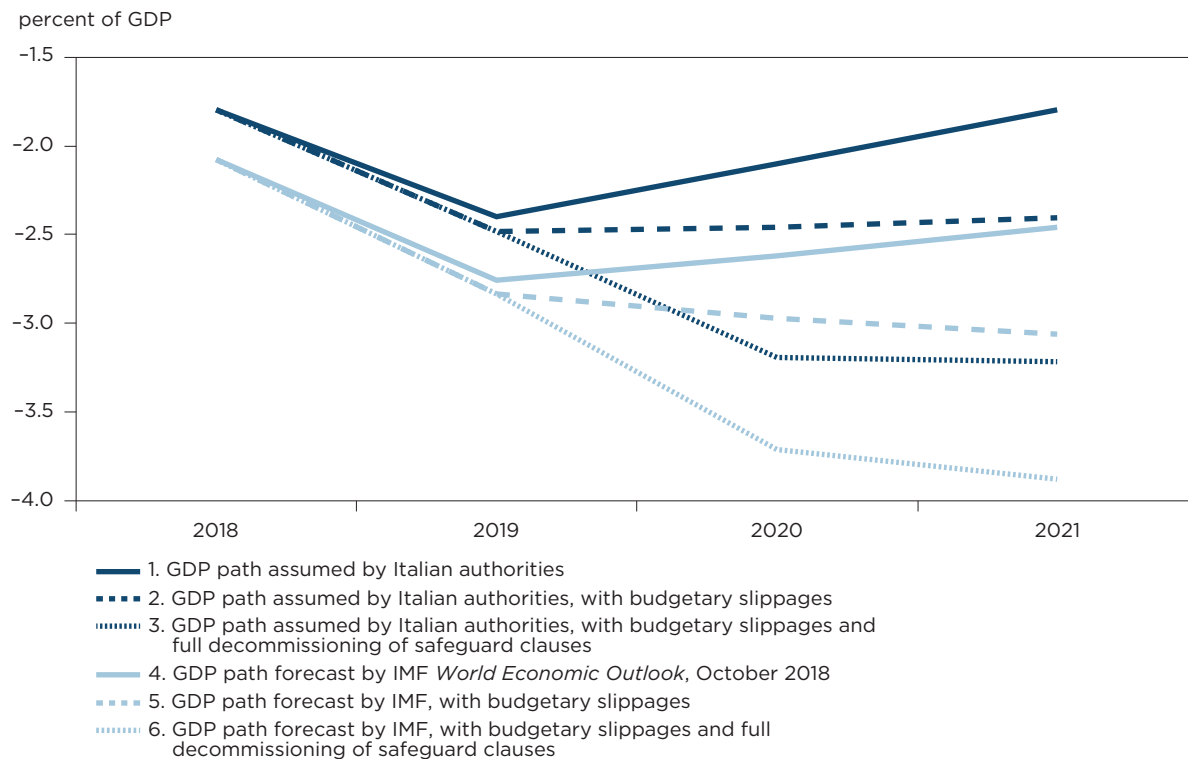
First, some of the budgeted expansionary measures may turn out to be more expensive than assumed, while some of the offsetting measures may yield less than what the government hopes. Typically, unspecified “rationalizations of expenditures of ministries,” for example, raise less than promised.¹⁸ With respect to the large expenditure items, independent estimates in May put the cost of the RdC at €17 billion, while the amounts budgeted in the DBP are close to €7 billion. The difference may be in part due to more restrictive eligibility conditions, but this is not obvious from government statements or public commentary.¹⁹ The fact that the budgetary cost of the RdC is assumed to be roughly flat

18. See OCPI (2018, 6–7) on this issue.

19. Cottarelli (2018a) estimated the cost at €17 billion for RdC plus €2 billion to reform job placement centers. These numbers were in an early draft of the «government contract» dated May 17, 2018, available at http://download.repubblica.it/pdf/2018/politica/contratto-m5s_lega-ver2.pdf. The final government contract still mentions the €2 billion but not the €17 billion; see final version at http://download.repubblica.it/pdf/2018/politica/contratto_governo.pdf. One difference between the government contract and the draft budget version of the RdC is that in the contract the beneficiaries were characterized as “Italian citizens” whereas the draft budget version includes all adults residing in Italy for at least five years.

17. See letter at https://ec.europa.eu/info/sites/info/files/economy-finance/letter_to_vd_and_pm_-_22-10-2018.pdf.

Figure 5 Fiscal balance under Italy's DBP policies for alternative growth assumptions, with and without budgetary slippages



Note: The figure shows alternative fiscal balance projections for Italy. The solid line at the top corresponds to the policy scenario of the 2019 revised Draft Budgetary Plan (DBP) of the Italian government. The others describe the consequences of lower growth than projected by the DBP, and budgetary slippages (as explained in the text), or combinations of both.

Source: Authors' calculations based on data presented in table 1.

over time (rather than rising, as one would expect from a new benefit whose take-up gradually increases) also raises red flags.

Second, the deficit may expand, particularly in the outer years, because of coalition promises that are *not* yet legislated. For example, “safeguard” legislation, which envisages automatic tax hikes if deficit limits are exceeded, may be fully deactivated not just in 2019 (as already envisaged) but also in 2020 and 2021 (for which the clauses mostly remain effective).²⁰ Another candidate is the Lega party’s promise to extend a flat tax to all businesses and individuals. Estimates had put the cost of Lega’s full flat tax proposal at 3 to 4 percent of GDP (Cottarelli 2018a, 2018c). While it may never be implemented in full, it is difficult to see that the flat tax as currently embodied in the DBP, which benefits only microbusinesses and the self-employed, will satisfy Lega’s

constituencies. Indeed, the DBP’s language suggests that the flat tax could be expanded in the future.²¹

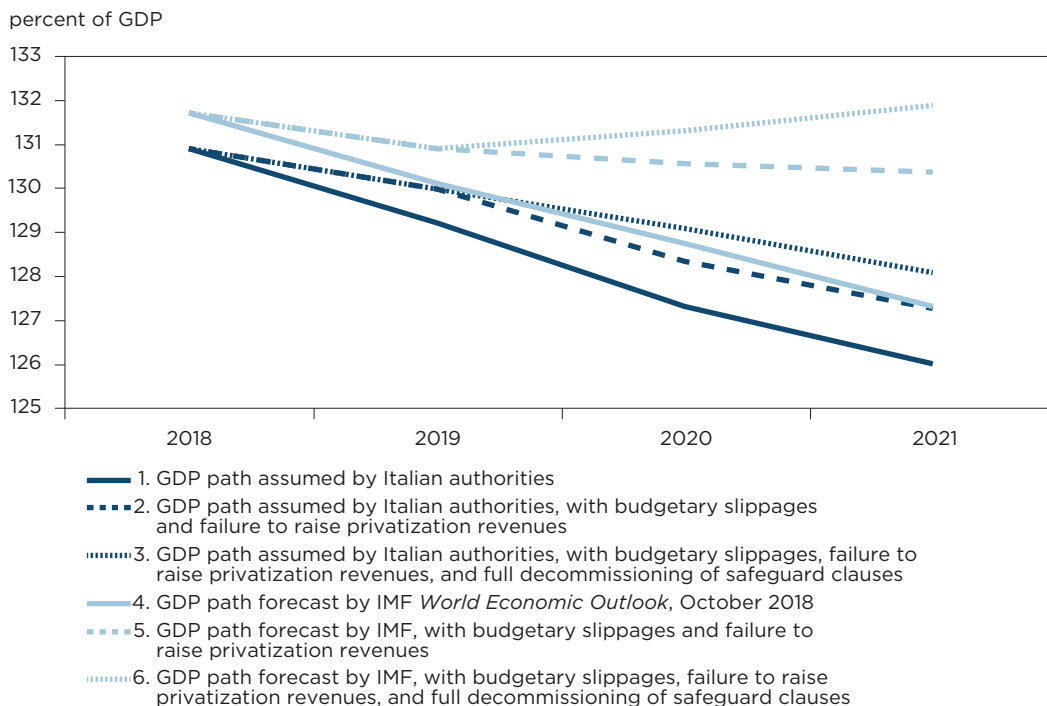
To see how these factors might impact the deficit, we first consider the sensitivity of deficit forecasts to GDP forecasts.²² In figure 5, the two solid lines depict the results of back-of-the-envelope calculations under two GDP paths,

21. The final government contract pledged to introduce a new fiscal framework characterized by “two rates fixed at 15% and 20% for individual taxpayers, self-employed corporates and families,” i.e., for all taxpayers (see http://download.repubblica.it/pdf/2018/politica/contratto_governo.pdf). The revised DBP states that “the introduction of a flat tax starting in 2019 is *initially* aimed only for individual entrepreneurs, artisans and self-employed workers...” (Ministry of Economy and Finance 2018b, 6). Moreover, compared with the previous version, the new version of the DBP already expands the application of a flat rate (at 20 percent) to those self-employed with earnings between €65,000 and €100,000. This leads to a higher cost in 2021.

22. In his November 13 letter to the European Commission, Minister of Economy and Finance Giovanni Tria pledged to offset any budgetary slippages that could take the 2019 deficit above 2.4 percent but did not say how (see letter at https://ec.europa.eu/info/sites/info/files/economy-finance/tria_letter_to_ec_13_nov_2018_en.pdf). The remainder of

20. An explanation of the safeguard clauses is available at www.camera.it/temi/ap/documentazione/temi/pdf/1107705.pdf. The total effect of the clauses is €12.5 billion in 2019 (which has been fully decommissioned in the draft budget), €19.2 billion in 2020, and €19.6 billion in 2021 (only partially decommissioned in the DBP).

Figure 6 Debt-to-GDP ratio under alternative growth assumptions, with and without budgetary slippages



Note: The figure shows alternative projections of Italy's debt-to-GDP ratio, for the same scenarios analyzed in figure 5 augmented by one additional source of uncertainty, namely the volume of privatization revenues in 2019.

Source: Authors' calculations based on data presented in table 1.

one assumed by the government (baseline scenario for the purposes of projecting nominal deficits, policy scenario to divide by GDP) and the other based on the IMF October forecasts (IMF 2018b; see table 1). The calculations assume that the path of expenditures is fixed in nominal terms (i.e., does not depend on GDP), while actual GDP below baseline GDP would lead to proportionally lower revenues (a unitary elasticity of revenues to GDP is assumed). Because nominal GDP projected by the IMF is lower than in the government's baseline scenario, deficits rise as a share of GDP through both lower nominal revenues and a smaller denominator. This said, the effect is not huge. The 2019 deficit would be 2.8 percent rather than 2.4 percent, followed by a modest recovery to a deficit of about 2.5 percent in 2021.

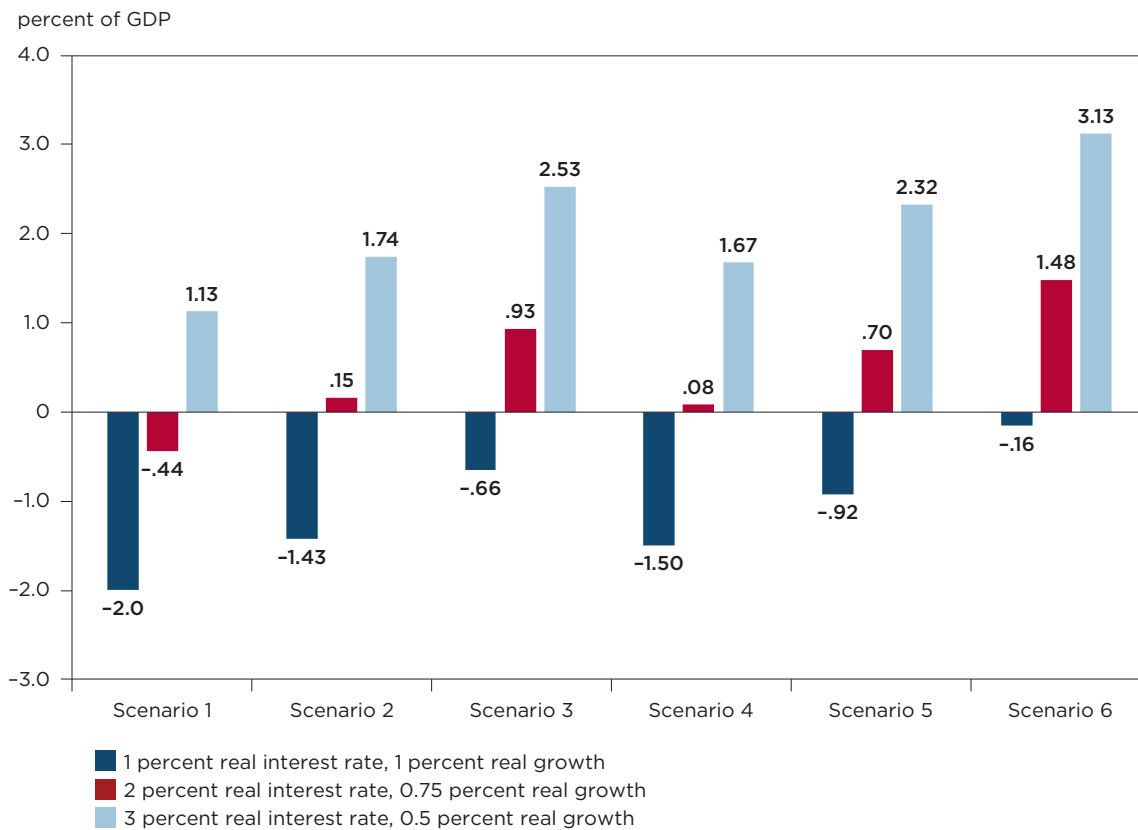
This result changes once uncertainty over budgetary outcomes is taken into account. The dashed lines in figure 5 combine the two alternative growth projections with some examples of how fiscal costs might be underestimated. This is done in two steps: first, by assuming that the "rationalization of expenditures of ministries" does not happen and that the cost of the RdC rises from its currently budgeted level to

€12 billion in 2020 and to the originally projected €17 billion in 2021, and second, by assuming that the safeguard clauses are fully removed in 2020 and 2021. The results suggest that this is enough to create large downside uncertainty with respect to fiscal outcomes, with the deficit reaching 3.9 percent in 2021 if low IMF growth projections are combined with all the fiscal slippages listed above. Note that these do not include a broader version of the flat tax, the fiscal costs of which are hard to predict but could be larger than any of the examples considered above.

How much sleep should holders of Italian debt lose over these risks? One way to address this question is to ask if any of these scenarios would put Italy on an exploding debt trajectory, and if so, how difficult it would be—i.e., what the size of the required fiscal adjustment would have to be—to get Italy's debt-to-GDP ratio back on a declining path. The answers depend on whether one has the short term or the long term in mind.

In the short term—that is, by 2021—Italy's debt-to-GDP ratio turns out to be surprisingly stable. Figure 6 examines the implications of the six scenarios considered in figure 5 together with one additional source of uncertainty: namely, that an attempt to raise privatization revenues in 2019 by 0.7 percent of GDP more than what the government had

this section assumes that the government is not in a position to honor this pledge.

Figure 7 Fiscal adjustment needed, after 2021, to reach debt-stabilizing primary balance

Note: The figure shows the difference between the debt-stabilizing primary surplus p^* and the primary surplus p projected to prevail in 2021 in each of the six scenarios shown in figures 5 and 6. p is computed by adding projected 2021 interest spending to the 2021 projected primary balance shown in figure 5. It is 2.0, 1.5, and 0.7 for scenarios 1, 2, and 3, respectively, and 1.5, 1, and 0.2 for scenarios 4, 5, and 6, respectively. p^* is computed, for each scenario, using the formula $p^* = D[(r - g)/(1 + g)]$, where D is the 2021 projected debt-to-GDP ratio of the respective scenario (from figure 6), for three different sets of assumptions about real interest rate r and real growth g : (1) $r = g = 1\%$; (2) $r = 2\%$ and $g = 0.75\%$; and (3) $r = 3\%$ and $g = 0.5\%$. Interest assumptions should be interpreted as assumptions about long-run real German interest rates plus a small (50 to 100 basis points) spread for Italy. With Italy's potential growth rate of around 0.75 percent, (2) could be interpreted as a baseline assumption, while (1) and (3) capture optimistic and pessimistic assumptions, respectively.

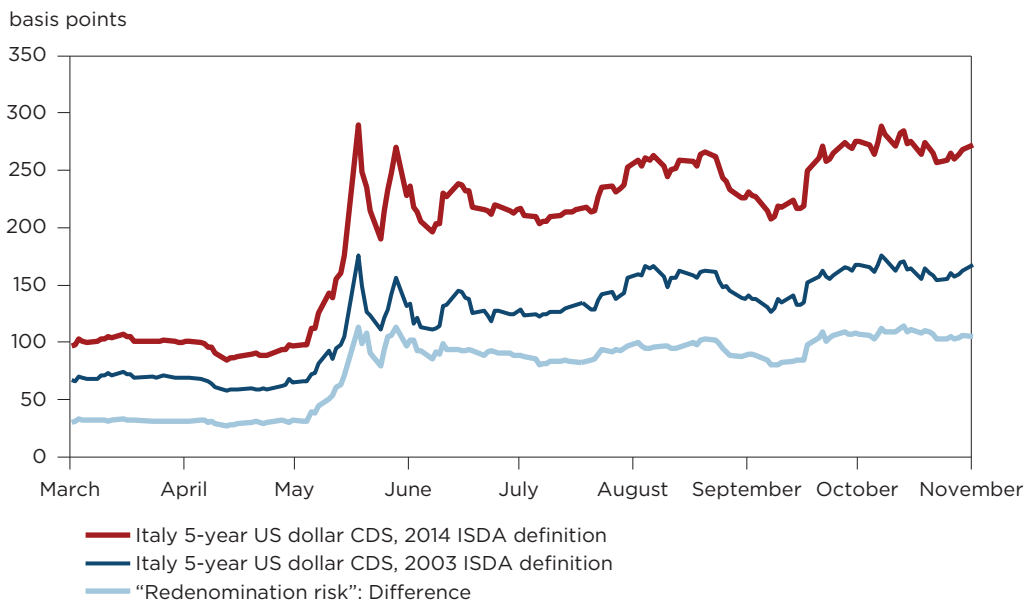
Source: Authors' calculations based on data shown in table 1 and figures 5 and 6.

envisaged in its original DBP (0.3 percent of GDP) does not materialize. The debt ratio would either continue to decline or remain stable in five of the six scenarios considered. In the most pessimistic case—scenario 6—the debt ratio would rise slightly from its projected end-2018 level to about 132 percent of GDP in 2021, along with an increase of interest expenditures from about 3.6 percent of GDP in 2018 to about 4 percent in 2021. The reason why the debt ratio does not change much in the short term is two-fold. First, even with borrowing spreads in the neighborhood of 300 basis points (the maintained assumption in all six scenarios), average real borrowing costs remain relatively low—between 1 and 1.5 percent—because of low interest rates in the euro area. This range is not much above the real growth rates assumed in even the more pessimistic scenarios. Second, Italy's primary balance starts from a relatively solid initial position—about 2

percent of GDP—and takes a while to erode even in scenario 6, where it reaches 0.2 percent in 2021.

Looking beyond 2021, the question is whether Italy, should its primary surplus erode in the next few years, might enter an explosive debt dynamic if euro area interest rates continue to rise and growth converges to its long-term potential. Figure 7 answers this question. For each of the six scenarios depicted in figures 5 and 6, it shows the fiscal adjustment required to get the debt ratio back on a declining path, for three sets of assumptions about long-run real interest rates and long-run growth rates: first, an optimistic assumption in which %, which implies a debt-stabilizing primary surplus of zero. Second, a “baseline” assumption in which long-run real interest rates are assumed to climb to 2 percent while growth declines to 0.75 percent. The latter roughly corresponds to Italy's medium-term potential growth rate according to Euro-

Figure 8 Evolution of CDS spreads covering or not covering redenomination risk and their difference, March 12–November 12, 2018



CDS = credit default swap; ISDA = International Swaps and Derivatives Association

Note: The figure plots the evolution of two CDS spreads on sovereign bonds, which differ in the way they treat redenomination risk. CDSs issued under the 2003 ISDA definition do not protect against redenomination risk, while CDSs issued under the 2014 ISDA definition do. The difference between the two thus gives an indication of the perceived risk of a loss due to euro exit.

Source: Bloomberg Finance L.P.

pean Commission and IMF estimates. Third, a “pessimistic” assumption, in which long-run real interest rates are assumed to reach 3 percent while growth declines to just 0.5 percent.²³ Negative bars indicate that, under the assumptions made, the debt ratio would already be on a declining path. Positive bars indicate an exploding debt ratio, and the extent to which the primary surplus would need to be raised to adjust it.

Focusing first on the baseline assumptions, the main takeaways from figure 7 are that (1) come 2021, Italy will almost surely need fiscal adjustment to ensure that the debt ratio declines over time; and (2) the needed fiscal adjustment seems manageable—on the order of 0.5 to 1.5 percent of GDP. Importantly, this is the *minimum* adjustment that Italy will need to undertake to resume a downward debt-to-GDP trajectory—EU fiscal rules would require it to do significantly more. Under the most pessimistic long-term assumptions, the minimum adjustment need can climb to about 3 percent—slightly less than the adjustment that Italy undertook in 2011–12.

In other words, Italy will eventually need to undo the fiscal expansion it has just embarked on. This may be po-

litically difficult to do since some of this expansion involves putting in place entitlements that are hard to reverse. But unless long-term real interest rates and growth turn out even worse than the most pessimistic set of assumptions in figure 7, or the 2021 primary deficit falls into significantly negative territory, a solvency crisis seems fairly remote.

One may reasonably ask at this point why, if a solvency crisis is indeed unlikely even at current spreads, the spreads have increased so much. The answer is that, while a crisis is unlikely, it is far from impossible, and investors are aware of and reacting to tail risks. Since the elections, investors have worried not only about the mechanical effects of fiscal policy but also, more generally, about the general policies the Italian government was likely to follow. And, in that environment, multiple equilibria and sharp increases in risk spreads forcing the country to default and thus becoming potentially self-fulfilling are an ever-present concern.

Go back to the increase in spreads since April 2018: The increase in spreads coincided with the nomination of the new government: Right or wrong, fear of irresponsible fiscal policies, fear that, in the face of lower growth, the government may double down and take extreme measures, fear that some in the government or in parliament were exploring the option of exiting the eurozone, all contributed to the increase in spreads. Figure 8 provides evidence on the perceived risk of euro exit. The figure plots the evolution of

23. For the purposes of these long-run computations, it is assumed that Italy’s spreads return to low levels (e.g., 50 to 100 basis points over Germany), while German real interest rates rise toward their historic averages.

two CDS spreads on sovereign bonds that differ in the way they treat redenomination risk. CDSs issued under the 2003 International Swaps and Derivatives Association (ISDA) definition do not protect against redenomination risk, while CDSs issued under the 2014 ISDA definition do. The difference between the two thus indicates the perceived risk of a loss due to euro exit. The figure shows two jumps: The first and largest is associated with the nomination of the government, the second with the presentation of the October budget. There is little question that the larger announced deficit, and the subsequent fight with the European Commission, have led investors to worry again, not only about the fiscal situation itself but also about the greater risk of euro exit.²⁴ In other words, the higher spreads reflect not just the mechanical effects of the decision to run larger deficits but also, and more generally, perceptions by investors about the signaling content of that decision, including the risk that it may lead to euro exit.

CONCLUSION

The main finding of this Policy Brief is that Italy's budget is unlikely to stimulate growth and may well depress it. At the same time, we do not see the budget as having dramatic consequences for fiscal solvency. Unless there is a significant recession, the debt-to-GDP ratio will be roughly unchanged in

the next few years. To get its debt ratio back on a downward path, Italy will eventually need to offset the fiscal expansion it has just embarked on, but the adjustment seems feasible.

Our analysis leads to two main policy implications.

First, Italy would have fared better with a roughly fiscally neutral budget—one that dropped the pension revision and opted for a less costly version of the RdC, for example, reflecting regional differences in price levels. Such a budget would have led to lower interest rates and probably to higher growth and employment—both in the short and long runs—while still allowing the government to pursue some of its social objectives. And, over a few years, it may not even have required a substantial sacrifice in noninterest spending, because it would have saved money that will now go toward higher interest expenditures—as much as ¼ percent of GDP in 2019 and ½ percent in 2020.

Second, even if the government decides to stick to its deficit plan, a crisis is not a foregone conclusion. A narrow path could maintain stability. At current government bond spreads, and in the absence of additional shocks to output, the government can probably manage to steer the economy, achieve some of its goals, and maintain debt sustainability. But further doubts, triggered by unrealistic claims or budgetary slippages, could quickly lead to unmanageable spreads and a serious crisis, including involuntary exit from the eurozone.

Building credibility by overperforming or at least delivering on the targets the government has set itself is hence of the essence. There is room for a reasonable compromise with the European Commission. If achieved, it would decrease spreads, although probably not all the way back to their April levels, given the governing coalition's words and actions so far and the risks of a renewed conflict in the future. This outcome would likely help growth and surely reduce crisis risks.

24. To derive actual exit probabilities requires assumptions about recovery value and about the size of the likely depreciation of the new currency. Computations by Fathom, a consulting firm (www.fathom-consulting.com), indicate that a 50 percent recovery and depreciation rate, for example, would imply a CDS-based redenomination probability of 14.5 percent at the end of October 2018, up from 9.7 percent at the end of July and 2.2 percent at the end of April. We thank Fathom for making these computations available to us.

APPENDIX A
ESTIMATING THE INTEREST COST OF THE
GOVERNMENT’S FISCAL POLICY

To estimate the total interest cost of the proposed budget compared with the previous government’s policies, one can undertake the following counterfactual experiment. The terms of Italy’s tradable general government debt instruments, which constitute roughly 85 percent of its debt stock (the rest consists of loans), are publicly available through data services such as Bloomberg Finance L.P. Assume that, as bills and bonds mature, they are replaced by new bills and bonds of the same original maturity (loans are assumed not to mature within the horizon of the experiment). One can then compute the interest cost of Italy’s debt under two alternative borrowing cost scenarios (see text, figure 1). The first assumes that the debt is rolled over at the yields described by Italy’s yield curve in mid-April 2018, prior to the election, when the previous government’s Stability Programme became public information. The second assumes the yield curve immediately after the publication of the new government’s DBP in October.

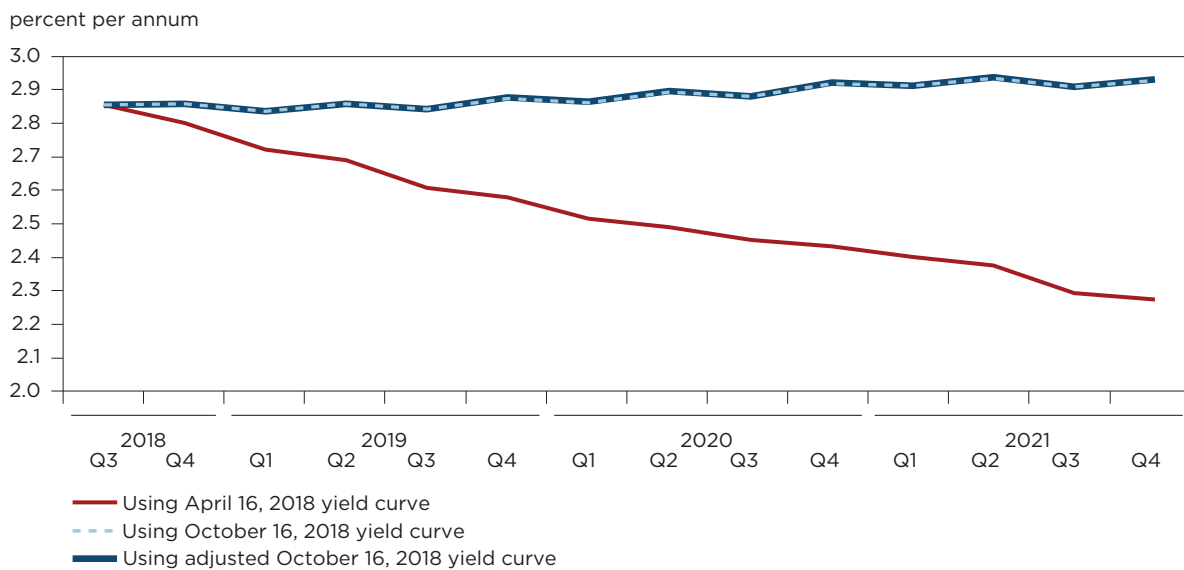
Figure A.1 shows the trajectory of the weighted-average interest cost of Italy’s government debt securities under the two scenarios, based on a bond-level analysis, which assumes that maturing government debt securities are replaced with new debt securities of the same maturity, plus some extra issuance required to cover the fiscal deficit targeted by the

DBP.²⁵ If the interest on Italian bonds had stayed at April 2018 levels, Italy’s average borrowing costs would have been steadily dropping, as expensive debt issued prior to 2014 gradually matures and is replaced by cheaper debt. At current interest costs, on the other hand, average borrowing costs will be approximately stable until early 2020 and then start rising again. The analysis underlying the figure also shows that this conclusion is entirely driven by the change in Italian borrowing spreads since April, rather than changes in euro area interest rates more broadly: Replacing the October 2018 Italian yield curve with an adjusted yield curve that adds October 2018 spreads to April 2018 German bund yields leads to exactly the same conclusion (see solid dark blue line).

Table A.1 shows the impact of the new policies on public interest expenditures. By far the largest impact comes from the rise in interest rates. In comparison, the cost of having to pay interest on additional borrowing is negligible. The total cost—adding both components—is considerable: 0.22 percent of GDP in 2019, 0.43 percent of GDP in 2020, and

25. We assume that the extra issuance necessary to cover the deficit has the same maturity structure as the debt that is being rolled over. The same deficit is assumed in both scenarios, namely, the policy scenario deficit shown in table 1. No adjustment is made for the fact that this deficit would be slightly lower under the lower April yields. Hence, the interest cost difference between the two interest rate scenarios is conservatively estimated.

Figure A.1 Projected average borrowing cost of Italian government debt securities, 2018Q3-2021Q4



Note: Assumes deficit in 2019 revised Draft Budgetary Policy’s policy scenario (see table 1).

Source: Authors’ calculations based on Bloomberg Finance L.P. data and data in table 1.

Table A.1 Interest costs of new government policies (percent of GDP)

Item	2018	2019	2020	2021
(1) Interest expenditures assuming baseline deficit, April 2018 yield curve	3.60	3.34	3.13	2.95
(2) Interest expenditures assuming baseline deficit, October 2018 yield curve	3.60	3.55	3.55	3.54
(3) Interest expenditures assuming deficit under new policies, October 2018 yield curve	3.60	3.56	3.55	3.54
(2) - (1): Rise of interest expenditures due to higher interest rates	0	0.21	0.43	0.58
(3) - (2): Additional interest expenditures due to higher borrowing	0	0	0	0.01
Total fiscal cost of new policies	0	0.22	0.43	0.59

Note: Small discrepancies reflect rounding.

Source: Authors' calculations based on data from table 1, Ministry of Economy and Finance, and Bloomberg Finance L.P.

0.59 percent of GDP in 2021 (note that these calculations implicitly assume that the cost of loans is unchanged, hence, they will tend to underestimate the total fiscal cost of the new policies). The fact that these costs are so high is not surprising: Each year, Italy needs to refinance debt securities worth 19

to 20 percent of GDP. Together with the large (about 150 basis points) difference between maturity-weighted average borrowing spreads in April 2018 and October 2018, this explains the order of magnitude of the additional fiscal costs in each year ($19\% \times 1.50\% = 0.29$).

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