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Fiscal space in the euro area before Covid-19

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Abstract

Numerical simulations of fiscal space in the euro area, based on 12 different situations, point to the large uncertainty surrounding the capacity of Member States to pay back their public debts. Unless nominal long term interest rates remain low and economic growth resumes at its pre-Covid-19 median, most countries will fail to address debt sustainability. Although the analytics behind this exercise is common knowledge among macroeconomists, it gives an order of the magnitude of fiscal space in the euro area and it also confirms that interactions between the ECB and governments are key to escape the public finances consequences of an exogenous global shock like Covid-19.

1. Introduction

The Covid-19 health crisis has sparked lockdown policies that have weighed extensively on the economy and on public finances. Euro area (EA) countries have not been equal *vis-à-vis* the intensity of the health crisis, and they are not equal in terms of their fiscal capacities to face the lockdown shock. The scars of the former global financial crisis and ensuing so-called "European sovereign debt crisis" remain in some countries where public debt-to-GDP ratios are still very high (figure 1). Larger public deficits in these countries, after growing expenditures and tax deferrals, lay the fear of a higher risk of default: States may be unable to repay their debts in the future. Although the worst is never sure, investigating public debt sustainability can highlight the differences and commonalities between EA governments before they decide (or do not decide) to design new financing tools at the European level.

Figure 1. Public debt in the euro area in 2019 (in percent of GDP)
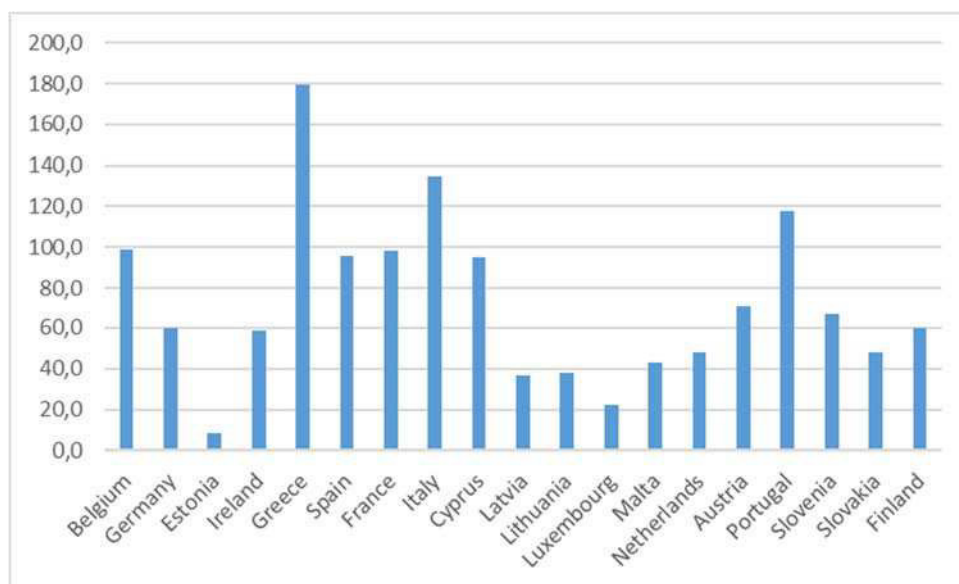
Source: Fiscal Space World Bank Database

Using simple analytics of fiscal space and debt sustainability, I show in the following that public finances in 2019 were sustainable only under very favorable conditions. As these conditions have become more and more unfavorable during the crisis, sustainability has undoubtedly deteriorated. This conclusion does not hold for a few EA countries but for most of them. Unless long-term interest rates remain low over an extended period, fiscal space will become a rare commodity, even in Germany.

2. Computing the fiscal space

There are many ways to assess debt sustainability[1] but one rough and simple manner is to compute the primary balance sustainability gap. The latter is the gap between the actual primary balance (the difference between public receipts and spending, excluding interest payments, expressed in percentage points of GDP) and the primary balance-to-GDP ratio that would stabilize the debt-to-GDP ratio at a given target. It writes:

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[1] See e.g. Aldama and Creel (2016) for a discussion of their respective merits.

$$pbsg_t = sp_t - \left(\frac{i-g}{1+g}\right) d^*$$ (1)

with *pbsg* the primary balance sustainability gap in percentage points of GDP, *sp* the actual primary balance in percentage points of GDP, *i* the long-term interest rate on public debt in percent, *g* the nominal growth rate of the economy in percent, *d** the debt-to-GDP target, and *t* is the time subscript. The term between parentheses is the critical gap.

If the primary balance sustainability gap is positive (resp. negative), the actual primary balance is above (resp. below) the stabilizing primary balance and public debt will fall below (resp. increase above) the debt target. Hence, a positive primary balance sustainability gap is interpreted as an indicator of fiscal space.

Actually, the primary balance sustainability gap is bigger the bigger the actual primary surplus. The relationship between fiscal space and the debt target depends on the critical gap. For a positive critical gap, fiscal space is the higher the lower the debt target. The reverse relationship holds if the critical gap is negative.

Now, what about France, Germany, Italy and Spain? It all depends on the assumptions that we make on the future interest rate on debt, the future economic growth rate and the debt target. In the following, I present four different scenarios for the first two and three different assumptions for the debt target, hence twelve different situations. The four scenarios for the critical gap are the following:

- "ZLB forever": the long-term interest rate on debt is equal to zero while the economic growth rate is equal to its country-specific median between 1990 and 2018.
- "Historical": the long-term interest rate on debt is equal to its country specific median while the economic growth rate is equal to its country-specific median between 1990 and 2018.
- "Bad case": same situation as in the "historical" case, except that the long-term interest rate is augmented by one standard deviation while the economic growth rate is decreased by one standard deviation.
- "Worst case": same situation as in the "bad case" but with two standard deviations.

The "ZLB forever" scenario assumes that ECB monetary policy accommodation will continue beyond 2020 and/or that some forms of low-yield Eurobonds (Coronabonds, Recovery bonds, Perpetual bonds, etc.) will emerge or that "secular stagnation" with a savings glut continues. All three situations would permit to keep long-term rates at very low levels over an extended period. It may be viewed as an extreme case, very favorable to the refinancing of public debts in the EA[2].

The "historical" scenario is a return to some kind of a "business-as-usual", whereas the "bad case" and "worst case" scenarios assume that the Covid-19 crisis will leave scars to the EA economy: larger interest rate spreads between the core and the periphery and a long-lasting decline in economic growth rates.

I take no stand on the probabilities of these scenarios. In April 2020, the uncertainty surrounding the economic costs of the crisis and the lockdown remained very high. Forecasters at the IMF and OECD converge towards sharp GDP drops in advanced economies. Banque de France, DG-Tresor, INSEE and OFCE[3] all share quite close assessments of the impact of the lockdown on the French economy, between 2.5 and 3 percent drop in GDP per month of lockdown. First

[2] Blanchard (2019, 2020) and Krugman (2020) view this scenario of long-lasting low interest rate as very likely. Krugman (2020) advocates for a permanent public investment stimulus of 2 percentage points of GDP that would not, according to him, weaken debt sustainability.
[3] See OFCE (2020a, b).

releases of forecasts for the first quarter of 2020 point to GDP drops of 5.3 % in France, 4.7% in Italy, 5.2% in Spain and 3.8% in the EA. Recent forecasts for Germany point to GDP annual drop of 6.3% in 2020.

Then I include three different debt targets associated with these four scenarios. The first one is simply the 60 percent of GDP debt limit of the Treaty of the Functioning of the EU, included in the Stability and Growth Pact. Between 1990 and 2019, the median debt to GDP ratio computed across all EA member states is also equal to 60 percent. The second debt target is the country-specific median debt to GDP ratio between 1990 and 2019. It therefore assumes that EA Member State may depart from the 60 percent of GDP debt limit over the long run. The third assumption takes for granted that countries could stabilize their debt-to-GDP ratio at its value *before* the Covid-19 crisis, hence at its value of 2019. This assumption is consistent with the view that debt sustainability had improved substantially in the EA until the Covid-19 crisis erupted.

I use two datasets to compute fiscal space. Data on long-term interest rates (on 10-year government bonds) and economic growth rates come from the Ameco database of the European Commission. Data on public debts and primary balances come from the Fiscal Space World Bank database (assembled by Kose, et al., 2017, and updated by them in April 2020). All data are annual and the period covers the years 1990 to 2018 (for the interest and economic growth rates) or 1990 to 2019 (for public finances).

3. Results

Results for the 19 EA member states are summarized in table 1 (all tables appear in the last portion of the paper). To understand how it reads, take for example the average of column 1: 4.3 (percent of GDP) is the average fiscal space of EA countries required to stabilize debt at 60 percent of GDP under a zero-interest-rate and historical median growth rate ("ZLB forever" scenario). The standard deviation of this average fiscal space is equal to 2 percent of GDP. The fiscal space varies between 0.3 for France and 8.6 per cent of GDP for Cyprus under this scenario.

Results show that on average across all twelve cases, the EA has a negative gap: in 2019, the EA faced growing risks of debt instability and lacked fiscal space. The standard deviation is very large, though: while some countries like Latvia and France had larger risks of debt instability, other countries like Cyprus or Malta faced large fiscal space.

On average across EA countries, fiscal space is the highest under the "ZLB forever" scenario when the debt target is at its 2019 value (in percent of GDP). It is not true for all countries though, for some countries had succeeded in reducing debt in 2019 below its country-specific median value. It must be added that stabilizing the debt-to-GDP ratio at its 2019 value is not an option if financial conditions deteriorate substantially: fiscal space is the lowest on average (and substantially negative) in the worst-case scenario when the debt target is the 2019 value (in percent of GDP).

Table 1 shows that the computations are heavily dependent on the choice of the critical gap scenario. If interest rates soar and growth collapses, Greece sees its situation worsen dramatically, whereas public finance sustainability seems easily achievable if interest rates stick to the zero-limit. Such a discrepancy certainly raises concerns over the validity of the method. I will discuss the limitations in the conclusion.

Specific results for France, Germany, Italy and Spain are reported in figure 2. They show that the best scenario for all countries is to target the debt to GDP ratio of 2019 – hence trying to

erase only the debt that has accumulated since the Covid-19 crisis [4] - provided long-term interest rates remain very low. Whatever the debt target, the ZLB scenario gives fiscal space to all four countries, although to a lower extent for France that had a relatively large primary deficit in 2019. It also appears that a return to the historical critical gap would keep away France from public debt stability, while it would not have an impact on Italy and Spain. Germany would see its debt to GDP ratio decline. More generally, the ZLB and historical scenarios give fiscal space to almost all EA countries (see table 2). Finally, if interest rates increase and economic growth slows down, all four countries will face a growing debt-to-GDP ratio. In the worst-case scenario, the primary balance sustainability gap would be sharply negative at -4 percent of GDP for Germany. Debt stability would therefore be a shared concern for EA large countries, but not only. With the exception of Cyprus, Luxembourg and Malta, all EA countries would have no fiscal space (see table 2).

Figure 2. Fiscal space in the largest EA countries in 2019 (in percent of GDP)
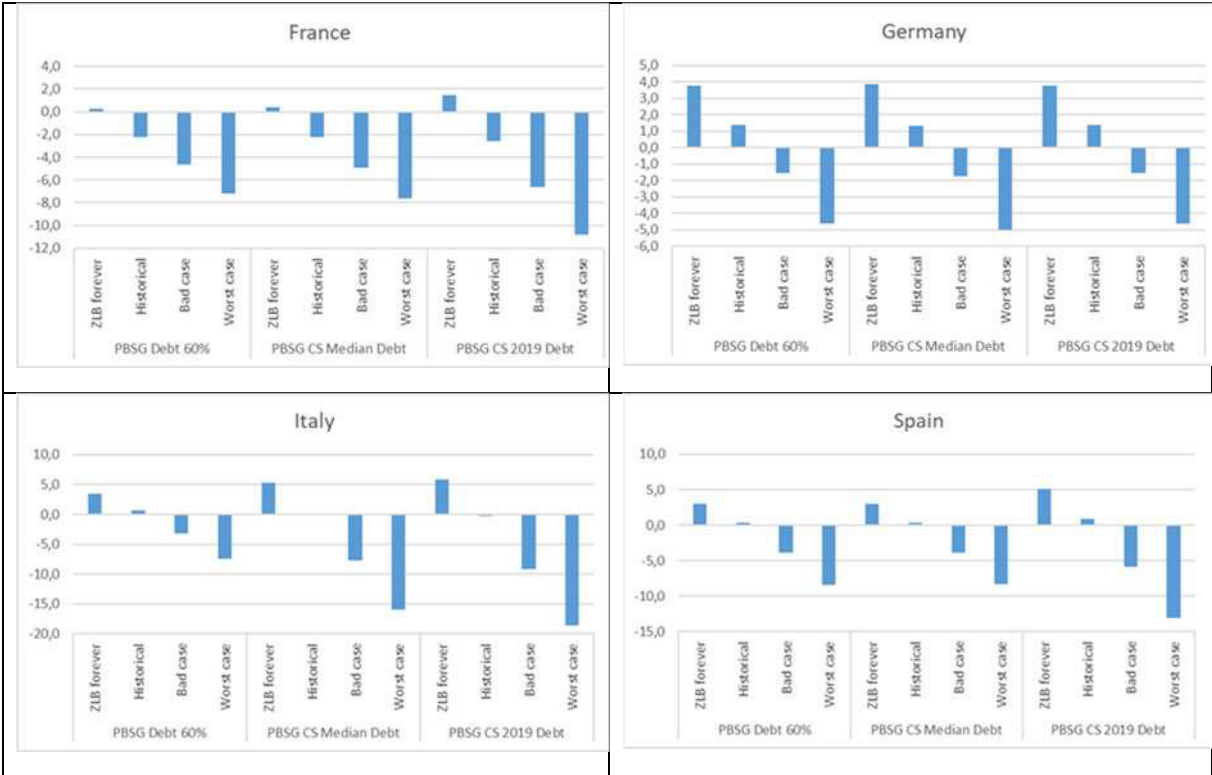
Sources: Ameco and Fiscal Space World Bank Databases, computations of the primary balance sustainability gap (in percent of GDP) by the author.

These computations do not take into account the deterioration in public finances of EA countries during and after the Covid-19 crisis. Consequently, the (negative) fiscal space after the joint rise in interest rates and decline in output can be interpreted as an upper bound before debt rises. Drawing on recent forecasts found in the press for debt-to-GDP ratio by the end of 2020, I have recomputed fiscal space under the four different scenarios (same values as before between 1990 and 2018). Results are reported in table 3. Without information on 2020 primary balance, I took the same value as that of 2019. The ensuing result gives an approximation of fiscal space, once

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[4] There have been some voices that proposed the contrary: removing the accumulation of debt during the crisis from the convergence process towards the debt target (at 60 percent?). In a static analysis as the one developed here, it does not make a difference.

again an upper bound under unfavorable financial conditions, with lower primary deficits than may be finally achieved by the end of 2020. Take the case of France, for example and, rather than a debt target at 98.5 percent of GDP (its value of 2019), assume that the debt target is 115 percent of GDP (the forecast debt-to-GDP ratio after the crisis of Covid-19 as expressed by Minister Darmanin in April 2020). Under this assumption, fiscal space would decline by almost 1 percent of GDP in the "bad case" scenario and by 1.5 percent of GDP in the "worst case". In contrast, fiscal space would increase by 0.5 percent of GDP if the "ZLB" scenario prevailed. Spain would see its fiscal space increase by more than 1 percentage point in the "ZLB forever" scenario whereas it would diminish by more than 2 percentage points if Spain sticks to 2020 forecast-debt. The respective figures for Italy show an improvement of 0.6 under the "ZLB forever" scenario and a deterioration of more than 3 percentage points under the "worst case" scenario. All these results point to the strong impact of financial conditions on debt stability in the future.

Finally, I checked how the primary balance sustainability gap varies *vis-à-vis* a market-related indicator of fiscal sustainability, 10-year bond spreads. The last two columns of Table 2 report the country-specific covariance and correlation between fiscal space and the interest rate spread *vis-à-vis* German Bunds. Except for Greece, Luxembourg and Portugal, covariance and correlations are negative: the fiscal space and interest rate spreads give similar information on fiscal sustainability (if anyone does).

4. Conclusion

Numerical simulations of fiscal space in the euro area, based on twelve different situations, point to the large uncertainty surrounding the capacity of Member States to pay back their public debts. Unless nominal long term interest rates remain low and economic growth resumes at its pre-Covid-19 median, most EA countries will fail to address debt sustainability without fiscal consolidation. In the worst-case scenario of high interest rates and long recession, even Germany would lack sufficient fiscal space to stabilize its debt-to-GDP ratio. It appears then that debt stability is a shared concern for most EA Member States, with the exception of Cyprus, Luxembourg and Malta.

It is clear that the exercise is purely mechanical. While it includes some features of European Commission's Debt Sustainability Monitor, for instance, it simplifies them with only a few scenarios. Moreover, it does not compute a dynamic process by which the gap between actual debt and the debt target would decline smoothly. It also neglects macroeconomic feedbacks. For example, a primary deficit mechanically reduces fiscal space and is interpreted as weakening debt sustainability, without taking into account the possible feedback on GDP. The feedback effect may improve debt sustainability via higher future tax receipts and lower public spending that would ease the repayment of debts. The method is also mostly backward-looking: in most scenarios, it assumes that past trends will continue. There are of course many other criticisms to address to this "methodology"[5]. I use it here only as an illustration of the deviation of actual policy from the debt stability condition, of the stance of fiscal policy to converge toward debt stability (abstracting from macroeconomic feedbacks) and of the impact of macroeconomic conditions on the debt stability condition. Although the analytics behind this exercise is common knowledge among macroeconomists, it gives an order of the magnitude of fiscal space in the euro area and it confirms that interactions between the ECB and EA governments are key to escape the public finances consequences of an exogenous global shock like Covid-19.

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[5] See e.g. Creel and Sterdyniak (1995) and Wyplosz (2020) for a discussion.

5. References

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Table 1. Descriptive statistics of the primary balance sustainability gap (PBSG) for the different scenarios

	PBSG Debt 60%				PBSG Country Specific Median Debt				PBSG Country Specific 2019 Debt				All cases
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	
Max	8.6	5.5	1.7	-1.5	10.7	5.5	2.1	1.6	15.5	5.8	1.6	0.1	
	(Cyprus)	(Cyprus)	(Cyprus)	(Malta)	(Greece)	(Cyprus)	(Lux.)	(Lux.)	(Greece)	(Cyprus)	(Malta)	(Lux.)	
Min	0.3	-2.2	-7.6	-21.0	0.0	-2.2	-11.3	-29.3	0.2	-2.6	-22.2	-52.8	
	(France)	(France)	(Latvia)	(Latvia)	(Estonia)	(France)	(Greece)	(Greece)	(Estonia)	(France)	(Greece)	(Greece)	
average	4.3	1.7	-2.9	-8.0	4.0	1.4	-2.6	-7.1	4.8	1.5	-4.1	-10.4	-1.5
sd	2.1	2.0	2.5	4.9	2.8	2.0	3.3	6.7	3.6	2.0	5.3	11.6	6.9

(1) ZLB Forever; (2) Historical; (3) Bad case; (4) Worst case

Sources: Ameco and Fiscal Space World Bank Databases, computations of the primary balance sustainability gap (in percent of GDP) by the author.

Table 2. Fiscal space in the EA in 2019 (in percent of GDP), covariance and correlation between the primary balance sustainability gap and 10-year spread

2019	PBSG Debt 60%				PBSG Country Specific Median Debt				PBSG Country Specific 2019 Debt				Cov	Corr
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(a)	(b)
Belgium	**2.1**	-0.4	-2.9	-5.3	**3.7**	-0.7	-5.0	-9.3	**3.4**	-0.7	-4.7	-8.8	-0.52	-0.50
Germany	**3.8**	**1.4**	-1.5	-4.6	**3.9**	**1.4**	-1.7	-5.0	**3.8**	**1.4**	-1.5	-4.6	0.00	
Estonia	**3.7**	**0.4**	-5.7	-13.0	**0.0**	-0.3	-0.9	-1.7	**0.2**	-0.3	-1.2	-2.2	-2.70	-0.55
Ireland	**6.1**	**3.3**	-2.9	-10.1	**6.5**	**3.4**	-3.3	-11.2	**6.0**	**3.2**	-2.8	-9.9	-6.34	-0.57
Greece	**7.9**	**4.0**	-4.8	-15.0	**10.7**	**3.9**	-11.3	-29.3	**15.5**	**3.8**	-22.2	-52.8	1.21	0.06
Spain	**3.0**	**0.3**	-3.9	-8.4	**3.0**	**0.3**	-3.8	-8.3	**5.1**	**0.9**	-5.8	-13.1	-2.71	-0.46
France	**0.3**	-2.2	-4.7	-7.2	**0.4**	-2.2	-4.9	-7.6	**1.5**	-2.6	-6.6	-10.8	-0.18	-0.36
Italy	**3.5**	**0.7**	-3.2	-7.4	**5.3**	-0.1	-7.8	-16.0	**5.9**	-0.3	-9.2	-18.7	-0.71	-0.24
Cyprus	**8.6**	**5.5**	**1.7**	-2.4	**8.6**	**5.5**	**1.7**	-2.6	**10.6**	**5.8**	-0.2	-6.8	-0.19	-0.04
Latvia	**4.9**	**2.6**	-7.6	-21.0	**1.8**	**1.1**	-1.9	-5.8	**3.2**	**1.8**	-4.5	-12.7	-4.13	-0.82
Lithuania	**4.2**	**1.9**	-5.2	-13.6	**2.1**	**1.1**	-2.3	-6.3	**2.8**	**1.3**	-3.1	-8.5	-5.81	-0.79
Luxembourg	**5.8**	**3.2**	-0.3	-4.0	**3.0**	**2.6**	**2.1**	**1.6**	**3.7**	**2.8**	**1.5**	**0.1**	0.22	0.30
Malta	**6.3**	**3.8**	**1.2**	-1.5	**6.6**	**3.9**	**1.1**	-1.8	**5.3**	**3.5**	**1.6**	-0.3	-0.08	-0.07
Netherlands	**4.7**	**2.3**	-0.5	-3.5	**4.8**	**2.3**	-0.5	-3.5	**4.3**	**2.3**	0.0	-2.4	-0.19	-0.53
Austria	**3.7**	**1.3**	-1.2	-3.7	**4.0**	**1.2**	-1.5	-4.3	**4.1**	**1.2**	-1.6	-4.6	-0.05	-0.15
Portugal	**5.9**	**3.0**	-2.2	-8.0	**6.1**	**3.0**	-2.6	-8.8	**8.6**	**3.0**	-7.3	-18.6	1.47	0.23
Slovenia	**4.2**	**2.0**	-1.6	-5.5	**3.0**	**2.0**	**0.4**	-1.4	**4.5**	**2.0**	-2.0	-6.4	-3.04	-0.60
Slovakia	**2.5**	**0.3**	-3.6	-8.0	**1.8**	**0.2**	-2.6	-5.7	**2.0**	**0.2**	-2.9	-6.4	-1.62	-0.63
Finland	**1.0**	-1.5	-5.7	-10.3	**0.5**	-1.4	-4.8	-8.3	**1.0**	-1.5	-5.7	-10.2	-1.89	-0.39

(1) ZLB Forever; (2) Historical; (3) Bad case; (4) Worst case; (a) covariance between the primary balance sustainability gap and 10-year spread (1990-2018); (b) correlation between the primary balance sustainability gap and 10-year spread (1990-2018)

Sources: Ameco and Fiscal Space World Bank Databases, computations of the primary balance sustainability gap (in percent of GDP) by the author.

Table 3. Fiscal space in 2020, in difference vis-à-vis fiscal space in 2019 (in percent of GDP)

	Debt-to-GDP	PBSG Country Specific 2020 Debt			
	End of 2020	(1)	(2)	(3)	(4)
Germany	75.3	0.4	-0.2	-1.0	-1.7
Spain	113.4	1.1	0.3	-1.0	-2.3
France	115.0	0.5	-0.1	-0.8	-1.5
Italy	155.7	0.6	-0.3	-1.7	-3.1

(1) ZLB Forever; (2) Historical; (3) Bad case; (4) Worst case

Sources: Ameco, Fiscal Space World Bank Databases and press releases, computations of the primary balance sustainability gap (in percent of GDP) by the author.