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Jürgen Matthes

Debt Sustainability Analyses for Italy, Spain and Portugal: Assessment and Recommendations

Despite the broad upswing in the euro area, it cannot be precluded that high public debts in some countries could spiral out of control if interest rates increase again. To analyse the relevance of this danger, a debt sustainability analysis is carried out using a narrow range of relatively realistic assumptions through 2022. While public debts will remain high for an extended period, reasonable fiscal primary surpluses will be sufficient to stabilise debt ratios, even if a moderate recession occurs.

More than five years after the end of the acute phase of the euro debt crisis, the subsequent upturn in the euro area has increasingly gained momentum. But how stable is the overall economic situation?¹ In Italy and Portugal, the public debt ratio is very high, at some 130% of GDP, and it is around 100% of GDP in Spain. In all three countries, this ratio has not or only hardly declined in recent years due to only limited consolidation progress. This raises the question as to whether the sovereign debts of these countries are still viable if interest rates rise again or if the next recession hits. These aspects are also of great relevance to the current debate on the future EMU architecture.² Advocates of stronger fiscal integration justify their proposals with the supposedly too great fragility of the highly indebted euro area countries.³ Against this background, a debt sustainability analysis of Spain, Italy and Portugal is carried out to assess how fragile the situation really is.⁴

Methodological remarks

The change in the public debt ratio as a percentage of GDP (DR) at time t is derived from the average interest rate on public debt (i), the nominal GDP change (g), which results from the year-on-year change in the real GDP and the GDP deflator, as well as from the fiscal primary balance (PB)⁵.

$$DR_t - DR_{t-1} = \frac{i - g}{1 + g} DR_{t-1} - PB_t$$

The debt sustainability analysis carried out here relies on data from the World Economic Outlook Database of the International Monetary Fund (IMF).⁶ In addition, the European Commission's AMECO database is used.⁷ Assumptions on growth and inflation are checked for plausibility with data and forecasts from Eurostat, the OECD and Consensus Economics. Estimates of government debt ratios are provided until 2022, as the IMF forecast extends to this year.

On top of a baseline scenario, two other scenarios are presented: a moderately optimistic and a moderately pessimistic one. The assumptions are chosen to reflect a relatively realistic development.⁸ Over the observed time horizon, all scenarios assume (to different degrees) a decline in economic growth, a recovery in inflation rates, an improvement in the fiscal primary surplus (other than in

1 See e.g. O. Blanchard, J. Zettelmeyer: Will Rising Interest Rates Lead to Fiscal Crises, Policy Brief No. 17-27, Peterson Institute for International Economics, 2017.

2 See J. Matthes, A. Iara: On the future of the EMU: Is more fiscal integration indispensable?, in: European View, Vol. 16, No. 16, 2017, pp. 3-22.

3 See e.g. European Commission: Reflection paper on the deepening of the Economic and Monetary Union, Brussels 2017.

4 For an extended version of this article, see J. Matthes: How sustainable are government debts in the formerly stressed Southern European countries?, IW-Report No. 32, Cologne Institute for Economic Research, 2017. For debt sustainability analyses for Greece, see J. Matthes: Schuldenerleichterungen für Griechenland?! – Anforderungen, Optionen und Wirkungen, IW policy paper No. 25/2015, Cologne Institute for Economic Research, 2015; J. Matthes: Griechenland – IW-Schuldenträgfähigkeitsanalyse zeigt: Kein Schuldenschnitt nötig, IW-Kurzbericht No. 24.2016, Cologne Institute for Economic Research, 2016.

5 J. Gottschalk: Fiscal and Debt Sustainability, IMF-Workshop "Fiscal Analysis and Forecasting Workshop", 16-27 June 2014, Bangkok, available at <https://www.imf.org/external/region/tlm/rrr/pdf/aug7.pdf>.

6 International Monetary Fund: World Economic Outlook Database, April 2017, available at <http://www.imf.org/external/pubs/ft/weo/2017/01/weodata/index.aspx>.

7 European Commission: Ameco database, available at http://ec.europa.eu/economy_finance/ameco/user/serie/ResultSerie.cfm.

8 For more details, see Tables 1 to 3. For further explanations on the plausibility of the assumptions, see J. Matthes: How sustainable ..., op. cit.

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Portugal) and a rise in interest rates. The more pessimistic scenario is characterised by a recession of 0.5% of real GDP in 2019 and only a tepid recovery of 0.5% in 2020. For the three countries considered, structurally similar developments are assumed in the respective scenarios. Where necessary, country-specific adjustments are made, for example, to reflect the effect of different debt levels and GDP growth rates on the risk premiums.⁹ As a caveat, it needs to be pointed out that setting the assumptions necessarily introduces a subjective element to the analysis.

Spain

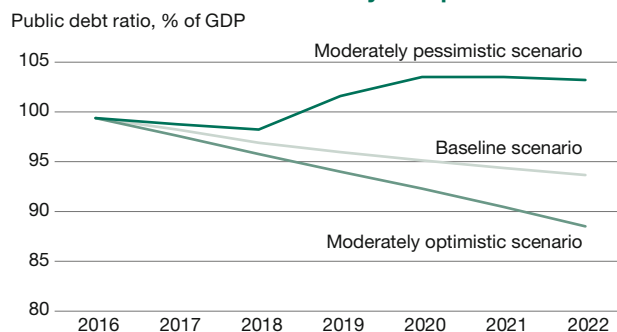
The Spanish economy benefits from the wide-ranging structural reforms it undertook during the crisis years.¹⁰ It is expected to grow dynamically in 2017 at a rate of around three per cent year on year (yoy) for a third consecutive year. In the first three quarters of 2017, real GDP growth was again in this range. Important economic indicators, such as business and consumer sentiment, remained at a high level as of the autumn of 2017. For example, the European Commission's Economic Sentiment Indicator for Spain stood at 110.8 in November 2017, which is the highest level since December 2015. In view of the rapid growth, the GDP deflator is estimated to increase by about 1.5% this year after a prolonged period of weakness. As a result of reforms and the economic dynamic, the average interest rate on government debt at 2.7% in 2017 is slightly lower than in Italy and Portugal (according to EU figures). On the other hand, certain weaknesses are still evident with regard to the fiscal situation. After a primary fiscal deficit of 1.7% of GDP in 2016, the European Commission estimates that a primary surplus will still not be reached this year (-0.1% of GDP).

Despite this weakness on the fiscal side, dynamic growth and moderate inflation contribute in the *baseline scenario* to a fall in the public debt ratio (which has already slightly declined recently) from 99.4% of GDP in 2016 to around 93.7% in 2022 (see Figure 1). It is assumed that the growth rate of real GDP will decrease over time, that inflation and the average interest rate on public debts will rise slightly,

9 Interactions between the drivers of the public debt ratio are also taken into account. For example, moderately stronger economic growth should increase inflation and should lead to lower risk premiums on sovereign bonds – both effects tend to further improve the debt situation on top of the direct growth effect.

10 J. Matthes: Krisenländer: Relevanz von Strukturreformen für Wachstum und Währungsraum, in: Wirtschaftsdienst, Vol. 95, No. 2, 2015, pp. 106-113; for a longer English version, see J. Matthes: An assessment of structural reforms in the stressed euro area countries and their relevance for growth and for EMU, IW policy paper No. 5/2015, Cologne Institute for Economic Research, 2015.

Figure 1
Scenarios of debt sustainability for Spain



Note: From 2017 onwards, the data is simulated based on the assumptions displayed in Table 1.

Sources: European Commission; IMF; Cologne Institute for Economic Research.

Table 1
Scenarios for Spain at a glance

Assumptions	2016	2017	2018	2019	2020	2021	2022
Baseline scenario							
Change in real GDP (yoy)	3.2	3.1	2.6	2.0	1.9	1.7	1.6
Change in GDP deflator (yoy)	0.3	1.5	1.5	1.6	1.6	1.7	1.8
Average interest rate on public debts	2.9	2.7	2.6	2.8	3.0	3.2	3.4
Public primary balance in % of GDP	-1.7	-0.6	-0.1	0.1	0.3	0.5	0.7
Public debt ratio in % of GDP	99.4	98.2	96.9	96.0	95.1	94.4	93.7
Moderately optimistic scenario							
Change in real GDP (yoy)	3.2	3.3	2.8	2.4	2.2	2.1	2.0
Change in GDP deflator (yoy)	0.3	1.7	1.7	1.8	1.8	1.9	2.0
Average interest rate on public debts	2.9	2.7	2.6	2.7	2.8	2.9	3.0
Public primary balance in % of GDP	-1.7	-0.4	0.1	0.3	0.6	0.8	1.1
Public debt ratio in % of GDP	99.4	97.6	95.8	94.0	92.3	90.5	88.5
Moderately pessimistic scenario							
Change in real GDP (yoy)	3.2	2.9	2.2	-0.5	0.5	2.0	1.6
Change in GDP deflator (yoy)	0.3	1.3	1.3	1.3	1.3	1.5	1.8
Average interest rate on public debts	2.9	2.7	2.6	2.9	3.2	3.4	3.6
Public primary balance in % of GDP	-1.7	-0.8	-0.3	-1.3	-0.5	-0.1	0.5
Public debt ratio in % of GDP	99.4	98.8	98.2	101.6	103.5	103.5	103.2

Sources: European Commission; IMF; Cologne Institute for Economic Research.

and that the fiscal primary balance will improve continuously in small steps (see Table 1).

In the *moderately optimistic scenario*, the debt ratio falls further to 88.5% of GDP by 2022. Here, the assumed growth decline over the time horizon is less pronounced than in the baseline scenario. Moreover, a somewhat accelerated price increase, a minor increase in the average interest rate and a slightly greater improvement in the primary balance are assumed.

The *moderately pessimistic scenario* foresees a poorer development and a temporary recession with only a slight recovery. Under these assumptions, the public debt ratio rises temporarily to 103.5% but stabilises again at only a small primary surplus of 0.5%.

Italy

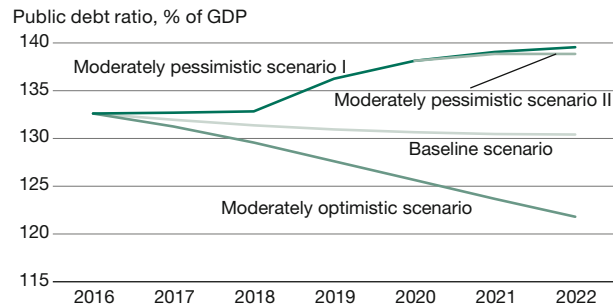
Economic growth in Italy had up to 2016 not gained stronger momentum (despite some structural reforms), mainly because of the crisis-related legacy problems in the banking and corporate sectors. In 2016 real GDP grew at a rate of only around 1.0% (yoy). In 2017, however, there was a marked acceleration, with the real GDP growth rate rising to 1.8% in the third quarter (yoy). Moreover, many leading business cycle indicators have recently risen to high levels. The European Commission's Economic Sentiment Indicator for Italy reached 112.1 points in November 2017 – the highest level since June 2006. However, in view of the weak economic momentum so far, the price increase in the GDP deflator was still below one per cent in 2016. According to the European Commission, the average interest rate on the government debt was 3.0% in 2017, primarily because Italy, like the other countries discussed here, benefits from the low-interest rate environment and the ECB's sovereign bond purchases. Unlike in Spain, the fiscal primary balance is clearly positive, with 1.5% of GDP in 2016 and 1.7% in 2017.¹¹

In the *baseline scenario*, the high Italian debt ratio declines only very slowly between 2016 and 2022 – from 132.6% to 130.4% of GDP (see Figure 2). This is mainly due to the assumptions that real GDP growth and inflation remain very weak while interest rates are rising (see Table 2).

In the *moderately optimistic scenario*, somewhat more positive but still relatively conservative assumptions are set. At just under 1.5% on average, economic growth is expected to be higher than in the baseline scenario. However, this is roughly the same growth rate as the average for the period from 1998 to 2007. Inflation also rises

¹¹ Estimates of the European Commission.

Figure 2
Scenarios of debt sustainability for Italy



Note: From 2017 onwards, the data is simulated based on the assumptions displayed in Table 2. Moderately pessimistic scenario I assumes a primary surplus of 1.9% of GDP in 2022, while moderately pessimistic scenario II assumes a higher primary surplus of 2.5% of GDP in 2022.

Sources: European Commission; IMF; Cologne Institute for Economic Research.

Table 2
Scenarios for Italy at a glance

in %

Assumptions	2016	2017	2018	2019	2020	2021	2022
Baseline scenario							
Change in real GDP (yoy)	0.9	1.3	1.0	0.8	0.8	0.9	0.9
Change in GDP deflator (yoy)	0.8	0.9	1.2	1.4	1.4	1.4	1.4
Average interest rate on public debts	3.1	3.0	2.9	3.1	3.3	3.5	3.7
Public primary balance in % of GDP	1.5	1.7	1.5	1.6	1.7	1.8	1.9
Public debt ratio in % of GDP	132.6	132.0	131.4	130.9	130.7	130.5	130.4
Moderately optimistic scenario							
Change in real GDP (yoy)	1.5	1.5	1.5	1.5	1.5	1.4	1.3
Change in GDP deflator (yoy)	0.8	1.1	1.4	1.6	1.6	1.7	1.7
Average interest rate on public debts	3.1	3.0	2.9	3.1	3.2	3.4	3.5
Public primary balance in % of GDP	1.4	1.9	1.7	1.9	2.1	2.3	2.5
Public debt ratio in % of GDP	132.6	131.2	129.6	127.6	125.7	123.7	121.8
Moderately pessimistic scenario							
Change in real GDP (yoy)	0.8	1.1	0.8	-0.5	0.5	1.0	0.9
Change in GDP deflator (yoy)	0.8	0.7	1.0	1.0	1.0	1.2	1.4
Average interest rate on public debts	3.1	3.0	2.9	3.3	3.7	3.9	4.0
Public primary balance in % of GDP	1.5	1.5	1.3	0.3	1.1	1.4	1.9
Public debt ratio in % of GDP	132.6	132.7	132.8	136.3	138.1	139.0	139.5

Sources: European Commission; IMF; Cologne Institute for Economic Research.

slightly, but reaches only 1.7% by 2022. The average interest rate increases only slightly less than in the baseline scenario. The primary balance rises to 2.5% of GDP at the end of the time horizon. With these assumptions, the public debt ratio falls significantly to just under 122% of GDP in 2022.

In the *moderately pessimistic scenario*, the public debt ratio continues to rise after the assumed recession in 2019. Given weak growth and inflation and higher interest rates, a primary surplus of 1.9% of GDP does not suffice to stabilise the debt ratio. However, this would be achieved with a still moderate primary surplus of 2.5% of GDP.

Portugal

In the past two years, Portugal's economy has been growing at a respectable rate of around 1.5% (yoy) due to the structural reforms it undertook in the crisis years.¹² In 2017, the dynamics increased significantly, with a growth rate of 2.5% in the third quarter (yoy). Business cycle indicators also show a predominantly positive picture. The European Commission's Economic Sentiment Indicator for Portugal reached 115.8 in November 2017, which is the highest level since February 2000. The increase in the GDP deflator is expected to remain at a subdued 1.4% this year.¹³ Due to relatively high risk premiums, the average interest rate on public debts in 2017 is comparatively high at 3.3%, despite the low interest rate period. However, with a primary surplus of 2.4% of GDP in 2017, Portugal is the top performer among the three countries considered.

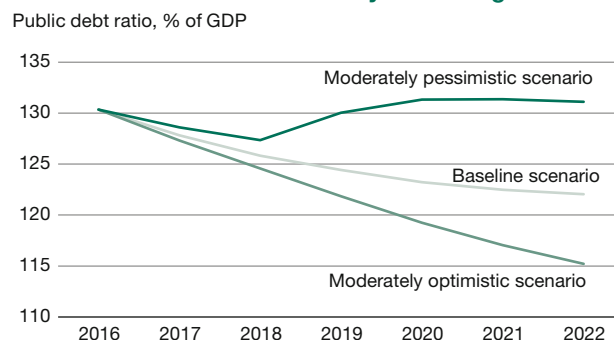
In the *baseline scenario*, the government debt ratio declines considerably from 130.4% in 2016 to 122% in 2022 (see Figure 3), despite relatively conservative assumptions. In fact, in view of the moderately dynamic development currently, the assumed economic growth and price increases appear relatively low over the time horizon, as shown in Table 3. Moreover, interest rates continue to rise moderately despite the already relatively high level, and the primary surplus decreases slightly but continuously in this scenario.

In the *moderately optimistic scenario*, an initially higher growth rate of real GDP is assumed (based on the current dynamics) – which then decreases again, as in the baseline scenario. As a result, price increases are set somewhat higher from 2017 onwards, while interest rates are lower due to reduced risk premiums. The fiscal primary surplus remains at a high level. As a result, the public debt

¹² J. Matthes: An assessment ..., op. cit.

¹³ IMF forecast.

Figure 3
Scenarios of debt sustainability for Portugal



Note: From 2017 onwards, the data is simulated based on the assumptions displayed in Table 3.

Sources: European Commission; IMF; Cologne Institute for Economic Research.

Table 3
Scenarios for Portugal at a glance

Assumptions	2016	2017	2018	2019	2020	2021	2022
Baseline scenario							
Change in real GDP (yoy)	1.4	1.9	1.7	1.2	1.1	1.0	1.0
Change in GDP deflator (yoy)	1.6	1.4	1.4	1.5	1.7	1.7	1.7
Average interest rate on public debts	3.4	3.3	3.3	3.3	3.5	3.7	3.9
Public primary balance in % of GDP	2.2	2.4	2.2	2.1	2.0	1.9	1.8
Public debt ratio in % of GDP	130.4	127.8	125.8	124.4	123.2	122.5	122.0
Moderately optimistic scenario							
Change in real GDP (yoy)	1.4	2.2	2.1	2.0	1.8	1.6	1.4
Change in GDP deflator (yoy)	1.6	1.6	1.6	1.7	1.9	1.9	1.9
Average interest rate on public debts	3.4	3.3	3.3	3.3	3.4	3.5	3.6
Public primary balance in % of GDP	2.2	2.4	2.2	2.2	2.2	2.2	2.2
Public debt ratio in % of GDP	130.4	127.3	124.6	121.8	119.2	117.0	115.2
Moderately pessimistic scenario							
Change in real GDP (yoy)	1.4	1.7	1.5	-0.5	0.5	1.3	1.0
Change in GDP deflator (yoy)	1.6	1.2	1.2	1.2	1.2	1.4	1.7
Average interest rate on public debts	3.4	3.3	3.3	3.6	4.0	4.1	4.1
Public primary balance in % of GDP	2.2	2.2	2.0	1.0	1.6	1.7	2.0
Public debt ratio in % of GDP	130.4	128.6	127.4	130.0	131.3	131.4	131.1

Sources: European Commission; IMF; Cologne Institute for Economic Research.

ratio falls significantly faster and more strongly to around 115% of GDP in 2022.

In the *moderately pessimistic scenario*, real growth and price increases are already significantly lower as of 2017 and the assumed phase of economic weakness in 2019-20 is added. Under these assumptions, the government debt ratio rises again to over 131% of GDP as a result of the recession. However, a primary surplus of 2.0% of GDP is sufficient to stabilise the public debt ratio.

Summary

The debt sustainability analyses carried out here are, of course, dependent on the chosen assumptions and hence their results are to be interpreted with caution. Comprising three relatively realistic scenarios, the following differentiated conclusions can be drawn:

- Public debt ratios remain high in the moderately pessimistic scenario, which includes a brief recession in 2019, as well as in the baseline scenario (with rather conservative assumptions), mainly in Italy and to a lesser extent in Portugal and Spain.
- In the moderately optimistic scenario, the reduction in government debt ratios is faster in all three countries. The assumptions do not appear to be unrealistic in view of the current economic situation. Another positive aspect is that an increasingly self-sustaining upturn is also generating sustained supply-side growth impulses, and the labour volume continues to increase due to the ongoing reduction in unemployment. However, even in this scenario, it will take considerably longer than 2022 before the public debt ratios in Italy and Portugal fall below 100% of GDP.
- On the other hand, the public debt does not spiral out of control under the chosen assumptions, even in the rather pessimistic scenario. An important prerequisite is that fiscal policy, particularly in Italy and to a lesser extent in Portugal and Spain, reacts with moderate consolidation. The primary surplus needed for stabilisation is considerably below three per cent of GDP and thus within a reachable range. According to Bencek and Klodt,¹⁴ who analysed countries covered by OECD statistics over the period from 1980 to 2010, a primary surplus of at least two to three per cent of GDP was reached in more than 20% of the resulting 712 obser-

vations. Primary surpluses of more than three per cent of GDP were achieved in about ten per cent of cases.

- In view of the impending increase in interest rates, a compensating effect needs to be highlighted. While rising interest rates tend to raise the public debt ratio, they usually go hand in hand with an increase in nominal growth, which lowers the debt ratio.

Overall, there is no reason for the financial market to regard the debt situation as unsustainable under fairly normal conditions. However, this might be different if a deeper crisis or self-fulfilling prophecies in the financial market occurred, or if populist parties had success in disparaging the course of moderate fiscal consolidation. In particular, the threat that a large euro area country gets into difficulties needs to be considered and prepared for.

Policy recommendations to make EMU more resilient

In order to overcome these challenges and vulnerabilities, the high public debt burdens must be reduced as quickly as possible and reasonable. Moreover, it is necessary to limit the likelihood and extent of future crises and to strengthen the resilience of the countries in focus. Table 4 provides an overview of important policy measures that are arranged according to these two key objectives. In the following, due to space constraints, only several measures are highlighted.¹⁵

Debt reduction

In view of more rapid debt reduction, *strengthening the growth potential* is central to improving the decisive lever of debt dynamics, i.e. the interest rate – economic growth differential. Apart from the often-mentioned key growth drivers – structural reforms and more private and public investment – high private debts and non-performing loans need to be reduced more rapidly, mainly in Italy and Portugal. Where appropriate, this adjustment in the banking system should be accompanied by a financial sector programme of the European Stability Mechanism (ESM), as was the case in Spain.

An *ambitious fiscal consolidation strategy* is needed to bring down the public debt ratios more quickly. When calibrating the consolidation strategy, it is necessary and possible to do this in a growth-friendly and socially inclu-

14 D. Bencek, H. Klodt: Fünf Prozent sind (zu) viel, Szenarien zu den benötigten Primärüberschüssen der Euroländer, in: *Wirtschaftsdienst*, Vol. 91, No. 9, 2011, pp. 595-600.

15 For more detailed policy recommendations related to debt reduction, see J. Matthes: *How sustainable ...*, op. cit. For an encompassing systematised list focusing more on financial market issues and on the context of optimal currency area theory, see J. Matthes, A. Iara, B. Busch: *Die Zukunft der Europäischen Währungsunion – Ist mehr fiskalische Integration unverzichtbar?*, IW-Analysen No. 110, Cologne Institute for Economic Research, 2016. And for a shorter English version, see J. Matthes, A. Iara, op. cit.

Table 4
Selected policy recommendations

	Debt reduction		Strengthening crisis resilience	
	Economic growth	Fiscal consolidation	Crisis mitigation	Adjusting to recessions
Reduction of NPLs and private debts	More market discipline		Reduction of crisis potential	National adjustment
ESM financial sector programme (optional)	Reviving no-bailout expectation		Macroprudential supervision / SSM	Flexibility of wages and prices
Enhancing growth conditions	Single-limb collective action clauses		Macroeconomic surveillance	National automatic fiscal stabilisation
Improved conditions for private investments	Exposure limits for sovereign debt		Tackling crises	Euro area wide measures
More and targeted public investment	Accountability bonds ¹		ESM programme	Capital markets union to increase financial risk sharing
Structural reforms	Higher incentives to adhere to fiscal rules		Maturity extension of sovereign bonds to bolster ESM capacity	Facilitating cross-border labour mobility
	Ex ante qualification for "fiscal capacity"		OMT and TARGET2	Supporting national fiscal stabilisation by new "ESM light" programme
	Simplification of rules to raise transparency			

¹ See C. Fuest: Accountability Bonds, ifo Standpunkt No. 171, 2017.

Source: Own compilation.

sive way.¹⁶ Claims that stronger fiscal consolidation would have a negative effect on the economy are becoming less and less justified given the broadened and more sustained upswing in the euro area. Furthermore, the concern that spending cuts would restrict public investment can be qualified, because spending reviews can (and should) be used to reveal opportunities to better target public spending.

The most effective method to achieve more appropriate fiscal consolidation is to strengthen market discipline,¹⁷ which is reduced if there are doubts about the validity of the no-bailout clause. Financial market participants would regard a sovereign default of a euro area country as highly unlikely if they expected the country to be rescued. Indeed, a major obstacle to a sovereign default lies in the fact that the national banking system would suffer a deep crisis because banks often hold the bonds of their own sovereign due to regulatory privileges. Therefore, an urgent task is to reduce this exposure and thus limit the sovereign-banking nexus.¹⁸ There are a number of options; at a minimum, there should

be sufficiently tight exposure limits for banks to hold government bonds of their own sovereign. However, with such reforms, the need to introduce new forms of safe assets might arise in order to ensure that banks have sufficient collateral for refinancing, even though this is no panacea.¹⁹

In addition, a potential sovereign debt restructuring should be possible in an effective and legally reliable way. Dissenting individual investors (holdouts) must be prevented from acquiring blocking minorities in individual issues through which they can severely hamper a restructuring agreement between the bankrupt state and the other creditors. Thus, the voting rules in the recently introduced collective action clauses should be amended so that a qualified majority of bondholders can overrule holdouts. Instead of the current regime that foresees separate votes for each individual issue of sovereign bonds, a requirement for only one single vote (single-limb aggregation) should be introduced. This reform is a minimum requirement to make a sovereign debt restructuring more viable.²⁰

16 G. Kolev, J. Matthes: Smart Fiscal Consolidation. A Strategy for Achieving Sustainable Public Finances and Growth, Centre for Economic Studies, 2013.

17 This mechanism is currently hampered by the fact that the ECB is buying sovereign bonds in large amounts and will continue to do so even after the end of the quantitative easing (QE) programme, because it will keep its sovereign bond stock unchanged for an extended period of time and will therefore substitute maturing bonds with new bond purchases. Nevertheless, it cannot be ruled out that the debate on the ECB's QE exit may lead to some unrest in the market for government bonds.

18 J. Matthes, A. Iara, B. Busch, op. cit.; J. Matthes, A. Iara, op. cit.

19 M. Demary, J. Matthes: Can a Reliable Framework for Sovereign-Backed Securities Be Established?, in: Intereconomics, Vol. 52, No. 5, 2017, pp. 308-314.

20 In addition, the introduction of a formal, stepwise sovereign debt restructuring mechanism could be set up at the ESM (see J. Matthes, T. Schuster: Zum Umgang der Europäischen Währungsunion mit reformunwilligen Eurostaaten, in: ifo Schnelldienst, Vol. 68, No. 4, 2015, pp. 13-18) or at a European Monetary Fund (see J. Matthes: Risks and ..., op. cit.) in the longer term. However, no automatism should be used to trigger a sovereign default of major relevance. Moreover, even without such a mechanism, a sovereign restructuring can be handled, however, with more uncertainty than necessary.

Strengthening crisis resilience

Even in the moderately pessimistic scenario (including a slight recession), this study does not find that the public debts become unsustainable. More severe economic crises could change this. Therefore, a primary objective of economic policy must be to reduce the probability and the extent of future crises and to deal effectively with such situations.

To *mitigate the crisis potential*, macroeconomic overheating must be prevented. In particular, the extremely low interest rate environment must not lead to another massive financial cycle and credit boom. The single financial supervision of the ECB, new macroprudential instruments (particularly borrower-based instruments) and the macroeconomic surveillance within the European Semester provide important tools that must be actively used.²¹

The crisis mechanisms ESM, Outright Monetary Transactions and TARGET2 are, in principle, powerful tools to prevent self-fulfilling prophecies in nervous financial markets. To achieve this objective, these mechanisms have to be credible. However, the ESM's loan capacity is not sufficient for large and heavily indebted euro area countries (and the ECB has nearly reached the limits of its maximum sovereign bond exposure). One option would be to massively increase the ESM's capacity. However, this step risks overburdening the highly creditworthy euro area countries as well, and thus endangering the whole ESM concept.

Therefore, a proposal originally made by the Deutsche Bundesbank should be implemented: if a state enters into an ESM programme, the maturities of all government bonds should be automatically extended by the duration of the ESM programme.²² Importantly, while the repayment would be postponed, the interest payments would continue. This reform would block ESM loans from being used to finance the repayment of expiring government bonds instead of financing only current expenditure. The proposal would also prevent private investors from reducing their exposure during the programme. With this reform, the existing loan capacity of the ESM would be sufficient for a large and heavily indebted state, as has been shown for Italy, for example.²³

To prevent the maturity extension from leading to a credit event in financial markets, collective action clauses should

be introduced so that bondholders could decide on this step with a qualified majority. Still, the extension could lead to a certain level of unrest in the financial markets, including in the immediate period before the ESM is called in. However, the maturity extension would only marginally reduce the present value of the bonds concerned, as interest payments would continue and the nominal amount of the debt would not be reduced. Thus, the irritation to the financial markets would likely be only temporary. Nevertheless, financial market participants should be consulted before such a reform is introduced. The author holds this option to be preferable in order to ensure a safer EMU because, in the case of an impending sovereign debt crisis of a large country, the deficient credibility of the rescue mechanisms could have more detrimental effects on sovereign spreads than a maturity extension.

In case of recessions in individual members of a monetary union (that cannot use currency depreciation or monetary policy), mainly national *adjustments* are needed.²⁴ Wage and price flexibilities have been improved by structural reforms in the formerly stressed euro area countries.²⁵ On top of that, national fiscal policy is mainly responsible for cushioning a recession by letting automatic stabilisers work, which are much stronger in the euro area than in the US. In order for the fiscal deficit not to become excessive, sufficient fiscal space must be built up in good times to be available when a recession hits. The medium-term requirement of the European fiscal rules aims to ensure that fiscal space is available when it is needed.

However, the euro area needs precautions in case financial markets do not allow highly indebted states that comply with the fiscal rules to let automatic stabilisers do their work, because financial investors might demand excessive risk premiums. For such a case, it is necessary to consider introducing a new type of “ESM light” programme as a new risk-sharing mechanism. It should allow for a limited increase in fiscal deficits that is needed to use automatic stabilisers. As usual, it should consist of limited but long-term ESM loans at low interest rates. The long maturity would lead to an erosion of the real value due to inflation over time that would be borne by the financial markets. However, only countries that follow the European fiscal rules should have access. This would increase the incentive to comply with these rules. It is also conceivable to use *ex post* conditionality by calling for limited structural reforms, e.g. by prescribing the implementation of a defined number of concrete country-specific recommendations within the framework of the European Semester.

21 For more details, see J. Matthes, A. Iara, B. Berthold, op. cit.; J. Matthes, A. Iara, op. cit.

22 Deutsche Bundesbank: Proposal for an effective private sector involvement for bond issues from mid-2013 onwards, in: Monthly Report, Vol. 63, August, 2011, pp. 68-71.

23 J. Matthes: Risks and opportunities of establishing a European Monetary Fund based on the European Stability Mechanism, IW policy paper No. 8, 2017.

24 For an extended analysis and for arguments that the euro area properties in terms of optimal currency area theory functions better than often suggested, see J. Matthes, A. Iara, B. Busch, op. cit.; and J. Matthes, A. Iara, op. cit.

25 J. Matthes: An assessment ..., op. cit.