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Research Euroland

Debt on a dangerous path

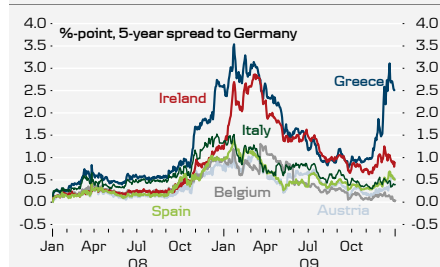
- Euro area debt levels are rising faster than at any peacetime rate in the aftermath of the ongoing crisis. Further, as a result of the crisis government bond yield spreads between different euro area member states have exploded.
- We take a closer look at debt sustainability for various euro area member states. The approach chosen is to make mechanical projections until 2020 for each country and analyse the projected path for future debt levels.
- We conclude that debt levels will rise to unsustainable levels for some countries if member states do not tighten their primary balances significantly.
- It is not too late to avoid default. If plans put forward by Greece and Ireland are strictly adhered to, it will stop the debt-to-GDP ratio from skyrocketing. Significant spread tightening in addition to fiscal tightening could stabilize the debt ratio.
- The Maastricht Treaty's debt-to-GDP criterion of 60% seems unrealistic within the next 10 years for many EMU countries. Even a 100% debt-to-GDP ratio in 10 years time could prove difficult for several countries.

Euro area debt levels start on a dangerous path

Euro area debt levels are rising with faster than at any peacetime rate in the aftermath of the ongoing financial and economic crisis. Firstly, the severity of the ongoing economic crisis overall has resulted in a sharp drop in government income and an increase in expenditure (particularly rising unemployment costs). In addition to the automatic stabilisers significant fiscal easing has also occurred. Secondly, GDP growth has been negative both in real and nominal terms for most euro area countries. Finally, *direct fiscal costs* are resulting from government support for the financial sector. Direct fiscal costs can be partly recovered after the crisis. In Sweden, initial direct fiscal costs were nearly fully recovered following the crisis of the early 1990s. However, this is not the norm. A study of 49 financial crises undertaken by the European Commission estimates average direct fiscal costs of a banking crisis after recovery (i.e. in the first five years) at 13% of GDP but only 5.6% of GDP for crises within the euro area. The table below shows latest budget deficits, debt-to-GDP levels and forecasts for coming years provided by the European Commission (Autumn forecast 2009).

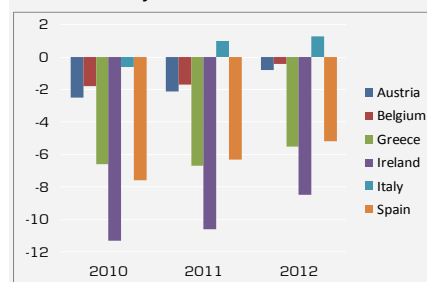
Before the crisis, most 10y government bonds traded within 10-20bp spread to Bunds (even tighter for most countries). Currently, 10y spreads to Germany are 15-35bp for AAA-countries (Finland, France, the Netherlands and Austria), 35-80bp for Belgium, Portugal, Spain and Italy, around 150bp for Ireland and more than 230bp for Greece.

Chart 1. The market is concerned



Source: Reuters Ecowin

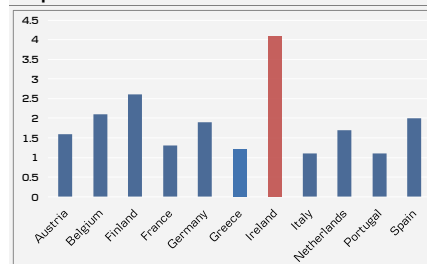
Chart 2. ...For a reason (Primary deficit in % of GDP)



Source: European Commission and own calculations

Note: Primary deficit excludes interest payments

Chart 3. Increase in age-related expenditures in 2020



Source: European Commission

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Table 1. Budget balance and government debt (% of GDP), EC autumn'09 forecast

	Budget balance, % of GDP					Government debt, % of GDP					Change '07-'11
	2007	2008	2009F	2010F	2011F	2007	2008	2009F	2010F	2011F	
Austria	-0.4	-0.4	-4.3	-5.5	-5.3	59.5	62.6	69.1	73.9	77	17.5
Belgium	-0.3	-1.2	-5.9	-5.8	-5.8	84.2	89.8	97.2	101.2	104	19.8
Finland	5.3	4.5	-2.8	-4.5	-4.3	35.2	34.1	41.3	47.4	52.7	17.5
France	-2.7	-3.4	-7.0	-7.0	-6.5	63.8	67.4	76.1	82.5	87.6	23.8
Germany	-0.2	-0.1	-3.4	-5.0	-4.6	65	65.9	73.1	76.7	79.7	14.7
Greece	-3.5	-7.7	-12.5	-12.2	-12.8	95.6	99.2	112.6	124.9	135.4	39.8
Ireland	0.2	-6.3	-12.5	-14.7	-14.7	25.1	44.1	65.8	82.9	96.2	71.1
Italy	-1.6	-2.7	-5.3	-5.3	-5.1	103.5	105.8	114.6	116.7	117.8	14.3
Netherlands	0.3	0.7	-4.7	-6.1	-5.6	45.5	58.2	59.8	65.6	69.7	24.2
Portugal	-2.6	-2.7	-8.0	-8.0	-8.7	63.6	66.3	77.4	84.6	91.1	27.5
Spain	2.2	-4.1	-11.2	-10.1	-9.3	36.1	39.7	54.3	66.3	74	37.9

Source: Danske Markets, European Commission autumn'09 forecast, Note: Red color indicates that values are in breach of criteria's from the Maastricht treaty.

Rising funding costs for some euro area member states will make a recovery to more sustainable debt levels harder. Last but not least, the severity of the crisis has probably lowered the potential for future growth for many euro area member states. Consequently, we believe it will be difficult for countries to just “grow” out of their high debt burden.

The mathematics of government debt ratios

The increase in a country's debt ratio is provided by the following formula:

$$\frac{D_t}{Y_t} - \frac{D_{t-1}}{Y_{t-1}} = \frac{PD_t}{Y_t} + \left(\frac{D_{t-1}}{Y_{t-1}} * \frac{i_t - y_t}{1 + y_t} \right) + \frac{SF_t}{Y_t}$$

where D is the total debt level, Y is nominal GDP, PD is the primary deficit, i is the average (nominal) interest paid on government debt, y is the nominal GDP growth rate and SF is the stock-flow adjustment.¹ The stock-flow adjustment includes losses caused by guaranties for banks and income from the recovery of direct fiscal costs after the crisis.

The term in parentheses is often referred to as the “snow-ball” effect on debt, i.e. the self-reinforcing effect of debt accumulation (or decumulation) arising from the spread between the interest rate paid on public debt and the nominal growth rate of the national economy. Therefore, if the average interest rate paid on existing public debt is higher than the nominal GDP growth rate the term will cause government debt ratios to trend upwards even if both the primary balance and stock-flow adjustment is zero.

We assume that the stock-flow adjustment is zero. For a country to keep its debt-to-GDP ratio constant the following relationship then needs to hold:

$$\frac{PD_t}{D_{t-1}} = y_t - i_t$$

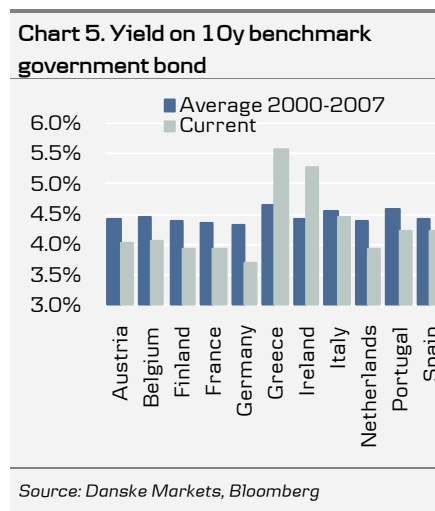
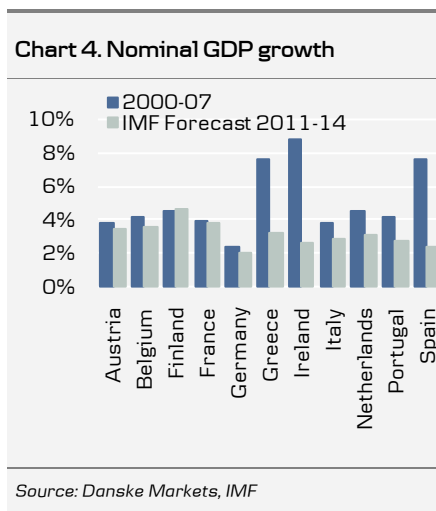
Therefore, high nominal GDP growth and low interest rates on sovereign debt allow a country a larger deficit-to-debt multiple without increasing the debt-to-GDP ratio. A country with nominal growth lower than the interest rate level will on the other hand have to run primary surpluses in order to keep the debt-to-GDP ratio steady.

¹ The stock-flow adjustment (or debt-deficit adjustment) ensures consistency between net borrowing and the variation in the stock of gross debt. It includes the accumulation of financial assets, changes in the value of foreign currency debt and remaining statistical adjustments.

Problem of self-reinforcing debt accumulation

EMU members were blessed with relatively high growth rates and a relatively low funding cost on their debt in the years leading up to the financial crisis. Further, the interest rate differential between EMU member states were subdued and almost non-existent. Today, however, the situation is completely different with interest rate differentials that have soared in the wake of the financial crisis and potential growth rates that are likely to be lower than in pre-crisis years. In particular, countries such as Ireland, Greece and Spain that enjoyed very high growth rates in the pre-crisis years have seen (or will see) a decline in potential growth capacity and a solid widening of funding costs relative to other EMU member states. Consequently, these countries will have a hard time letting future growth “deflate” their debt. Instead they have to take the hard road and embark on substantial fiscal tightening. But there is no easy solution because if fiscal policy is tightened too much future growth potential may be reduced. Therefore, there is a delicate balance between tightening too much or too little with governments needing to keep a close eye on this factor in coming years.

To illustrate this point note the two figures below. The chart to the left shows the average nominal growth rate between 2000-2007 and IMF staff projections for the average nominal growth rate for 2011-2014. The right chart shows the average nominal yield-to-maturity of the benchmark 10 year government bond between 2000-2007 and the current rate.



The charts reveal two important things. Firstly, projected growth rates are lower than actual growth in the years before the crisis. In particular, Greece, Ireland and Spain which have enjoyed high growth rates for over a decade are likely to face economic hangovers in coming years. Further, those countries with the biggest debt problems (Ireland and Greece) will face significantly higher funding costs than other EMU countries. Consequently, we see no “easy” solution in identifying their path towards more sustainable debt ratios other than huge government spending cuts etc.

Analysing sovereign debt sustainability

Based on the mathematics of debt ratios and assumptions on funding costs, primary deficits, nominal GDP growth etc. we are able to make mechanical projections of future debt levels. Those assumptions are as follows:

For 2010 and 2011 we expect countries to tighten fiscal policy in line with expectations put forward in the European Commission’s Autumn forecast. We assume the primary deficit returns to its cyclically adjusted level in 2012 and that it increases from 2013 to 2020 reflecting the increase in ageing-related expenditure as foreseen by the European Commission in its European Economic Forecast, Autumn 2009.

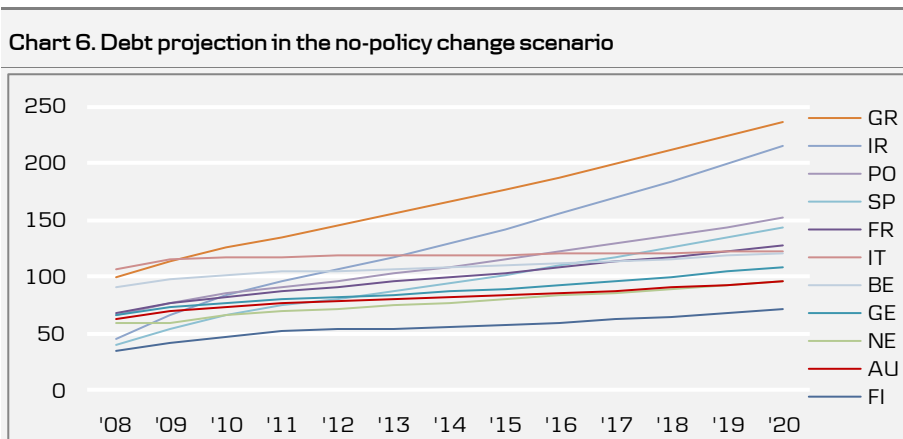
We use the IMF WEO autumn forecast for nominal GDP growth rates to 2014 while for 2015-2020 we use 2014 growth rates. Interest rates for Germany are based on forward rates for 5 year bonds which serve as a proxy for the average funding cost. From 2013 we assume that Germany pays 4.25% as an average funding cost. We apply 5y government bond spreads vs. German Bunds from 16 December 2009 to calculate funding costs for other countries. The yield spread is kept constant over the entire projection period.

These mechanical projections are obviously not what will actually happen. As debt increases it will probably influence the political will to combat further debt increases and this will affect both the size of the primary deficit and the government bond spread. Direct fiscal costs recovered after the crisis may also help reduce debt. In the following analysis we conduct the following exercises:

1. Mechanical debt projection based on no policy change
2. Fiscal consolidation needed to reach a debt-to-GDP ratio of 60% by 2020
3. Fiscal consolidation needed to reach a debt-to-GDP ratio of 100% by 2020
4. Fiscal consolidation needed to reach a constant debt-to-GDP ratio by 2020
5. Debt projection based on fiscal tightening projected by selected governments
6. Debt projection in a scenario with rising interest rates and/or low growth

Mechanical debt projection based on no policy change towards 2020

The outcome of our main scenario with mechanical debt projection based on a no-change policy is frightening (see Annex). Greek debt is ballooning and will hit 238% of GDP in 2020. In Ireland the situation is not much better with debt increasing faster than in Greece and set to reach 220% of GDP in 2020. This is partly the result of a more substantive increase in age-related expenditure albeit from a lower level. More positively, Italy's debt as a proportion of GDP will not increase much over the next decade according to mechanical projections. This is because exceptionally Italy stands has a cyclically adjusted primary surplus and has the smallest increase in age-related expenditure of all countries. Italy has a substantial debt, but has not used fiscal stimulus to combat the current crisis.



Source: Danske Markets

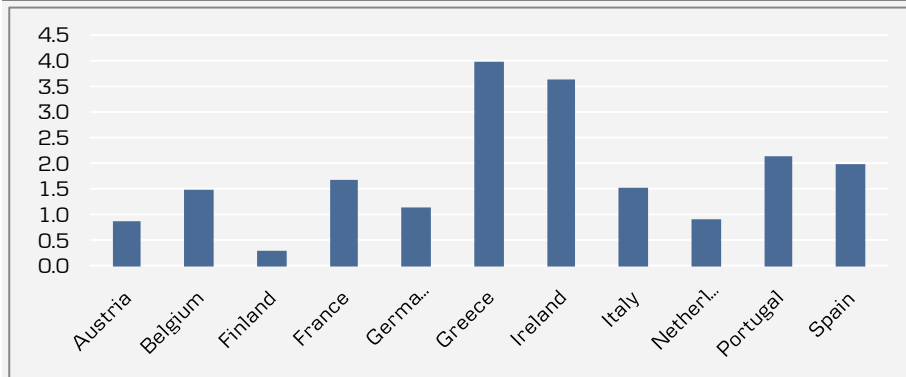
This scenario with no policy change provides a simple yet illustrative framework that shows that for most EMU countries solid fiscal consolidation is needed to prevent government debt ratios becoming unsustainable. While debt projection is based on a static assumption of future growth, interest rates etc. obviously these assumptions could (and probably will) prove to be wrong. However, this exercise is a valid starting point for other more sophisticated debt projections we present below.

Further, as regards Ireland and Greece (clearly the two countries worst off in this exercise) their respective governments *are already* taking steps to address government debt. To us, it seems as if the political will in Ireland to counter these developments is substantial and as such we are in fact more worried about developments in Greece with its historically lacklustre track record on public finances.

Fiscal consolidation needed to reach a debt-to-GDP ratio of 60% by 2020

Instead of applying the assumption of no-change which in all fairness appears improbable for most countries, we now analyze how much fiscal consolidation each country needs in order to achieve a debt-to-GDP ratio of 60% by 2020. The earlier fiscal tightening takes place the less tightening will be needed to achieve this ambitious goal. Euro-area finance ministers have already agreed to start tightening fiscal policy in 2011 at the latest, assuming the recovery stays on track. We assume that additional fiscal tightening takes place uniformly between 2011 and 2015. The chart below shows annual tightening of primary deficits needed from 2011 to 2015 in order to reach a 60% debt-to-GDP ratio by 2020.

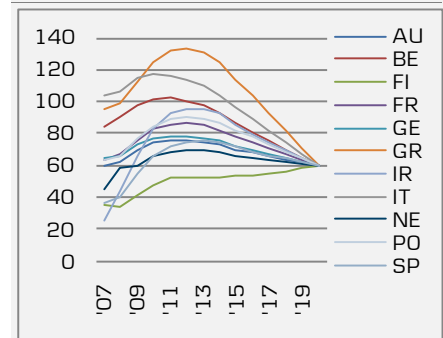
Chart 8. Annual tightening of primary deficit needed from 2011 to 2015 to reach 60% debt-to-GDP ratio by 2020



Source: Danske Markets

Greece will then have to tighten its fiscal policy by 4% of GDP each year. This is a very difficult task. Our mechanical projections do not take into account the fact that such tightening would receive support from a decline in sovereign spreads nor that it would negatively impact growth. Selling public assets and recovering direct fiscal costs from the banking crisis can also help to bring down debt. Still, the message is fairly clear. We are currently in a situation where we can say that Greece is unlikely to fulfil the Stability and Growth pact's criteria requiring a debt-to-GDP ratio below 60% within a decade.

Chart 7. Is this possible? Debt in % of GDP



Source: Danske Markets

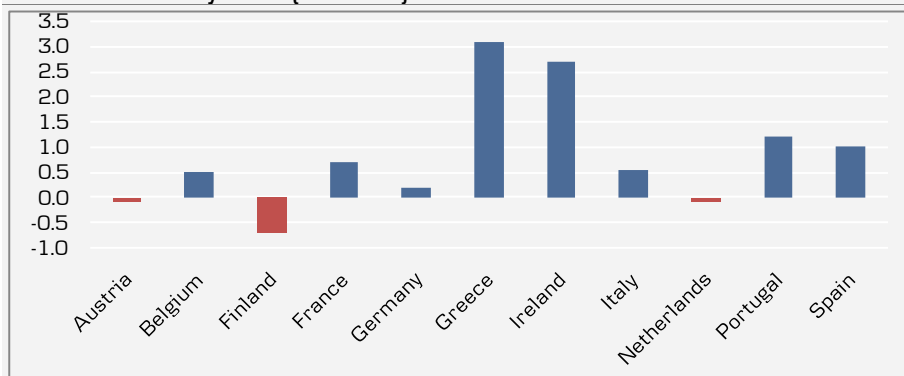
The likelihood that Ireland will achieve this goal is somewhat higher. The starting point for Ireland is better than Greece with a debt-to-GDP significantly lower. Despite a strong political will, it will be difficult to achieve extra tightening of the primary deficit by 3.6% of GDP annually for five consecutive years as is needed. While we expect support from spread tightening, this may not be enough. To achieve a 60% debt-to-GDP ratio by 2020 will probably require growth higher than the 3.0%-3.5% nominal increase we assume based on the IMF WEO forecast. Further, Spain and Portugal, also countries with current large structural imbalances, also appear to face difficulties meeting the 60% criterion. For other countries the task is more realistic (see chart) albeit still a tough goal to achieve.

Obviously, several things can turn out better than projected in the baseline scenario. If growth increases faster and the average funding cost declines then the debt burden will be reduced more rapidly (see also later scenarios) and the 60% goal become more feasible.

Fiscal consolidation needed to achieve a debt-to-GDP ratio of 100% by 2020

Achieving a 100% debt-to-GDP ratio is probably more realistic. The chart below shows the annual tightening necessary between 2011 and 2015 to ensure a 100% debt-to-GDP multiple by 2020. However, for Greece and Ireland even achieving a 100% debt-to-GDP ratio by 2020 will be challenging based on the assumptions outlined above.

Chart 9. Annual tightening of primary deficit needed from 2011 to 2015 to reach 100% debt level by 2020 [% of GDP]

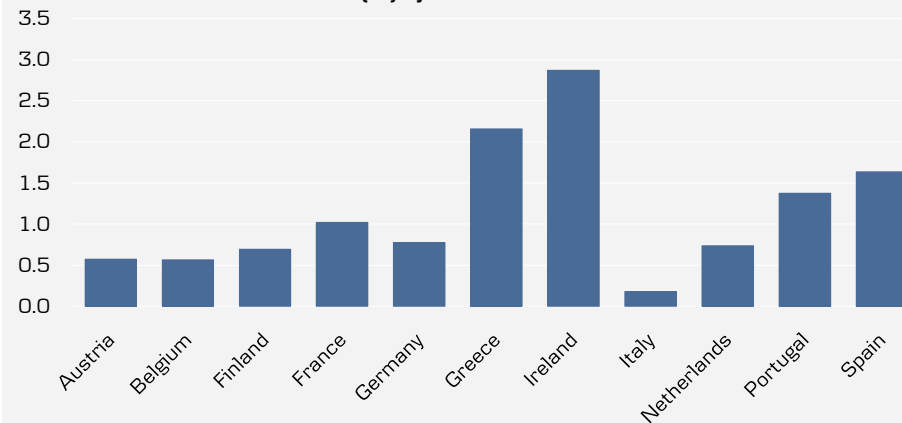


Source: Danske Markets

Fiscal consolidation needed to stabilize the debt-to-GDP ratio by 2020

An alternative goal is to simply aim for a stable debt-to-GDP ratio by 2020, i.e. to stop the “snow-ball effect” from rolling. For countries with large cyclically adjusted deficits and increasing ageing-related expenditure this is a demanding task, particularly for Ireland. Large current and temporary investments in infrastructure and present relatively low current age-related expenditure make debt stabilization a more realistic task for Ireland than headline figures indicate. Note that stabilization would take place at quite different debt-to-GDP levels. For example, whereas Ireland would have a debt-to-GDP ratio of 93% in 2020 Greece would be boxing with a stable debt-to-GDP ratio of 141%.

Chart 10. Annual tightening of primary deficit needed between 2011-2015 to reach a stable debt-to-GDP ratio (%) by 2020



Source: Danske Markets

The Irish stability program

The debt projections above are purely mechanical and based on assumptions regarding future growth and funding costs, rising age-related expenditure and the structural primary deficit. These assumptions are fairly static and could easily prove incorrect. In this section we examine the Irish government's latest update of Ireland's Stability Programme which expands on the government's medium term strategy for economic recovery and budgetary consolidation.² The main objectives of the Irish government's medium term strategy are to assist economic growth through a restoration of competitiveness, prevent general government debt rising to unsustainable levels and restore expenditure and taxation to more sustainable levels.

In Ireland's Stability Programme the government states that the general government balance is now estimated at a negative 11.7% of GDP for 2009. Further, the 2010 budget deficit is estimated at a negative 11.6% of GDP. One of the fiscal objectives set out in the supplementary budget in April was certainly to stabilise the deficit at its 2009 level. Further consolidation efforts will be pursued in subsequent years to reduce the general government deficit to below 3% of GDP by end 2014. However, at this stage it is thought likely that the scale of these further adjustments will not be as large as had been previously thought.

The table below presents the general government balance and prospective debt ratio based on the budget plan and assumptions from Ireland's Stability Programme.

Table 2. Ireland's Stability Programme December 2009

% of GDP	2008	2009	2010	2011	2012	2013	2014
Gross debt	44.1	64.5	77.9	82.9	83.9	83.3	80.8
General government balance	-7.2	-11.7	-11.6	-10.0	-7.2	-4.9	-2.9
Primary Balance	-6.1	-9.6	-8.8	-6.6	-3.4	-1.1	1.0
Structural primary balance	-7.1	-7.2	-6.5	-5.1	-3.0	-1.3	0.4
Nominal GD	-4.2	-4.6	-1.5	4.1	5.2	5.1	4.8

Source: Ireland's Stability Programme, EC autumn forecast

² Ireland's Stability Programme could be found [here](#).

The projected budgetary consolidation in the Irish Stability Programme clearly puts the government debt ratio on a totally different path than that in the European Commission’s forecast and the mechanical projections we have made above. The chart in the margin shows the government debt prediction in the Irish Stability Programme and the no-change policy scenario from above (using the European Commission’s autumn forecast for 2009-2011). The tightening of the primary balance is significant with around 2-3% of GDP between 2011 and 2014. Further, growth and funding cost assumptions are brighter than those we use. In particular, the nominal growth forecast is around 2%-points higher than the IMF forecast we employ. Consequently, the Irish economy will to a larger extent “grow out” of its debt problems according to the Stability Programme than based on our own mechanical projection.

Whether the predictions in Ireland’s Stability Programme are more likely to occur than those in the EC autumn report depends to some extent on the determination of the Irish government to tackle its debt problems. So far, promises made by the Irish government have been fulfilled. In this respect we are more positive on the future development of the Irish debt ratio compared to Greece, for example.

Below, in the section *Interest rate and growth matters* we stress assumptions on funding costs and nominal growth. But first, we take a closer look at the Greek government’s plan to reduce debt and the current soaring budget deficit.

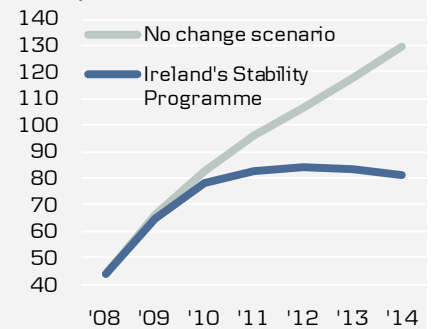
The Greek program

The Greek government has vowed to narrow the general government deficit by almost 4 %-points to 9.1% of GDP next year, and subsequently to the stability and growth pact fiscal deficit limit of 3% of GDP by 2013. Greek households appear reluctant to make any financial sacrifices so it may prove politically difficult for the government to proceed with such ambitious plans.

We have not yet received many details on how the government intends to cut the deficit. The Greek prime minister has announced that measures include a 10% cut in social security spending next year, the introduction of a capital gains tax and a substantial 90% tax on private bankers’ bonuses. He has also vowed to fight corruption and tax evasion, which he and many others regard as Greece’s biggest problems. In addition the government plans to reduce the government debt by selling real estate assets. A formal plan for debt reduction with more details must be presented to the European Commission by 15 January.

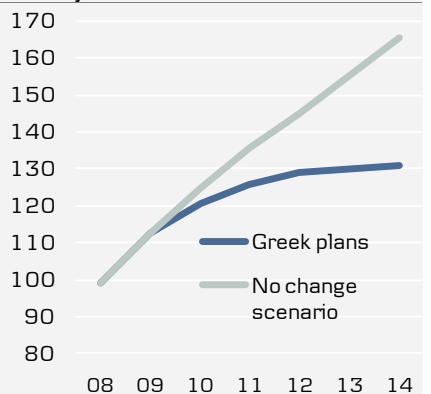
In order to fulfill the government’s intentions the primary deficit will need to be tightened by around 10% of GDP by 2013. The primary deficit will then be in surplus from 2012, peaking at around 3% of GDP in 2013. Nevertheless, this is still insufficient to prevent the debt-to GDP ratio from increasing. In this scenario the debt ratio will reach 140% of GDP in 2020, i.e. a much more manageable level than 238% in the baseline (no-policy change) scenario. This example also shows the magnitude of Greece’s debt problem. Even a 3% surplus on the primary balance will not be enough to prevent the debt ratio from rising in the forecast by the Greek government, a clear illustration of the fact that the current situation is close to becoming unsustainable.

Chart 11. Ireland government debt (% of GDP)



Source: EC autumn forecast, Ireland's Stability Programme, Danske Markets

Chart 12. Greek government debt (% of GDP)



Source: EC autumn forecast, Danske Markets

Table 3. Greek intentions, December 2009

% of GDP	2008	2009	2010	2011	2012	2013	2014
Gross debt	99.2	112.6	120.7	125.8	128.8	129.9	130.8
General government balance		-13.7	-9.1	-7.2	-5.1	-3.0	-3.2
Primary Balance		-3.2	-7.7	-3.0	-1.1	0.9	2.8

Source: EC autumn forecast, Greek government plans and Danske Markets

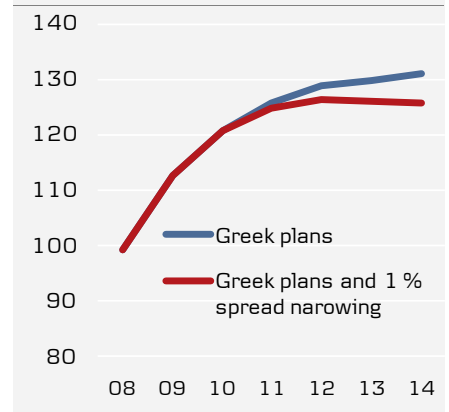
Note: Danske Market's estimates in italic.

If the Greek government manages to show determination and deliver results the government bond spread will probably narrow significantly. Apparently, some spread widening in GGBs in November and December reflected disbelief in both the determination and the ability of the Greek government to overcome the current debt crisis. When the budget deficit turned out to be twice as big as expected all fiscal credibility was lost. A narrowing of the government spread by around 140 basis-points from 2011 in addition to the government's ambitious fiscal tightening agenda would be sufficient for Greek government debt to stabilize at around 121% of GDP in 2020. We therefore think it premature to conclude that Greece is heading for default. Certainly, the government will have to take tough choices and regain credibility, but it is clearly not too late to avoid a default.

Interest rates and growth matter

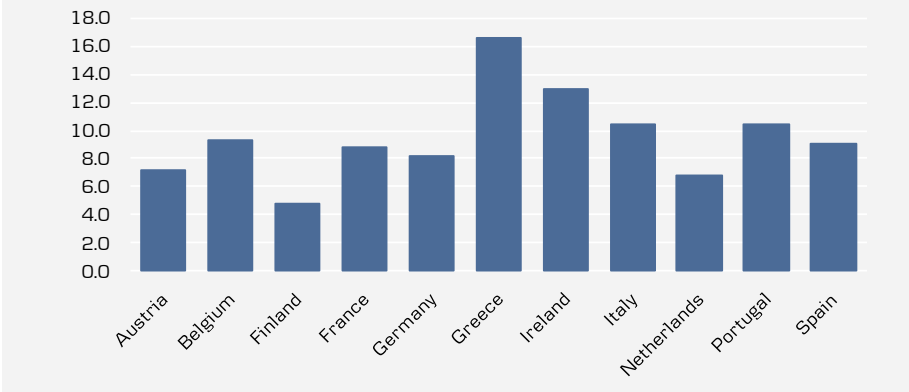
In this our final scenario we consider the impact of lower interest rates or higher nominal growth. As already shown in the case of Greece it matters a lot. Lower nominal rates and/or higher nominal growth can stop the "snowball effect". As is clearly apparent from the equation on page two it is the difference between the two that is significant. The impact of a 1% decline in nominal interest rates and a 1% increase in nominal growth rates is roughly the same. If rates decrease by 1% from 2010 the resulting debt-to-GDP ratio will be 5-17% lower in 2020 than in the main scenario.

Chart 13. Greek government debt (% of GDP)



Source: Danske Markets

Chart 14. Impact of a 1%-point decrease in average funding cost from 2010 on debt in 2020



Source: Danske Markets

The impact of lower rates is obviously biggest for countries with large debt. Consequently, the interest rate-nominal GDP growth differential is more important for Greece than Ireland at current debt levels. The interest rate reduction is insufficient to stabilize the debt-to-GDP ratio for any country. But combined with ambitious fiscal tightening it could make a huge difference.

Conclusion

These are challenging times for public finances across Europe. Reducing debt to the Stability and Growth pact's upper limit of 60% of GDP will not happen any time soon for

most euro area member states. Indeed, even 100% of GDP appears an immense task for several countries.

The situation is most dire in Greece and Ireland, which are to be found in the fast track lane for default in our mechanical “no change scenario”. However, it is still not too late to avoid default. If the plans put forward by Greece and Ireland are strictly adhered to, it would stop the debt-to-GDP ratio from skyrocketing. Significant spread tightening on top of ambitious fiscal tightening could even prove sufficient to stabilize the debt ratio. The big question is therefore whether there is sufficient political will to take tough decisions. We are confident that Ireland is already doing so. However, only time will tell whether Greece is ready to act.

Appendix

No change scenario

Debt % of GDP	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Austria	59.5	62.6	69.1	73.9	77.0	78.4	80.1	81.5	83.4	85.6	87.9	90.5	93.2	96
Belgium	84.2	89.8	97.2	101.2	104.0	105.0	106.4	107.6	109.2	111.0	113.0	115.4	118.0	120
Finland	35.2	34.1	41.3	47.4	52.7	53.4	54.4	55.5	57.3	59.5	61.9	64.7	67.9	71
France	63.8	67.4	76.1	82.5	87.6	91.2	95.1	99.1	103.4	107.9	112.6	117.5	122.5	127
Germany	65.0	65.9	73.1	76.7	79.7	81.7	84.2	86.8	89.7	92.8	96.3	100.1	104.2	108
Greece	95.6	99.2	112.6	124.9	135.4	145.1	155.2	165.5	176.3	187.5	199.2	211.4	224.1	237
Ireland	25.1	44.1	65.8	82.9	96.2	106.5	117.5	129.2	141.7	155.0	169.0	183.8	199.4	215
Italy	103.5	105.8	114.6	116.7	117.8	118.3	118.9	119.1	119.3	119.7	120.2	120.9	121.7	122
Netherlands	45.5	58.2	59.8	65.6	69.7	72.1	74.8	77.2	79.9	82.7	85.8	89.1	92.7	96
Portugal	63.6	66.3	77.4	84.6	91.1	96.6	102.5	108.7	115.2	121.9	128.9	136.2	143.7	151
Spain	36.1	39.7	54.3	66.3	74.0	80.8	87.8	94.6	101.8	109.4	117.2	125.5	134.1	143

Debt-to-GDP ratio at 60% of GDP in 2020

Debt % of GDP	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Austria	59.5	62.6	69.1	73.9	76.1	75.7	74.7	72.6	70.0	67.7	65.5	63.5	61.6	60.0
Belgium	84.2	89.8	97.2	101.2	102.5	100.5	97.3	92.5	86.5	80.7	75.2	69.9	64.8	60.0
Finland	35.2	34.1	41.3	47.4	52.4	52.5	52.7	52.7	53.1	53.8	54.9	56.3	58.0	60.0
France	63.8	67.4	76.1	82.5	85.9	86.2	85.1	82.3	78.2	74.3	70.5	66.8	63.3	60.0
Germany	65.0	65.9	73.1	76.7	78.6	78.3	77.3	75.2	72.2	69.4	66.7	64.3	62.1	60.0
Greece	95.6	99.2	112.6	124.9	131.4	133.0	130.8	124.5	114.1	103.6	93.0	82.1	71.2	60.0
Ireland	25.1	44.1	65.8	82.9	92.6	95.6	95.4	92.2	85.8	79.9	74.3	69.1	64.3	60.0
Italy	103.5	105.8	114.6	116.7	116.3	113.7	109.8	103.8	96.3	88.9	81.6	74.3	67.1	60.0
Netherlands	45.5	58.2	59.8	65.6	68.8	69.4	69.3	68.2	66.3	64.6	63.1	61.9	60.8	60.0
Portugal	63.6	66.3	77.4	84.6	89.0	90.1	89.5	87.0	82.3	77.7	73.2	68.8	64.3	60.0
Spain	36.1	39.7	54.3	66.3	72.0	74.8	75.7	74.5	71.6	68.8	66.3	64.0	61.9	60.0

Debt-to-GDP ratio at 100% of GDP in 2020

Debt % of GDP	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Austria	59.5	62.6	69.1	73.9	77.1	78.7	80.6	82.4	84.8	87.4	90.2	93.3	96.5	100.0
Belgium	84.2	89.8	97.2	101.2	103.5	103.4	103.3	102.5	101.4	100.6	100.1	99.8	99.8	100.0
Finland	35.2	34.1	41.3	47.4	53.4	55.5	58.7	62.7	68.1	73.8	79.9	86.3	93.0	100.0
France	63.8	67.4	76.1	82.5	86.9	89.1	91.0	92.2	93.1	94.2	95.4	96.7	98.3	100.0
Germany	65.0	65.9	73.1	76.7	79.5	81.1	82.9	84.7	86.6	88.7	91.1	93.8	96.7	100.0
Greece	95.6	99.2	112.6	124.9	132.3	135.7	136.3	133.8	128.2	122.6	116.9	111.3	105.7	100.0
Ireland	25.1	44.1	65.8	82.9	93.5	98.4	101.1	101.7	100.2	99.1	98.6	98.6	99.0	100.0
Italy	103.5	105.8	114.6	116.7	117.3	116.6	115.6	113.5	111.0	108.6	106.2	104.0	102.0	100.0
Netherlands	45.5	58.2	59.8	65.6	69.8	72.4	75.3	78.1	81.2	84.5	88.1	91.8	95.8	100.0
Portugal	63.6	66.3	77.4	84.6	89.9	92.9	95.2	96.5	96.7	97.1	97.6	98.2	99.0	100.0
Spain	36.1	39.7	54.3	66.3	73.0	77.7	81.5	84.2	86.1	88.3	90.8	93.6	96.7	100.0

Stable debt-to-GDP ratio in 2020

Debt % of GDP	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Austria	59.5	62.6	69.1	73.9	76.4	76.7	76.6	75.8	74.8	74.0	73.4	73.0	72.8	72.8
Belgium	84.2	89.8	97.2	101.2	103.4	103.3	103.0	102.0	100.7	99.6	98.8	98.3	98.1	98.1
Finland	35.2	34.1	41.3	47.4	52.0	51.3	50.2	48.6	47.0	45.7	44.7	44.1	43.8	43.8
France	63.8	67.4	76.1	82.5	86.6	88.1	89.0	88.9	88.1	87.4	87.0	86.6	86.5	86.5
Germany	65.0	65.9	73.1	76.7	78.9	79.4	79.5	78.9	77.8	76.8	76.2	75.7	75.5	75.5
Greece	95.6	99.2	112.6	124.9	133.2	138.6	142.0	143.3	142.6	142.0	141.6	141.3	141.2	141.2
Ireland	25.1	44.1	65.8	82.9	93.3	97.9	100.0	100.0	97.5	95.6	94.1	93.1	92.6	92.6
Italy	103.5	105.8	114.6	116.7	117.6	117.7	117.9	117.2	116.6	116.0	115.6	115.4	115.2	115.2
Netherlands	45.5	58.2	59.8	65.6	69.0	69.9	70.3	69.8	68.8	67.9	67.3	66.9	66.6	66.6
Portugal	63.6	66.3	77.4	84.6	89.7	92.4	94.2	94.8	94.1	93.6	93.2	92.9	92.8	92.8
Spain	36.1	39.7	54.3	66.3	72.4	75.8	77.8	78.0	76.8	75.8	75.1	74.6	74.4	74.4

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