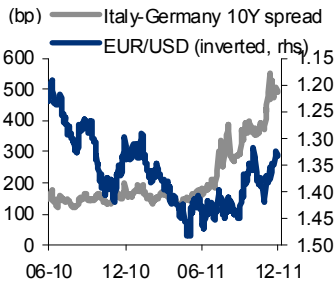


Global Economics

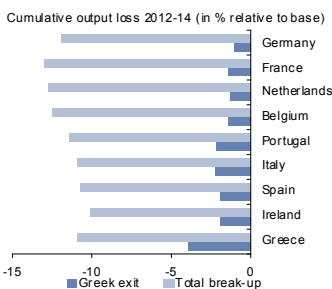
1 December 2011

Euro and Italy Bond Spread



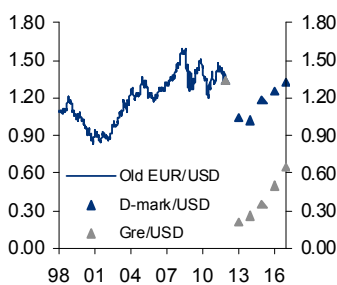
Source: EcoWin, ING

Output drop on EMU Break-up



Source: EcoWin, ING

New currencies would plunge



Source: EcoWin

EMU Break-up

Pay Now, Pay Later

Europe's monetary union (EMU) now faces make or break. Key aspects of the break-up scenario that we quantified in a report last year* are already being played out the financial markets. Amid political bickering and delay over the how to stem the Eurozone bond sell-off, the real economy is paying an increasingly heavy price. The paradox of Merkelism is that the core countries' attempts to limit their exposure are increasing it. But even as the cost of sustaining EMU in its current form mounts, our updated estimates presented here suggest that the impact of exits or break-up would be far costlier.

As the Eurozone stares recession in the face, the Eurozone's debt crisis is inflicting growing economic and political damage. Even past supporters of EMU are toying with the idea that the price of sustaining it in its current form may simply be too high. Governments in the periphery have all fallen as harsh fiscal austerity kicks in. Those in the core are in trouble too, as their electorates balk at the idea of having to dig in even more deeply into their pockets to pay to prevent EMU from falling apart.

Once again our purpose is not to assess the probability of EMU break-up, but its *impact*. Calibrating the impact remains challenging, but it is now essential to make informed investment decisions. We evaluate two boundary cases: a Greek exit and a complete break-up. Although there are many permutations in between, our results should give some indication of their potential impact as well.

Our revised estimates show even bigger damage on the Eurozone and global economy. In our complete EMU break up scenario, the cumulative loss of output in the Eurozone in the first two years is over 12%. This is substantially greater than the losses that followed the demise of Lehman Brothers in September 2008. The complexity of financial and trade inter-linkages are such that the short term consequences would be traumatic. In the first year, Eurozone GDP might fall by 9%. Indeed, these short-term losses would cause lasting damage to growth potential in subsequent years. Even by 2016, output in the Eurozone might be some 10% below where it would otherwise have been.

With their new currencies falling by 50% or more, the peripheral economies such as Spain and Portugal would see their inflation rates soar towards double-digits. Meanwhile, Germany and other core countries would suffer a deflationary shock. Indeed, with the US dollar surging on safe-haven flows to the equivalent of 0.85 EUR/USD, the US also suffers a bout of deflation.

Events of the past year have proved beyond doubt that the Eurozone is far from the textbook 'optimal currency area'. But this is an omelette that cannot be readily unscrambled. As a result, our base case remains that EMU will survive, courtesy of a 'grand bargain' that exchanges tighter fiscal discipline and economic reform for German support for ECB action to aid the funding of peripheral governments and banks and a commitment to launch a common Eurozone government bond. That would doubtless be greeted with relief by the markets. However, that relief could again prove to be short-lived. It might soon become clear that the thrust of Eurozone economic policy will remain austere and economic growth prospects subdued. Europe is already paying a price for the failure to quell doubts about the sustainability of EMU. It is likely continue to do so.

* see 'EMU Break-Up - Quantifying the Unthinkable' 7 July 2010

Mark Cliffe

Global Head of Financial Markets
Research
London +44 20 7767 6283
mark.cliffe@uk.ing.com

Global Economics and Strategy Team

Contents

Quantifying the (no longer) unthinkable	3
<hr/>	
The Paradox of Merkelism – Risky Caution	4
<hr/>	
A Not-so Grand Bargain?	6
<hr/>	
Quantifying Break-up	8
<hr/>	
Conclusion – Pay Now, Pay Later	23
<hr/>	
Appendix - Scenario Tables	25
EMU Greek exit scenario	26
EMU Greek exit scenario	27
EMU Greek exit scenario	28
EMU Greek exit scenario	29
EMU Greek exit scenario	30
EMU Greek exit scenario	31
EMU Complete euro break-up.....	32
EMU Complete euro break-up.....	33
EMU Complete euro break-up.....	34
EMU Complete euro break up.....	35
EMU Complete euro break up.....	36
EMU Complete euro break up.....	37
<hr/>	
Disclosures Appendix	39
<hr/>	

Quantifying the (no longer) unthinkable

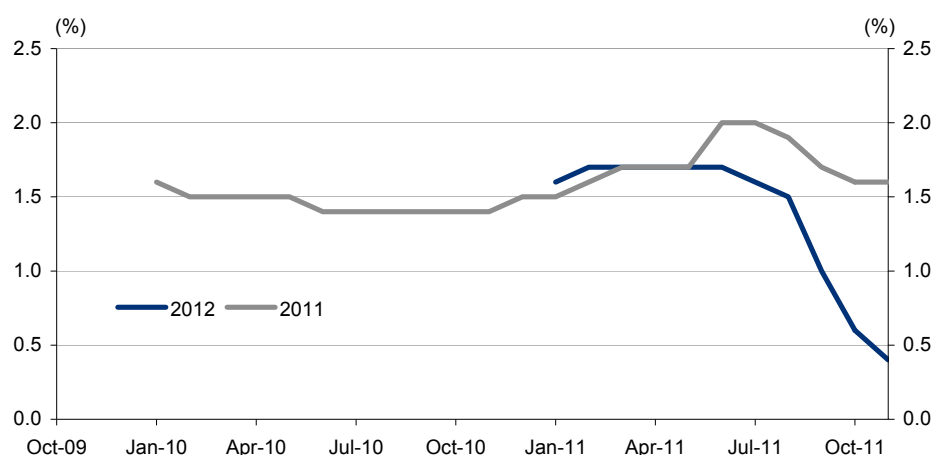
The sovereign debt crisis has cast further doubt on the sustainability of EMU

In July of last year, we published a report entitled 'EMU Break-up – Quantifying the Unthinkable' (7 July 2010). Its purpose was not to discuss the probability of Economic and Monetary Union exits or break-up, but rather to quantify the impact. Its central conclusion was that complete break-up would lead to a crisis that would dwarf the post-Lehman Brothers collapse in 2008-09. Uniquely, this report has become progressively more popular as time has passed. As the state of the Eurozone economy and financial markets have deteriorated, the possibility that EMU might not survive in its current form has become a major preoccupation for households, businesses and investors. Although the situation remains in a state of flux, we now feel obliged to update our estimates.

The costs of preserving EMU are mounting, increasing the risk of fracture

Our purpose in this report is again not to add to the voluminous debate about whether or not one or more countries will leave EMU. But the very fact that the Eurozone financial markets have been tumbling and the economies stalling undoubtedly adds to the risk of fracture. As the costs of preserving EMU intact become increasingly evident, so the political commitment to do so is eroded.

Fig 1 Consensus forecasts for Eurozone real GDP growth in 2011 and 2012



Source: EcoWin

Yet the costs of break-up have risen too

Yet while the costs of keeping EMU intact have risen, so have the costs of not doing so. Our latest estimates of the impact of EMU break-up, presented later in this report, show again how the huge transitional costs would create a huge headwind for the benefits put forward by proponents of break up. We have extended our projections out to 2016, and we conclude that the initial output loss is still far from being recouped by then.

The output loss would worsen fiscal solvency, not least of the core countries

In addition, we have also added an examination of the Eurozone members' public debt dynamics. Based on our projections, the huge output loss that occurs initially actually worsens the debt dynamics. Strikingly, the solvency of the core countries is particularly challenged, partly because they lack the inflationary surge which helps to reduce the debt burden of the peripheral countries.

Other estimates are even gloomier...

Other analysts and commentators have recently produced more apocalyptic estimates of the economic damage of EMU break-up; we have seen estimates of the output loss running up to an eye-popping 50%! Yet although it is possible to make more pessimistic assumptions than we have – after all, there is little past experience to go on – our results continue to beg the question of why policymakers would even dream of EMU exit being a viable policy option.

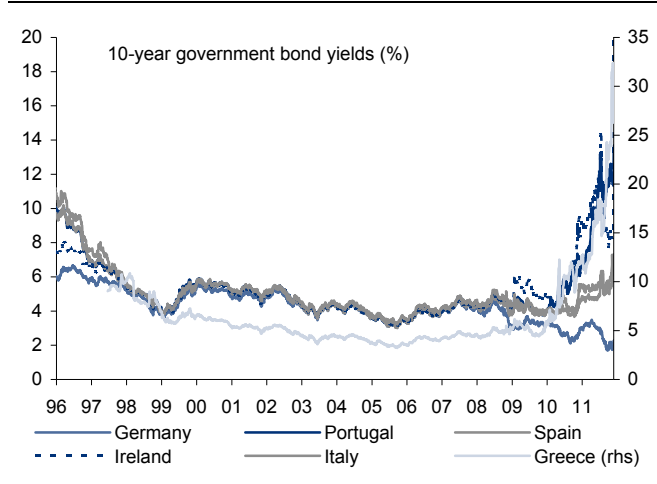
...so why are politicians even thinking of EMU exits?

Exit is being seen as the 'nuclear option' to coax other EMU members to change their behaviour

This is where politics trump economics. EMU exit is being floated as a 'nuclear option' in an effort to coax fellow Eurozone members to take the necessary action to prevent it. Thus the core countries want to scare the weaker peripheral members into accepting the

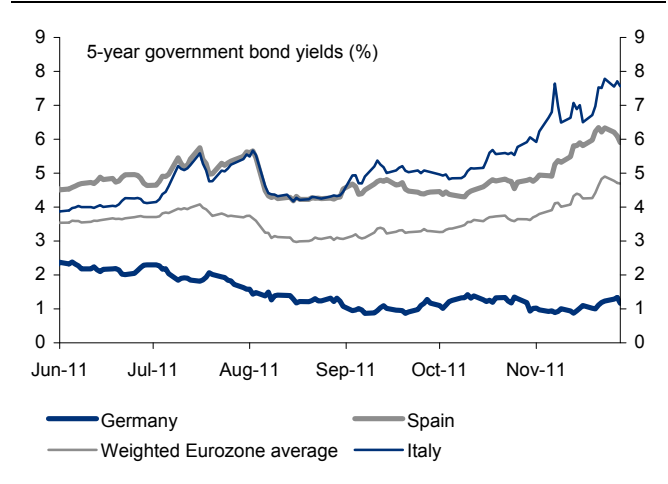
need for growth fiscal restraint or risk being cast into exile with hostile financial markets. Meanwhile, the periphery want to scare the core into providing them with more financial support or risk them exiting, depreciating and defaulting at the expense of the core's competitiveness and wealth.

Fig 2 Eurozone government bond yields diverge again...



Source: ecowin

Fig 3 ... Italy is now the big problem



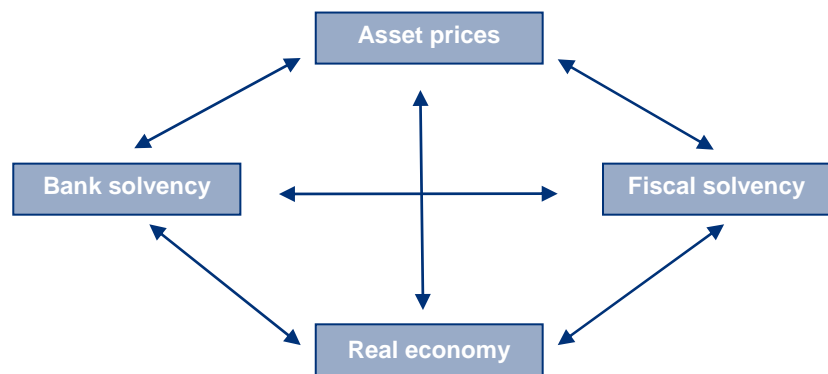
Source: ecowin

BUT this game of 'mutually assured destruction' is scaring the financial markets

...with are entering a 'deleveraging doom loop'

Unfortunately, this game of mutually assured destruction is unnerving the financial markets, driving up government bond yields and depressing asset prices. The longer it goes on, the more damage that it is inflicting on the solvency of the Eurozone's periphery, and more recently, even the core members. Moreover, the pervasive uncertainty about the outcome is undermining business and consumer confidence, economic activity and bank solvency. This in turn is feeding back into weaker credit growth, completing a deleveraging doom loop (see Figure 4).

Fig 4 Deleveraging Doom Loop



Source: ING

The Paradox of Merkelism – Risky Caution

Markets accuse politicians of doing "too little too late"

Amid the rising sense of panic in the financial markets, there is frustration at the hesitant response of policy-makers in the core countries, led by Germany. Although German Chancellor Angela Merkel continues to proclaim "if the euro fails, then Europe fails", she remains reluctant to sanction the dramatic fiscal and monetary measures that many see as essential to prevent EMU fracturing. The general perception of the financial markets has been that Eurozone policymakers' actions have been "too little, too late".

Germany and the core countries are reluctant to commit more resources

The key to this has been the reluctance of Germany and the core countries to commit more resources. In part, this reflects the political challenge of persuading their electorates

of the need to support their peripheral brethren, who are widely portrayed as having brought their debt problems upon themselves.

Box 1: Merkelism – Short Term Pain for Long Term Gain?

- No Quick Fixes –tolerate short-term pain for long term gain
- Fiscal discipline is paramount to the euro’s survival – fiscal restraint will boost confidence and growth (“expansionary fiscal contraction”)
- Adjustment should come from the debtors – the answer is not looser fiscal policy (“more debt”) from the core countries
- No ‘transfer union’ – transfers from the richer core to the poorer periphery should be limited
- No monetisation of public debt – this would undermine fiscal discipline and risk higher inflation
- Inflation must be contained – the ECB’s price stability mandate is sacrosanct
- Disdain for financial markets – speculation is unwarranted and temporary
- Pursuit of competitiveness and export-led growth - “We’re all Germans now”

Source: ING

Merkelism has economic as well as political roots...

...the crisis is seen as largely due to fiscal ill-discipline

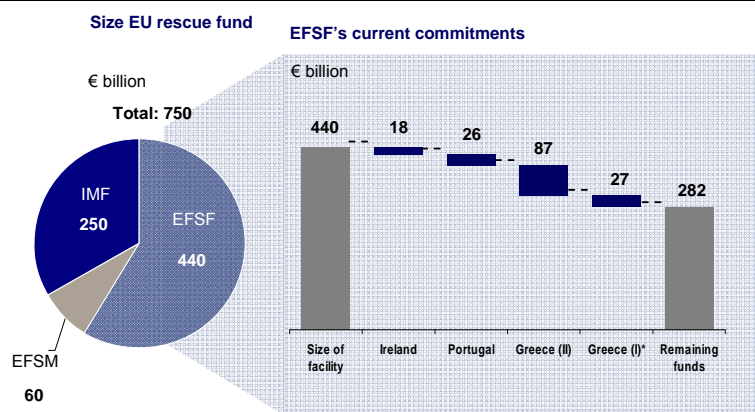
However, Merkelism is not just about the awkward politics of burden-sharing. It also reflects deep-seated German convictions about the economics of the sovereign debt crisis. It is viewed as largely a result of fiscal ill-discipline on the part of the peripheral economies¹. The Germanic prescription is therefore fiscal restraint. Coupled with this is Germany’s long-standing antipathy towards inflation, rooted in its past episodes of hyperinflation. As a result, Germany and its core partners have consistently chosen the most austere policy options:

- 1) **reluctance to increase the bail-out packages** for Greece and the other peripherals. This culminated in the agreement to try to extend the firepower of the European Financial Stability Fund (EFSF) not with bigger commitments from the member governments but with additional borrowing.
- 2) **an insistence on tough fiscal austerity measures** in the peripheral economies. The notion that this ought to be offset by fiscal relaxation in the core countries is rejected.
- 3) **a resistance to the notion of the becoming a ‘transfer union’**, in which tax revenues flow from the richer core to the poorer periphery.
- 4) **a rejection of the idea of a common Eurozone government bond**, which would entail members becoming liable for each other’s debts.
- 5) **insistence on private sector involvement (PSI)** in the restructuring of Greek public debt. The proposal that private holdings should be written down by 50% (while leaving official holdings unimpaired) damaged investors’ perceptions of all Eurozone sovereign debt.
- 6) **objection to sanction the European Central Bank (ECB) acting as ‘lender of last resort’** to Eurozone governments. The fear is that such ‘debt monetisation’ would both create moral hazard by weakening the incentives for governments taking the necessary actions to reduce their debts and pose long-term inflation risks. The Bundesbank, supporting this position, has argued that the ECB’s securities market programme (SMP) to buy peripheral government debt should be limited and temporary.

¹ This is despite clear evidence to the contrary. With the obvious exception of Greece, fiscal ill-discipline was not a major contributor to the crisis, which stemmed more from private borrowing (notably on real estate in the cases of Spain and Ireland). The role of core countries’ lending is also glossed over in the Germanic narrative.

7) **support for the ECB sticking to its anti-inflation mandate**, which was manifest in its support for its decision to raise its refinancing rate from 1.0% to 1.5% earlier this year. With headline inflation remaining embarrassingly high at 3% the ECB only grudgingly agreed to cut interest rates to 1.25% at its meeting on 3 November, despite manifest signs of a sharp slowdown in economic growth.

Fig 5 The European Financial Stability Fund's firepower is limited



* Assumes that the EFSF will take over the remaining Greece bilateral loan disbursements after September

Note: In case of a Greek selective default, the EFSF might have to provide an extra €35bn in collateral enhancement for the ECB to back Greek bonds used by Greek banks in ECB liquidity operations

Source: ING

Far from instilling confidence, fiscal austerity has hurt growth and fiscal solvency

With the core creditors in the driving seat, the net effect of this has been a powerfully contractionary fiscal and monetary stance across that has pushed the Eurozone into the deleveraging doom loop described earlier (Fig 4). Far from instilling confidence, fiscal austerity has led to a downturn in growth, now in the core as well as the periphery, raising further doubts about fiscal solvency and so driving up bond yields further.

German policy-makers are seek growth through structural reform...

This is not to say that German policy-makers are unaware of the need for economic growth. Aside from the so far abortive attempts to restore confidence through fiscal austerity, they point to the need for supply-side and governance reforms. On this score, there is near-universal agreement. The failure of peripheral economies both to liberalise their labour and product markets and to tackle government inefficiency and corruption has certainly weighed on their competitiveness and performance.

...but this is not a quick fix

But, as Angela Merkel herself is prone to say, supply-side reforms are not a quick fix. Implementation is politically challenging, and the benefits take years to come through. Unfortunately, with austerity biting harder and faster than reform, the financial markets are not prepared to wait for years.

Paradoxically attempts to limit the core's exposure have raised it

So the paradox of Merkelism is that the core countries' attempts to limit their exposure have served to increase it. A cautious step-by-step approach to fiscal integration designed to put the euro on a surer footing has so far served to undermine it. With the peripherals increasingly confronted with the prospect of long term austerity, exiting EMU becomes correspondingly more appealing.

A Not-so Grand Bargain?

The media is talking up a 'Grand Bargain' to save the euro

EMU is approaching make or break. Despite Merkel's rejection of 'quick fixes', the mounting panic about EMU's sustainability suggests that she will have to soften her hard-line stance if she is to avoid the euro's failure. Already the media are talking up a 'Grand Bargain' to save the euro. This would essentially involve Germany securing durable commitments to fiscal discipline in return for its support:

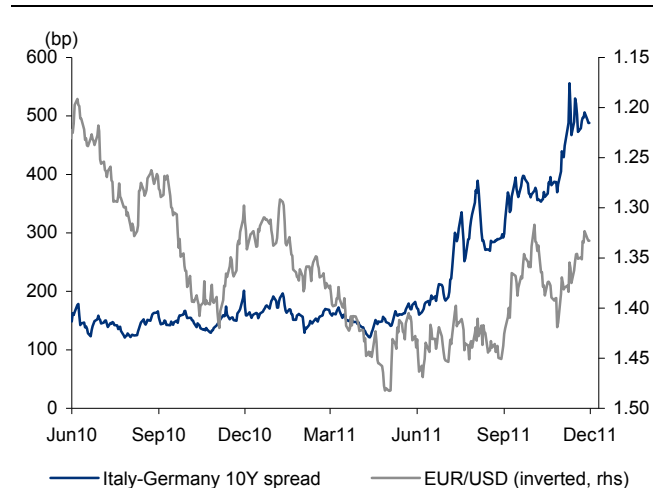
- ECB to provide more support...**
- 1) **more aggressive ECB action to support peripheral government bond markets** and banks. This could take the form of announcing a cap on peripheral government yields. Given sufficiently dramatic purchases early on, it could establish the credibility of its commitment, which might then limit the need for future purchases. Alternatively, it could adopt a more general quantitative easing programme, avoiding targeting its purchases at particular peripherals to dodge accusations of debt monetisation.
- ...EFSF to be beefed up...**
- 2) **a credible plan to expand the European Financial Stability Fund (EFSF)**. The current thinking is to leverage the EFSF by using its funds to insure only the first 20-30% of losses on new Eurozone government bond issues, and supplement it with extra funds from external investors. So far there are doubts about whether the former would be enough or whether a formula can be found to achieve the latter. One new idea is to funnel ECB loans to the EFSF via the IMF. Support from China or external creditors would probably depend on other elements of the Grand Bargain being agreed.
- ...a common Eurozone bond...**
- 3) **a common Eurozone bond**, whereby governments agree joint and several liability for the debts. There are several variants of this idea, but since they would probably involve a Treaty change, this approach would take time to implement. That said, a clear timetable and commitment would help to calm the markets in the meantime.
- ...in return for tough fiscal rules**
- 4) **tough fiscal rules**, involving countries making commitments to discipline and accepting EU intrusion into fiscal policy. This would fall short of fiscal union, but would certainly involve some loss national sovereignty.
- Our base case relies on some form of this Grand Bargain**
- Such is the precarious state of EMU, our base case, in which it survives, relies on some variant of this Grand Bargain being struck in the coming weeks. If so, there would undoubtedly be a dramatic relief rally in the financial markets. This would see Eurozone government bond yield spreads narrowing sharply and large rises in stock and corporate bond prices as well as the euro itself.
- BUT any relief may be short-lived**
- However, relief at a Grand Bargain might give way to the recognition that the reality is not so grand. The bargain would still have to be delivered. This would be tough in a background of weak economic growth. Moreover, it would have to be delivered by governments that have been severely battered by the crisis and their handling of it. Both President Sarkozy and Chancellor Merkel face challenging elections in 2012 and 2013 respectively, and the new governments in the periphery will be obliged to force through harsh fiscal medicine and economic reforms.
- Fiscal solvency would take years to restore...**
- The financial markets might soon begin to doubt whether the Grand Bargain would in fact be delivered. In the meantime, fiscal solvency would take years to restore. True, the periphery would benefit from lower government bond yields, but core market yields would be likely to rise as safe-haven trades reversed and the implications of a common bond sank in.
- ...since this is a recipe for slow growth**
- In sum, the events of the past year have inflicted lasting damage on the prospects for the Eurozone. This is true even if, as assume in our base case, policymakers take action to keep it intact. The core countries may succeed in avoiding explicit fiscal transfers to the periphery. However, moves towards a common bond will involve an implicit fiscal transfer, helping the periphery's interest burden at the expense of their own. Moreover, further defaults and sustained weak economic growth in the periphery will hold back their growth for years. Indeed, we expect them to underperform over the next five years. As a consequence, in our baseline forecasts for the Eurozone as a whole, we expect zero real GDP growth in 2012, followed by an average of only 1.6% in the period 2013-16.

Quantifying Break-up²

Deteriorating climate has tilted the odds against EMU's survival

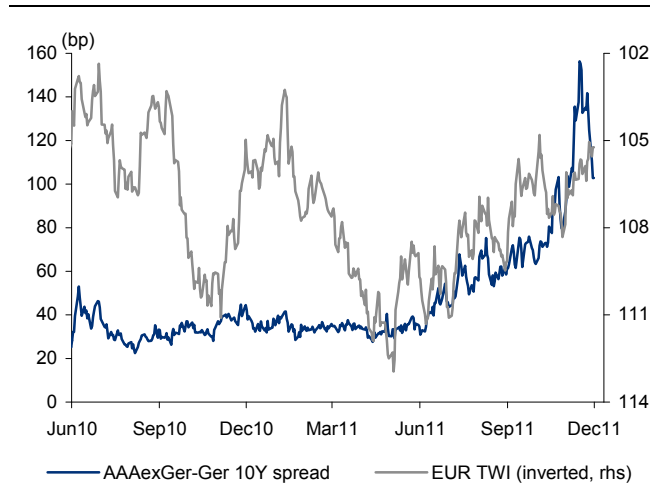
EMU in its current form is under imminent threat. The rapid deterioration in the economic and political climate in the Eurozone, along with the difficulties in reaching agreement on what needs to be done to preserve it, have dramatically raised the odds on possible exits or even the complete break-up of EMU. The cost-benefit calculus has clearly shifted: if the price of continued EMU membership is many years austerity, the transitional costs of leaving might be worth paying if the attendant currency depreciation offers a faster way of restoring price competitiveness, economic growth and fiscal solvency.

Fig 6 The euro is starting to respond



Source: EcoWin

Fig 7 ... as Italy runs into trouble



Source: EcoWin

BUT our focus is on the impact NOT the probability...

However, our main purpose here is not to debate the **probability** of EMU break-up. As we have observed before, that is as much a political as an economic question. Readers will doubtless have their own views on whether the political will exists to make the undoubted sacrifices that will be required to keep EMU intact. Nevertheless, with the risk of some kind of a fracture rising, investors and businesses are now being forced to consider the possibility. To that end, our main purpose is therefore to attempt to **quantify the impact**. As any good scenario or credit analyst will tell you, the importance of an event depends not just on its likelihood, but also its impact.

Quantifying the unquantifiable?

That said, quantifying the impact is a massive challenge. Indeed, it could be said that we are moving from 'thinking the unthinkable' to 'quantifying the unquantifiable'. True, there is a case history of failed monetary unions to work from.

EMU is a monetary union like no other in its scale and ambition

But EMU is a monetary union like no other in terms of its scale and ambition. It has pulled together 17 nations, the world's largest trading bloc. It has done so without political or fiscal union, indeed, for some, its express aim was to push the members in that direction. Its designers hoped too that it would become a currency to rival the US dollar, a goal that it looked well on the way to achieving, at least until a few months ago.

Past break-ups probably don't give us much guidance

So while monetary unions have broken up before, the consequences of even a partial break-up of EMU would be unprecedented. Throw in heavy doses of political friction and recrimination, and it is easy to see that any quantification of the economic and financial market consequences is fraught with uncertainty. The margins of uncertainty around what follows are unavoidably huge.

² This is an updated and expanded version of part of our report 'EMU Break-up – Quantifying the Unthinkable' (7 July 2010) pages 5-15. As before, the estimates were developed by members of ING's Economics Department and Financial Markets Research team.

What's the story?**Who? When? How?****We outline two boundary cases****Timing at end-2011 is a simplifying assumption, NOT a forecast!****The mild option:****Greek exit****1. Setting the boundaries**

The first problem that we face in contemplating the possibility of existing members leaving EMU is to specify the story. Would just one member leave, a group, or would it break up completely? When would it happen? How would it happen? There are clearly a wide range of possible scenarios.

In order to cut through the innumerable possibilities, our economists and strategists³ have again focused on two boundary cases. The idea is simply to give to some sense of the range of possible economic and financial market impacts.

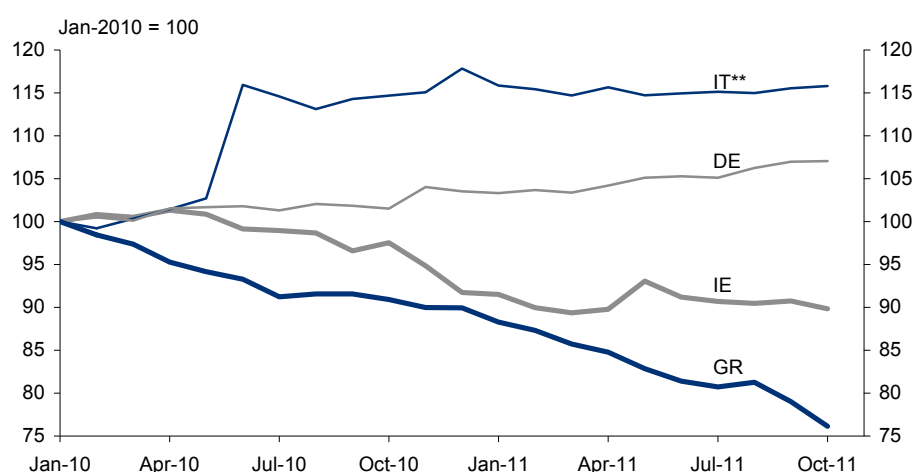
Further, we chose to assume that break-up would happen at the end of this year. This is not so much because we believe that this is the most likely scenario, but rather because this simplifies matters. In any case, since our main purpose is to examine what *difference* EMU exits would make, the precise timing does not make a material difference to our analysis. Within reasonable bounds, the resulting differences can be overlaid on alternative baseline forecasts⁴.

Our two boundary cases are as follows:

1. Scenario I: a 'stage-managed' exit of Greece

- At the mild end of the spectrum, the most plausible scenario is that Greece is the only country to exit the Eurozone.
- Greece is the most challenged from a solvency and a competitiveness perspective, and it is most observers' favourite candidate for leaving EMU.
- The modest size of the Greek economy means that its departure would be far less disruptive than if one of the bigger economies were to leave.
- Our assumption is that Greece's exit does not happen in a chaotic manner. The Eurozone and IMF would provide medium-term funding to ease the pain of Greece's exit.
- The Greek exit gives further impetus for reforms in other highly-indebted countries such as Italy, Spain and Portugal. Back-stop funding is put in place to limit contagion.

Fig 8 Bank deposits flee Greece



** Break in series in June 2010 due to inclusion of postal deposits

Source: EcoWin

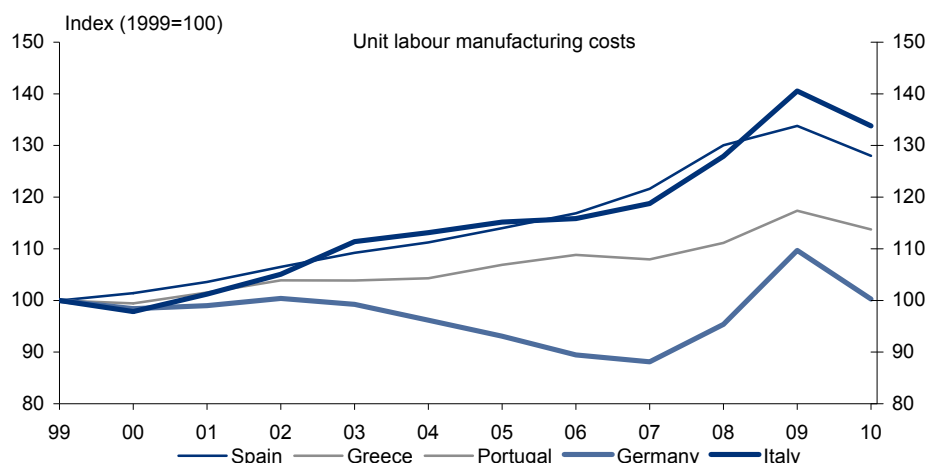
³ For a full team listing, see the back of the publication. Particular thanks to Peter Vanden Houde, Carsten Brzeski, Maarten Leen, Martin van Vliet, Teunis Brosens, Paolo Pizzoli, Padhraic Garvey, Alessandro Giansanti, Jeroen van den Broek, Chris Turner, Tom Levinson, James Knightley and Rob Carnell.

⁴ For more details on our Eurozone forecasts, please see Eurozone Economics Update: 3Q11

**The extreme option:
complete breakup****Intermediate permutations
can be inferred from our
results****Even without restructuring,
creditors would suffer FX
losses****2. Scenario II: a complete break up of the Eurozone**

- At the extreme end of the spectrum, Eurozone countries and the financial markets conclude that the monetary union has failed. Members decide to revert to national currencies and monetary policy.
- Clearly, there are many intermediate cases involving a variety of periphery or core countries leaving. However, in these cases, there would be protracted economic, political and financial tensions that would leave open the possibility of further departures or a complete break-up at a later date.
- The complete break-up scenario also has the analytical advantage of allowing us to specify where each member might stand in terms of the economic and market impact of their exit from EMU. Readers might want to use our results as a rough guide to the potential viability of intermediate scenarios involving either weaker or stronger members trying to stick together either with the euro or some new successor currency. For example, one might envisage a German-led core group wishing to persevere with the euro, or alternatively a 'two-tier' euro whereby the core group uses a 'strong euro' and the peripheral group a 'weak euro'.
- In our complete break-up scenario, governments decide to convert all assets and liabilities into their new national currencies. Capital controls are temporarily introduced in an effort to stem capital flight from the weaker members. New notes and coins are reintroduced as quickly as possible, but in the transition existing euro notes would likely be stamped to mark them as the new national currencies and strict legal tender limits would be put on coins.
- As a very extreme case, as we shall describe in the next section, the macroeconomic and financial market consequences of scenario II are a multiple of those of scenario I.
- EMU exit and reversion to national currencies does not directly improve fiscal solvency (see section 2c below). Indeed, we assume the conversion of all existing debt into local currencies in order to prevent an immediate deterioration in debt-to-GDP ratios. Debt restructuring in some highly-indebted countries would remain a key risk: the calculation is that currency depreciation would eventually help these countries 'grow out of their problems'. However, as we shall see, the initial impact on output is severely negative.
- Even in the absence of restructuring, foreign investors will still bear huge losses as a result of leavers' currencies depreciating and asset prices plummeting. Liquidity problems are addressed through quantitative easing, and IMF and EU support. Clearly, it is possible to conceive of even gloomier versions of this scenario in which such support is not forthcoming, causing even greater systemic dislocation.

Fig 9 Peripheral economies price competitiveness has worsened dramatically



Source: EcoWin

The margins for error are huge...

...but hopefully the broad orders of magnitude are plausible

Five blows to activity:

Logistical and legal problems would be severe

Capital flight and financial systematic distress

Plunging consumer and business confidence

2. Assessing the impact

For each scenario, we have assessed the potential impact on the economy and financial markets, both inside and outside the Eurozone. As noted earlier, the unprecedented nature of these scenarios means that the margins of error on our calibrations are necessarily wide; they involve a larger than usual element of art rather than science. Nevertheless, we believe that what follows gives some guidance of the broad orders of magnitude of the economic and market consequences that would ensue were our scenarios to play out.

The detailed results are contained at the end of this report. The following sections will briefly summarise the impact through to 2012 on:

- The real economy
- Inflation
- The financial sector
- Public finances
- Interest rates and government bonds
- Exchange rates
- Corporate bond spreads and ABS
- Real estate and stock market

2a. The real economy – a severe blow

Both scenarios would depress economy activity. There are several factors that would hurt economic activity:

- 1) Even with some advance planning, the logistical and legal problems of reintroducing national currencies, while transitional, would be severe and protracted.
- 2) Given the likelihood of sharp currency movements, capital flight and distress in the financial system would disrupt trade and investment. The dive in the global economy that followed the collapse of Lehman Brothers in September 2008 gives us a taste of how damaging this could be.
- 3) A plunge in business and consumer confidence would likely be accompanied by a renewed dive in asset prices inside and outside the Eurozone. Indeed, since it is

unlikely that EMU exit or break-up would be entirely unexpected, these effects might begin to build up in advance of the event itself.

Further fiscal tightening

4) The challenge of maintaining fiscal credibility and securing government funding would be intensified. This would call for yet more fiscal tightening measures, particularly for the weaker peripheral Eurozone countries.

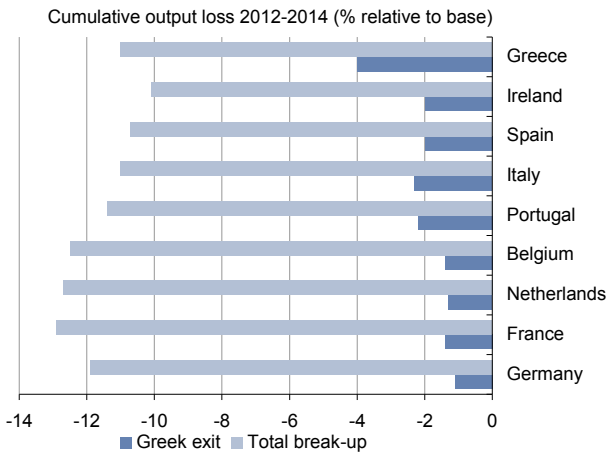
Non-Eurozone economies hit also by currency appreciation

5) While non-Eurozone economies would be spared the worst of the disruption of the creation of one or more new currencies, they would suffer more in one respect: their currencies would appreciate strongly, compounding the damage to their export growth.

Greek exit might slice 10½% off GDP in 2012

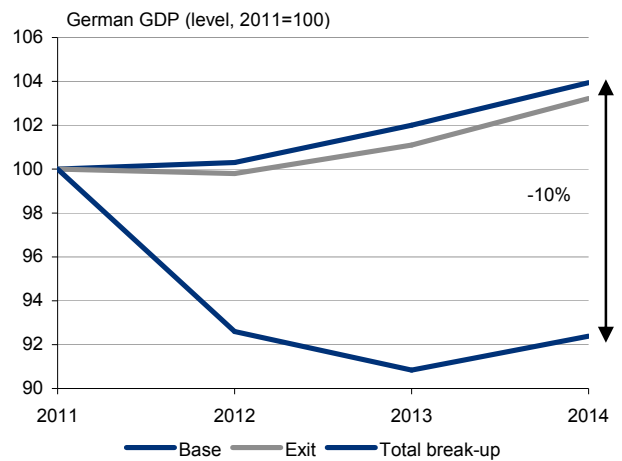
Although in scenario 1, Greek exit, the impact is clearly heaviest in Greece itself, there would be non-trivial effects on the rest of Europe. Greece suffers a deeper recession in 2012 than in our baseline, with GDP a 10½% lower. Other Eurozone countries suffer falls in output of up to 5% (see Figure 10).

Fig 10 Cumulative output loss of Eurozone countries



Source: ING

Fig 11 Impact on GDP exceeds that of the credit crisis



Source: ING

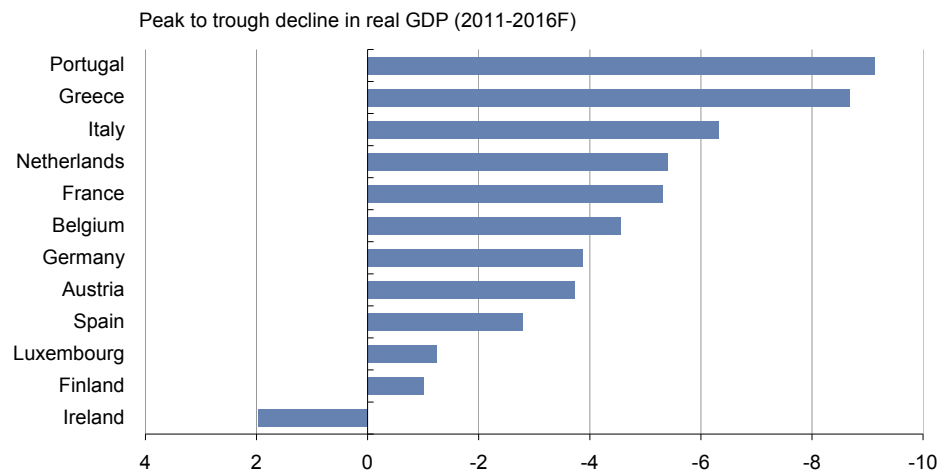
Break-up could depress GDP by between 7% and 13%

However, the broader impact under scenario II, the complete break-up of EMU, is much larger. In 2012 a deep recession across the Eurozone emerges, dragging down the global economy. In the Eurozone output falls range from -7% in Germany to -13% in Greece. Individual country experiences would vary depending upon their exposure to foreign trade and financial inter-linkages. The latter would result in large balance sheet as well as income shocks. The large drop in output, averaging 9% for the Eurozone as a whole, leads to sharp rises in unemployment, up to 13.2% of the labour force on average, compared with 10% in our baseline forecast.

Neighbours such as the UK would be hard hit, too

US could flirt with recession

Fig 12 Cumulative Loss of Output, 2011-16



Source: ING

The UK is heavily exposed, suffering a 5% drop in GDP in 2012...

...while some of the open and indebted CEE economies would suffer greatly too

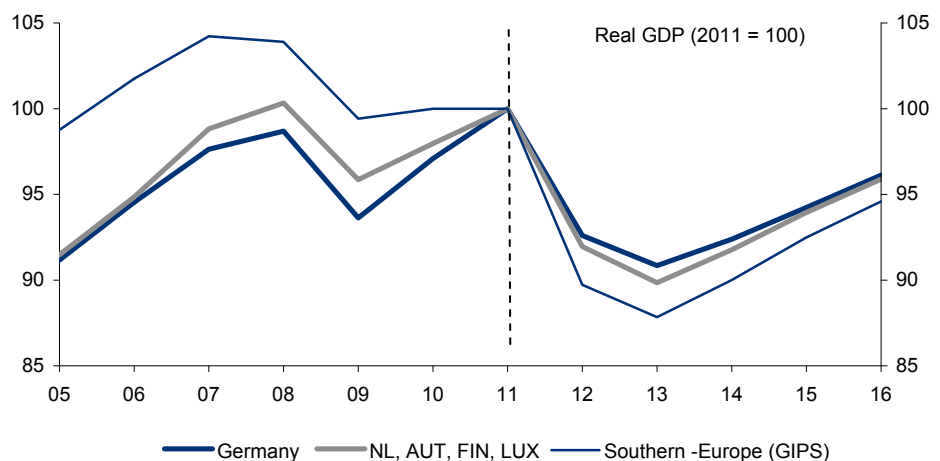
US would go suffer at least a mild recession...

...while Asian exporters would slow

Outside the Eurozone, the impact is particularly large in neighbouring European economies. The UK is heavily exposed both through trade and complex financial inter-linkages, suffering a 5% drop in GDP in 2012. Central and Eastern Europe (CEE) vulnerability comes through trade as well as “common creditor” links, hitting the countries with higher debt and current account deficits. Poland is less exposed than the Czech Republic, Slovakia, and Hungary, and also Romania and Bulgaria, with higher trade with the southern EMU states. For countries with large external debts, financing of “normal” economic activity and refinancing of past debt would initially be very difficult, forcing additional depreciation and demand slowdown. That said, recovery would generally come earlier than in the former Eurozone. Currency flexibility, combined with reasonably well anchored inflationary expectations in most new EU member states allows for a less disruptive adjustment of real exchange rates.

While the US would be less adversely affected, the combination of lower global growth and a strongly appreciating US dollar would send it into at least a mild recession in 2012. Similarly, Japan would experience an outright contraction given its trade links, although its financial exposure to the Eurozone is somewhat less than that of the US. China would experience slower growth too in the breakup scenario; real GDP growth of under 7% would be seen as a ‘growth recession’ by its standards.

Fig 13 Real GDP projections in breakup scenario



Source: EcoWin, ING

Europe would experience a substantial hangover in 2013

The dramatic drop in output in 2012 would also lead to a substantial hangover for the Eurozone in 2013. Not until 2014 would it see year-on-year growth returning to positive territory as the initial systemic disruption is resolved and exporters start to capitalise on a weaker exchange rate versus the rest the world.

Benefits to exports from weaker currencies may be muted

However, the benefits of the export impetus from weaker currencies are may be muted by the lasting damage done to global growth. This is where analogies with previous individual country experiences of currency depreciation fall down. For example, some have pointed to the example of Argentina in 2001, but in its case it benefited from a global recovery and a surge in commodity prices. Greece and the other Eurozone peripherals are unlikely to be so fortunate.

Eurozone output in 2016 might still be 4% below its 2011 level

Indeed, the shock to global activity in 2012-13 would create enormous political tensions. The EU's own internal market would be under severe strain and the rest of the world would not take kindly to the sharp depreciation in the euro in the midst of a new global recession. The risk of a global trade war, which extends the downturn, would be very real.

Even if protectionism were avoided, with fiscal solvency and financial systems still challenged (see below) the recovery through 2014-16 would be muted, leaving output still well below its 2011 level (see Figure 13).

Weaker leavers could see inflation hit double digits as their currencies plunge

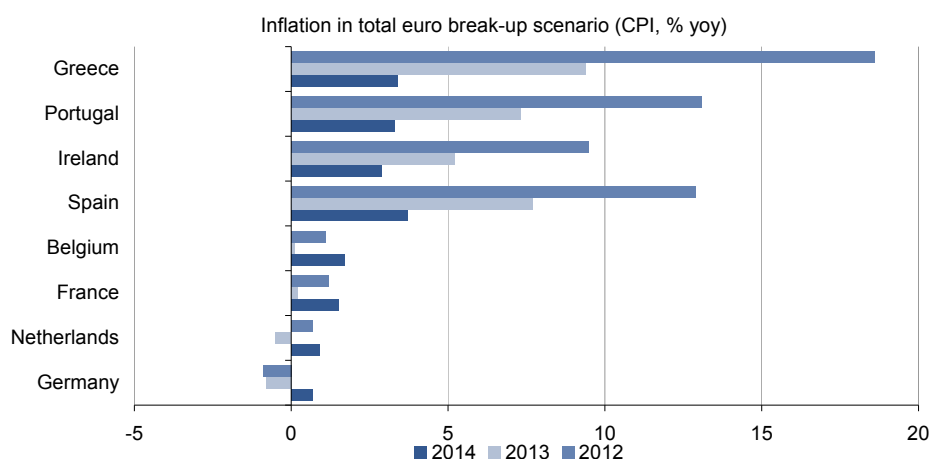
2b. Inflation – peripheral surge, core deflation

While the impact on activity would be negative across the board, the impact on inflation would be more varied (see Figure 14). In scenario I the drop in activity depresses inflation in general, apart from Greece where currency depreciation will push up inflation into double-digit numbers. In scenario II, the currency depreciation effect would extend to all the peripheral countries, in some cases pushing inflation rates to double digits.

Core Europe and the US have a deflationary shock

By contrast, the massive drop in activity might lead core European countries to suffer from deflation. A soaring US dollar would also impart a deflationary shock to the US economy. The sharp drop in global activity, coupled with a stronger US dollar would also prompt a sharp drop in commodity prices. In our break-up scenario, we assume that crude oil prices would fall to USD 55/bbl. This would serve to depress headline inflation worldwide.

Fig 14 Deflation for the core, Inflation for the periphery



Source: ING

The financial sector will suffer from plummeting asset prices

2c. Financial sector – fresh systemic distress

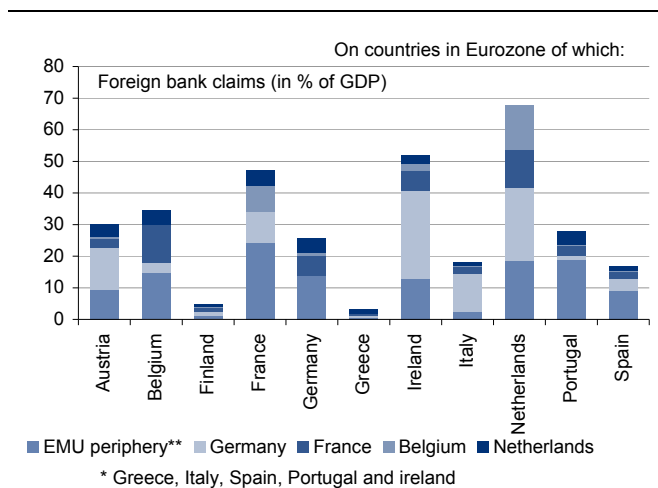
The financial sector suffers in both scenarios. In scenario I, the effects are clearly smaller, although the fact that a high proportion of Greek assets are held outside Greece spreads

the pain. In both scenarios, asset prices initially plummet (all the more so to the extent that the event is unexpected). Aside from stock prices, house prices will drop sharply in markets where mortgage debt was already high and rates go up relatively sharply. The plunge in economic activity and corporate profitability also leads to a sharp rise in defaults on corporate bonds and loans, compounding the problems for the banks and other financial institutions.

Financial institutions in surplus countries face a ‘triple whammy’ of losses

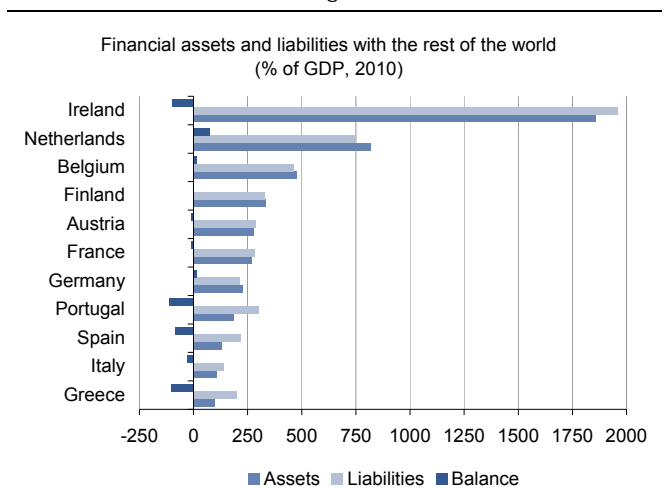
Banks, insurers, mutual funds and pension funds in surplus countries and/or countries with mature funded pension schemes, such as the Netherlands and the UK, face a triple whammy of collapsing stock prices, immediate currency losses, and increased default on their assets in deficit countries. In all, governments would find themselves having to bail out banks and insurers again, worsening already fragile government finances. Moreover, pension fund losses and sharply lower long term interest rates could lead to premium hikes and cuts in benefits, further depressing consumption.

Fig 15 Bank’s Eurozone exposure: core vs periphery



Source: BIS, ING calculations

Fig 16 High exposure to global assets for Ireland, the Netherlands and Belgium



Source: EcoWin

Asset and liability mismatches will also create problems for the corporate sector

Especially in the break-up scenario, severe balance sheet problems in the financial sector will arise depending on cross-border imbalances between assets and liabilities. Indeed, the same will apply to the corporate sector. In general the core countries are creditors to the peripheral countries, leaving them exposed to serious losses. Foreign direct investments by companies would be hit as well.

Peripheral economies will eventually benefit from depreciation, if credible policies are put in place

As a result, adjustment to a new equilibrium will be bumpier for core countries than for peripheral countries which will benefit from currency devaluation. However, the ability of peripheral countries to benefit from a break up will depend partly on their ability to convince market participants that they are implementing credible and sustainable policies to both contain inflation and restore fiscal solvency.

Peripheral governments would have to redenominate their debts into their new, weaker, currencies...

2d. Public Finances – no panacea for fiscal solvency

Exit or break-up would be no panacea for the Eurozone sovereign debt crisis. For the peripheral Eurozone economies that are struggling with their government debts, departure from EMU is not a straightforward solution. Indeed, in the short term, it would make matters worse. The immediate depreciation in the new domestic currency would increase the cost of servicing their euro-denominated debts. Even if, as we believe most likely, they chose to address this by re-denominating these debts into their new currency, their solvency would be challenged initially by higher interest rates and higher primary deficits. The calculation is that currency depreciation would in the longer term fuel

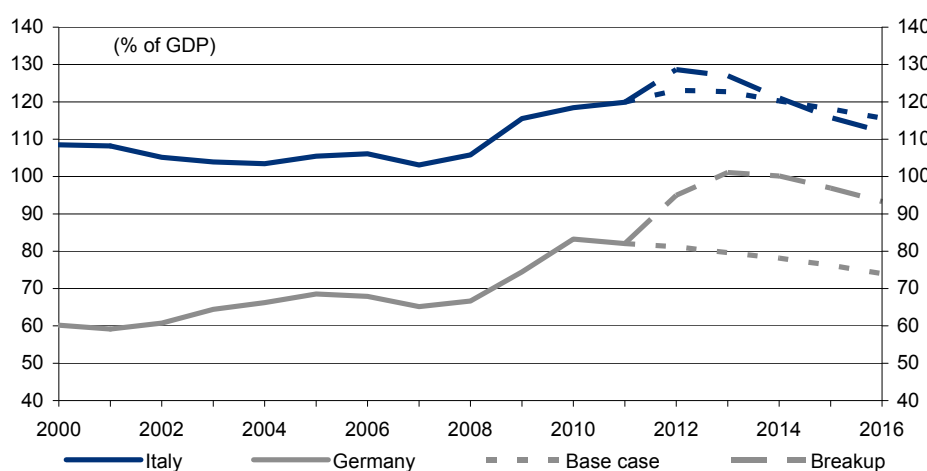
...and hope that stronger nominal growth would reduce their burden

Crucially, while the fiscal solvency of the periphery would improve, that of the core would worsen sharply

stronger nominal growth and, as result, lower primary deficits. This combination would allow them to reduce their debt to GDP ratios.

However, our scenarios suggest that the peripheral economies would see only a modest reduction in their debt-to-GDP ratios. The main benefit from EMU exit would be through higher inflation, which would more than offset the hit to real GDP. In the complete break-up scenario the Italian public debt-to-GDP ratio would fall from 120% in 2011 to 112%, by 2016, largely as result of inflation surging to 10% and then only subsiding slowly. However, the flipside of inflation in the periphery would be the deflationary impulse in the core countries. Combined with the big drop in real GDP, this would lead to a substantial rise in their debt-to-GDP ratio. In Germany, for example, the ratio would rise from 82% in 2011 to 93% in 2016, having broken the 100% level in 2013. In other words, while the fiscal solvency of the periphery would improve, that of the core would deteriorate sharply (see Figure 17).

Fig 17 Italy vs Germany - Gross debt to GDP ratio, 2000-16



Source: EcoWin, ING

The crisis as resulted in yields closer to our previous EMU break-up scenario

2e. Interest rates and bond yields – dramatic divergence

As we saw earlier, over the past year the intensification of the Eurozone debt crisis as resulted in interest rate and bond yield movements closer to our previous EMU break-up scenario than our previous base case. Intra-Eurozone government yield spreads have widened dramatically. However, these movements have reflected funding rather than EMU break-up concerns *per se*.

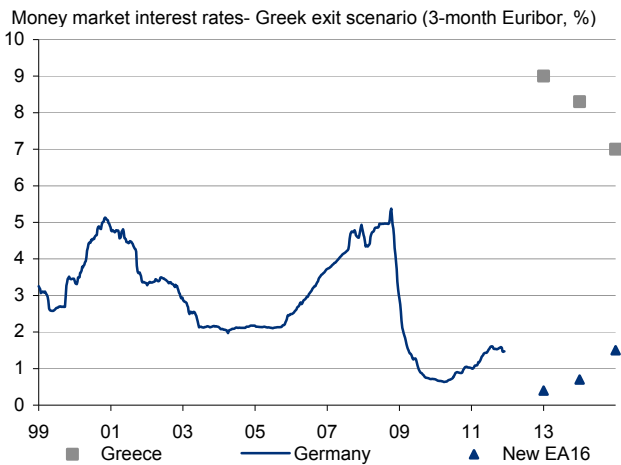
National central banks of weak leavers would have to tackle inflation

The restoration of national control over monetary policy will turn the responsibility of dealing with the economic and financial consequences of EMU exit back to the national central banks. For Greece, and in the break up scenario, the other peripheral economies, this means dealing with the inflationary consequences of sharp currency depreciation (see section 2f below). At the same time, this will have to be balanced against the pressures arising from economic and financial dislocation, not to mention a new wave of fiscal austerity. For the core countries, the main threat is deflation, albeit partially offset by a currency depreciation against non-Eurozone currencies.

Peripheral yields would rise, while core yields would fall further

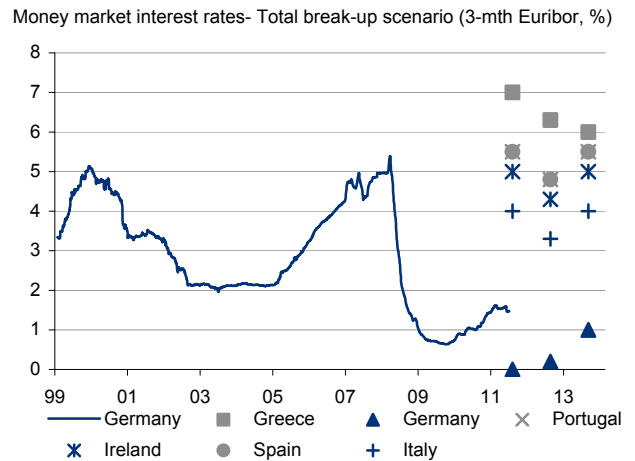
In the Greek exit scenario, money market rates will generally decline, the newly-restored official rates in Greece would quickly head towards 10%. As for government bond yields, Greek yields would decline from their current stratospheric levels, but contagion would drive up yields in the other peripheral countries and drive down yields in the core. Thus 10 year yields in Germany could nudge 1% in this scenario.

Fig 18 Greek exit = high interests in Greece



Source: EcoWin, ING projections

Fig 19 Break-up – general interest rate divergence

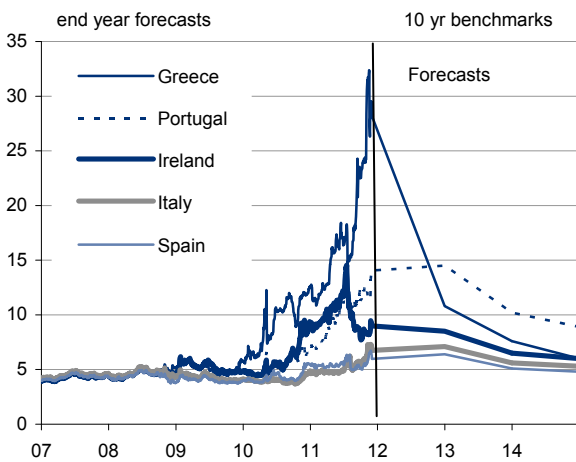


Source: EcoWin, ING projections

Core bond yields could fall to 1%

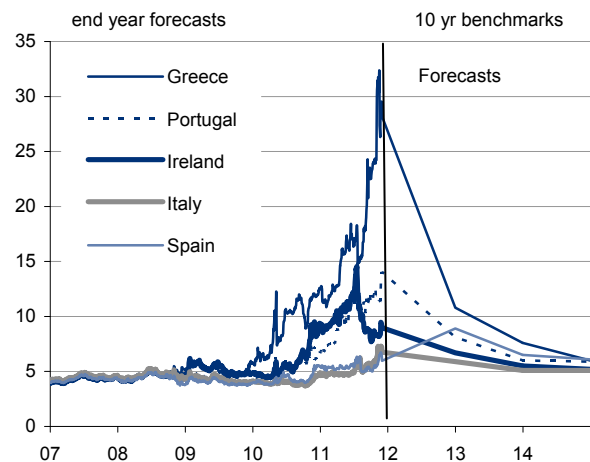
In the EMU break up scenario, interest rates in the core countries will fall even more than in scenario I. Ten-year government bond yields in Germany and the Netherlands may even temporarily fall below 1%. This reflects not just the massive deflationary shock, but also a significant capital flight from the periphery, capital controls notwithstanding. Peripheral long-dated yields, by contrast, remain stuck in a range between 5½-12% (see Figure 21).

Fig 20 Greek exit scenario – stubborn yield spreads



Source: EcoWin, ING projections

Fig 21 Break up - bond spreads slower to subside



Source: EcoWin, ING projections

Massive divergences would subside once the periphery rebuilds credibility

Overall, significant interest rate differentials between the core and the peripheral countries persist through 2012. These may diminish thereafter as peripheral central banks seek to rebuild credibility and the initial currency depreciation and inflation impulse fades.

Box 2: The Mechanics of Sovereign Debt Sustainability

Following the Greek government's difficulties in financing its debt, the financial markets have become sensitive to the ability of all governments to put their finances on a sustainable footing. Countries with outstanding public debts in excess of annual GDP have come in for particular scrutiny. In the long term, markets want to see the public debt-to-GDP ratios stabilise and then fall from the elevated levels sparked by the financial crisis.

The key drivers of the change in Public Debt (as %GDP) over time can be derived from the following identity:

$$\text{Change in Debt} = \text{Primary Budget Deficit} + [(\text{Interest rate} - \text{GDP growth}) \times \text{Debt}]$$

Note: public debt and deficits expressed as %GDP, primary budget deficit excludes debt interest

Accordingly, the growth in public debt can be reduced in the following ways:

1. Improved primary budget balance = either lower expenditure or higher taxes
2. Lower interest rates
3. Faster nominal GDP growth = either faster real growth or higher inflation
4. Reduce existing debt = either sell-off assets or restructure/default on existing debt

So far in this crisis the emphasis of the policy response has been focused on tightening fiscal policy (1), the exception being Greece, where restructuring existing debt (4) has only recently arrived on the policy agenda. But the emphasis on fiscal austerity has been offset by higher interest rate and weaker nominal growth – exact opposite of (2) and (3). Although there is talk of boosting growth through economic reform, so far progress has been minimal. In any case, the benefits to growth from reform can take years to come through – worse still the short term effects could be negative.

Historically, currency depreciation has been a common way of seeking to restore fiscal solvency, largely because it offers the prospect of faster real growth and/or higher inflation (the mix will depend upon how successful the local central bank is in containing inflation and thereby defending the price competitiveness gains arising from currency weakness). However, it would not be a panacea. Indeed, in the short term, it would make matters worse. For peripheral economies leaving EMU the immediate depreciation in the new domestic currency would increase the cost of servicing their euro-denominated debts. Even if re-denominate their debts into their new currency, their solvency would be challenged initially by higher interest rates and higher primary deficits. They would have to rely on the currency depreciation fuelling stronger nominal growth and, as result, lower primary deficits. This combination would allow them to reduce their debt-to-GDP ratios.

2f. Exchange rates – reality bites

Greek exit alone would permanently change perceptions of the euro

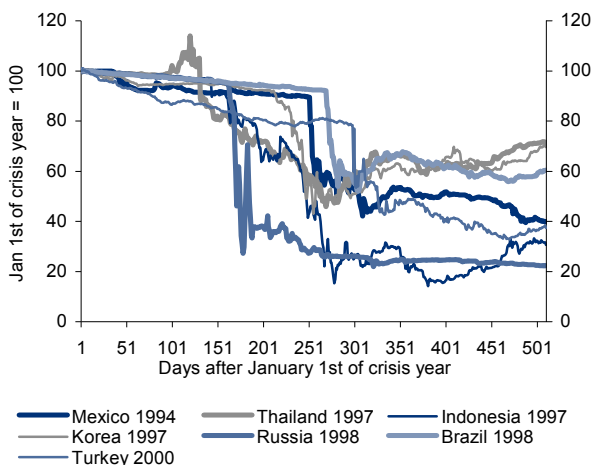
EUR/USD could test the previous low of 0.85...

...we disagree with those who argue that the new DEM would strengthen vs USD

Despite the euro's resilience in the face of the Eurozone debt crisis so far, the reality of departure of Greece alone would be a major blow to the financial markets' confidence in the sustainability of EMU. In establishing the principle that members could exit, the notion of the irreversibility of EMU would be shattered forever. Add to that the economic and financial hiatus that would ensue, and it is easy to see the euro plunging in both scenarios. Indeed, we see EUR/USD slumping to parity (see Figure 29) in the event of a Greek exit. In scenario II, there might be a temporary overshoot to below its previous low in 2001. This compares to our current baseline forecast for EUR/USD to fall to 1.30 if not 1.25.

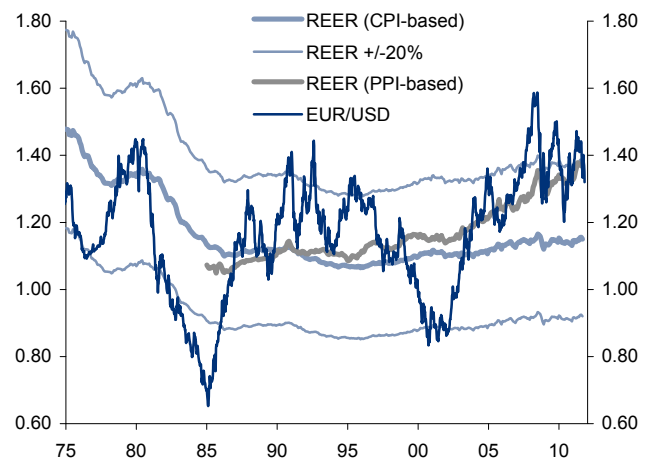
A noticeable feature of our scenarios is that we disagree with some commentators who argue that the new currencies of the former Eurozone core would appreciate against the US dollar and other major currencies. Although the new Deutschemark would be the strongest of the bunch, we would expect that the heavy blow to Germany's economy and solvency from break-up would weigh on its value against non-euro currencies such as the US dollar. In this respect, we are sceptical of analogies with the recent strong performance of the Swiss franc.

Fig 22 FX performance after failed currency regimes



Source: EcoWin, ING calculations

Fig 23 EUR/USD long-term fair value

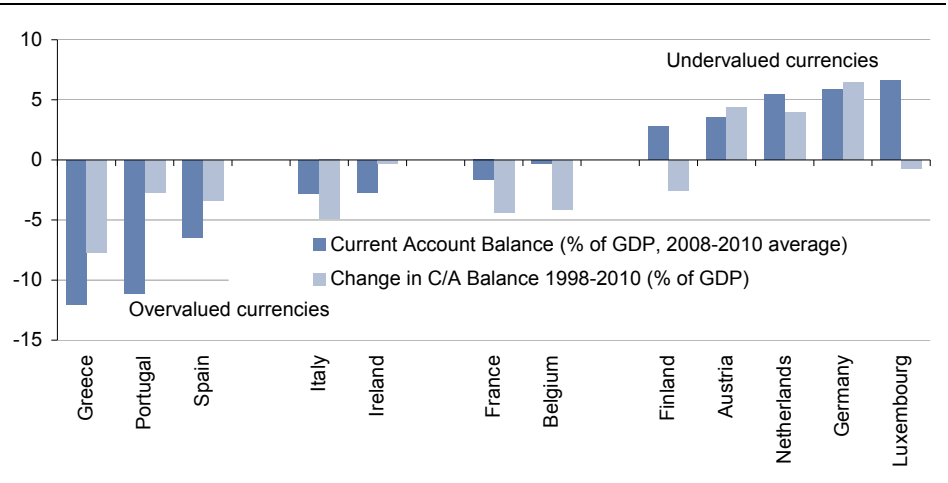


Source: EcoWin, ING calculations

High volatility and 'overshooting' would be likely

On top of this, we would expect huge volatility in the successor currencies. The markets would face enormous uncertainty about the consequences of departure, as well as the policy responses of domestic policymakers. Until the credibility of the latter was established, currencies would be liable to overshoot.

Fig 24 Current account positions and changes 1998-2010



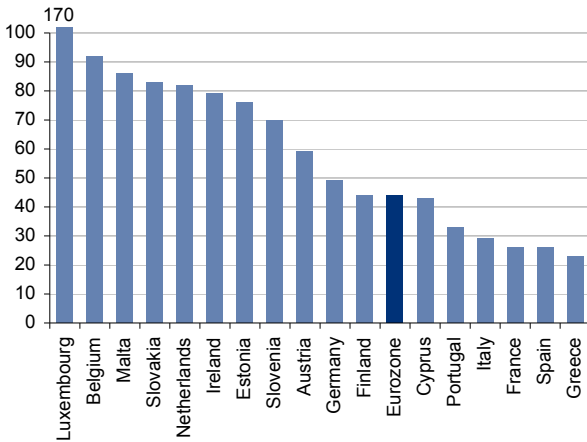
Source: EcoWin, ING calculations

Movements would be structural, not just cyclical

Fiscal and external solvency as well as competitiveness would be in focus

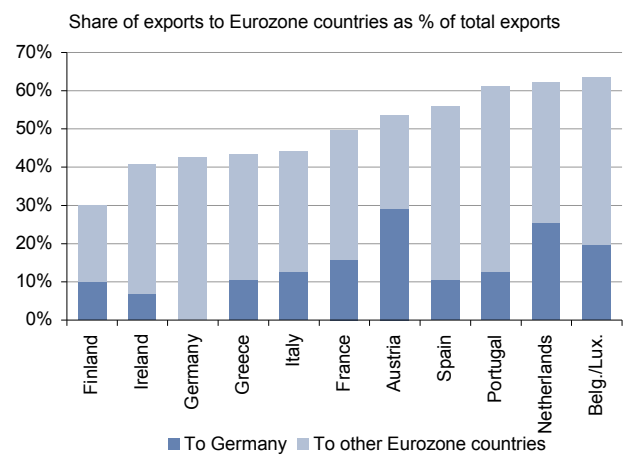
In assessing the scale of the currency movements, we have examined a number of considerations. Aside from immediate cyclical consequences and the policy responses, we have examined structural issues. These include the members' fiscal solvency, their international competitiveness and external balance sheet positions. Given the divergent performance of different asset classes, we have taken into account the members' gross as well as net foreign asset and liability positions.

Fig 25 Exports as a % of GDP



Source: Eurostat, ING calculations

Fig 26 Eurozone trade exposure highest for Benelux



Source: European Commission

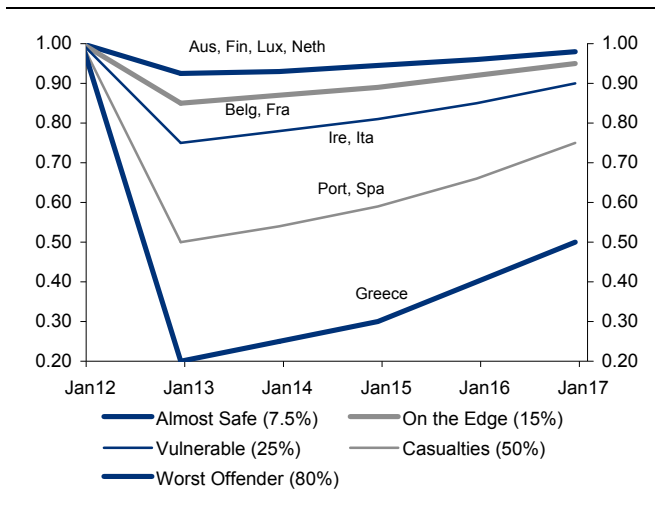
Our scenarios assume the initial movements:

Scenario I – Greek exit

New Greek Drachma could fall as much as 80%

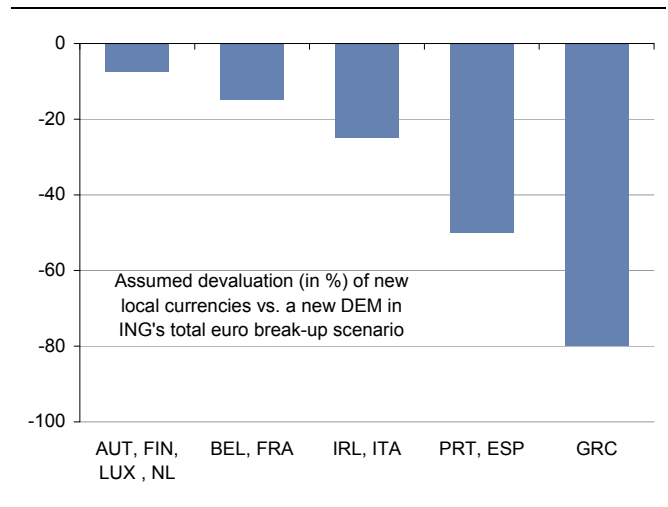
- Given Greece's large twin deficits we see the new Greek Drachma falling 80% against the EUR.

Fig 27 DEM/break up FX (T-1 to break-up DEM/Lcl = 1.00)



Source: ING

Fig 28 Devaluation ranging from 7.5% to 80%



Source: ING

Shilling, Markka, L.franc, Guilder by 7.5% vs DEM

B.franc, F.franc by 15%

Punt and Lira by 25%

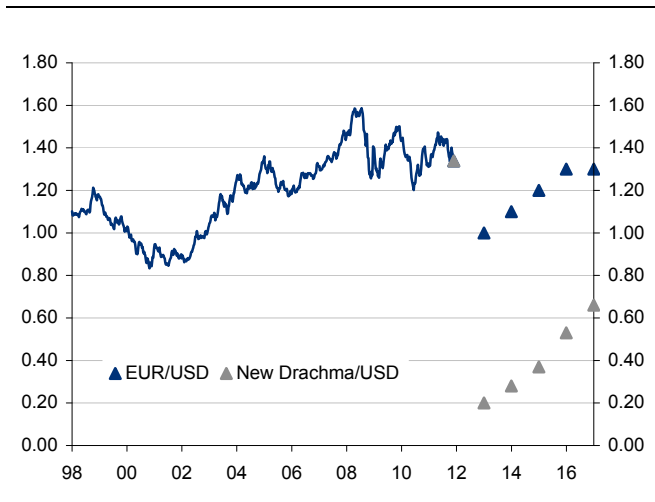
Escudo, Peseta by 50%

Drachma by 80%

Scenario II – Complete break up

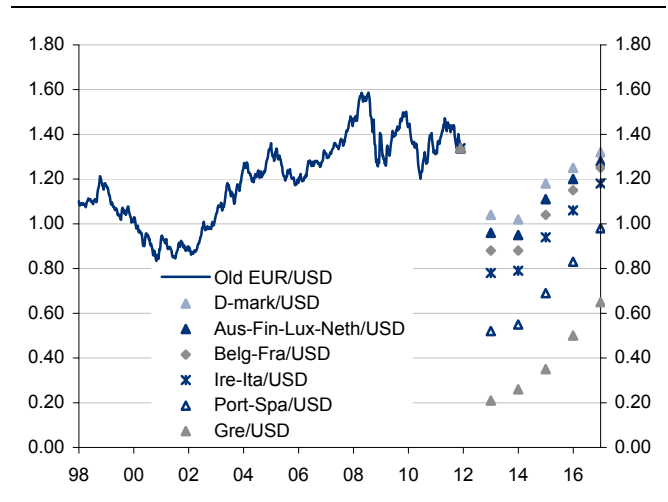
- Austria, Finland, Luxembourg and Netherlands devalue 7.5% against the new Deutschmark (DEM)
- Belgium and France devalues 15% against the DEM
- Ireland and Italy devalues 25% against the DEM
- Portugal and Spain devalues 50% against the DEM
- Greece devalues 80% against the DEM

Fig 29 New Greek Drachma may fall 80% initially



Source: EcoWin, ING projections

Fig 30 New D-mark would also fall versus the USD



Source: ING

2013 could see partial recovery as credibility is rebuilt

Following the initial dramatic divergence, we assume that there would be some retracement going into 2013 (see Figure 30). This reflects the weaker former EMU members re-establishing policy credibility as well as expectations that the initial economic and financial shock will be wearing off. However, given the need for these economies to restore growth, this retracement would only be partial.

Corporate defaults and distress selling could see credit spreads balloon

2g. Credit spreads – revisiting the peaks

Our scenarios would also lead to substantial volatility in credit spreads on corporate bonds and asset-backed securities (ABS). Lower economic activity, coupled with financial

system distress could well force distress selling, which might again lead to credit prices to fall disproportionately.

We assume the following effects:

Scenario I - Greek exit

- Credit spreads in core countries widen but less than their periphery counterparts. General spread widening is muted in comparison to the credit crisis of 2008.
- Nonetheless, even core German corporate credit spreads widen by 70bp in 2012.
- Contagion sees spreads rise by some 110bp in other peripheral markets for A rated corporate debt.
- But none get close to credit crisis peaks. Later in 2012 there is some retracement, but not towards current levels.

Scenario II – Complete break up

- Spreads re-target credit crisis peaks with A rated corporate debt hitting a massive 320bp widening for the core.
- In the periphery A rated corporate spreads might widen out by between 450bp and 800bp versus the base case scenario in 2012.
- Spreads would fall back from crisis levels in 2013, but the subsequent decline would be played out over several years, given the Eurozone's lacklustre recovery prospects.

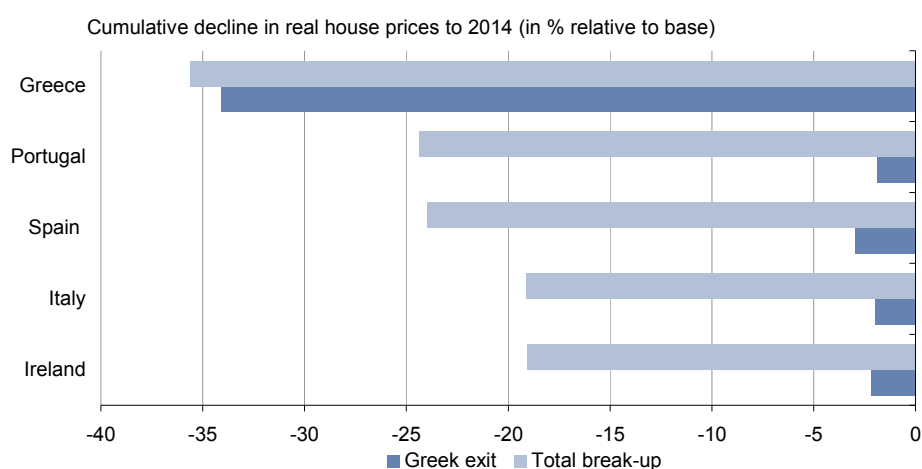
Break up would likely see spreads target 2008 peaks

2h. Real estate and stock markets – further downside

Although the real estate and stock markets have already fallen substantially, our scenarios call for further substantial declines. After all, a majority of investors still expect policy-makers to come through with the necessary action to keep EMU intact, so any fracture would be bound to lead to a further shocking loss of confidence.

In the case of the peripheral economies, apparently modest declines in nominal prices on leaving EMU conceal sharper falls in real terms, given the general surge in inflation resulting from currency depreciation. For example, Spanish house prices in 2012 are only 5% lower than in our base case in the break up scenario, but given that consumer price inflation is nearly 12% higher, this implies a much sharper fall of over 15% in real terms.

Fig 31 House prices under pressure in EMU periphery



Source: ING

Real estate developments

- Although residential real estate markets already corrected in the 2007- 2010 period, a further decline still looks likely.

- With a deflationary climate prevailing in core countries, real estate prices are expected to remain depressed over the 2010-2012 period. Given the rise in general (CPI) inflation in the peripheral economies, house prices fall substantially further in real terms (see Figure 31)
- In peripheral countries, nominal real estate prices might recover earlier on the back of higher inflation, though in real terms no recovery is expected before 2014.

Stock market developments

- The EMU break up will lead to a strong stock market correction in 2012, with the peripheral countries suffering most, as capital flight will be hard to contain.
- However, as central banks try to reflate their economies in core countries some recovery might be expected later in 2013.
- The rebound will be much stronger in peripheral countries benefiting from currency depreciation. However, initial huge currency losses will only be partially recouped.

Conclusion – Pay Now, Pay Later

Amid the repeated failure of policy-makers to contain the Eurozone debt crisis is putting Economic and Monetary Union (EMU) in peril. Key aspects of the break-up scenario that we quantified in report last year are already being played out the bond markets. As confidence crumbles, the real economy is paying an increasingly heavy price. But even as the cost of sustaining EMU in its current form mount, the impact of Greece leaving EMU, let alone EMU breaking up completely, would be far costlier.

Indeed, our revised estimates the impact of exits or break-up show even bigger damage on the Eurozone and global economy. In our complete EMU break up scenario, the cumulative loss of output in the Eurozone in the first two years is over 12%. This is substantially greater than the losses that followed the demise of Lehman Brothers in September 2008. The complexity of financial and trade inter-linkages are such that the short term consequences would be traumatic. Indeed, these short term losses would cause lasting damage to growth potential in subsequent years.

Events of the past year have proved beyond doubt that the Eurozone is far from the textbook 'optimal currency area'. But this is an omelette that cannot be readily unscrambled. As a result, our base case remains that EMU will survive, courtesy of a 'Grand Bargain' that exchanges tighter fiscal discipline and economic reform for German support for ECB action aid the funding of peripheral governments and banks and a commitment to launch a common Eurozone government bond. That would doubtless be greeted with relief by the markets. However, that relief could again prove to be short-lived. It would soon become clear that the thrust of Eurozone economic policy will remain austere and economic growth prospects correspondingly subdued. Europe is already paying a price for the failure to quell doubts about the sustainability of EMU. It is likely continue to do so.

mark.cliffe@uk.ing.com

Even as the costs of sustaining EMU mount, break up would be far costlier

The first two years could see output losses of 12%

Relief at a Grand Bargain could prove to be short-lived...

...as the thrust of policy would remain austere

This page is left blank intentionally

Appendix - Scenario Tables

Contents

Greek exit scenario – absolute numbers 2012.....	page 26
Greek exit scenario – absolute numbers 2013.....	page 27
Greek exit scenario – absolute numbers 2016.....	page 28
Greek exit scenario – differences to base 2012.....	page 29
Greek exit scenario – differences to base 2013.....	page 30
Greek exit scenario – differences to base 2016.....	page 31
Complete euro break up – absolute numbers 2012.....	page 32
Complete euro break up – absolute numbers 2013.....	page 33
Complete euro break up – absolute numbers 2016.....	page 34
Complete euro break up – difference to base 2012.....	page 35
Complete euro break up – difference to base 2013.....	page 36
Complete euro break up – difference to base 2016.....	page 37

Calculations for the years 2014 and 2015 are available upon request.

EMU Greek exit scenario

Absolute numbers (financial market variables all year-end)

Fig 32 EMU break up scenarios -- Greek exit 2012

	EA17	DEU	FRA	NLD	BEL	LUX	AUT	FIN	GRC	IRL	ITA	PRT	ESP	UK	Poland	USA	Asia ex Japan	Japan
Macro economic drivers																		
GDP, %YoY	-1.6	-0.2	-1.4	-1.1	-1.0	-0.2	-0.9	-0.8	-10.7	-1.1	-2.6	-4.8	-2.1	0.0	1.2	1.3	8.3	1.4
Unemployment, %	10.8	6.5	10.9	5.3	8.3	5.3	5.2	8.5	21.8	15.6	9.3	14.6	23.0	8.5	13.3	8.2	4.2	5.0
CPI, %YoY	1.8	1.6	1.6	1.3	1.6	2.0	1.8	1.9	21.6	0.2	1.9	0.4	0.0	2.0	3.4	2.0	4.2	-0.1
Interest rates - SWAP (%)																		
Central bank rate																		
3M euribor	0.4								9.0					0.5	4.25	1.0		0.2
2Y	1.3								11.5									
10Y	2.4								11.8									
30Y	2.4								12.0									
Equity, %YoY	-10													-10	-25	-12		1
FX (local currencies per USD)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	5.00	1.00	1.00	1.00	1.00	0.70	4.51			65
Local currency/USD (USD per local currency)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.20	1.00	1.00	1.00	1.00	1.43				0.02
(local currencies per DEM)									4.00				(EUR/GDP) 0.7					(EUR/JPY) 65
Government bond yields (%)																		
2Y		0.2	1.4	0.4	4.3	0.9	1.5	0.6	10.9	10.3	7.2	19.4	5.7					
5Y		1.0	2.5	1.6	4.8	1.4	2.8	1.5	11.4	9.9	7.8	18.1	6.2					
10Y		1.7	3.1	2.3	5.2	2.1	3.3	2.5	10.8	8.5	7.1	14.5	6.4	2.1	6.2	1.3		0.9
Credit spreads corporate bonds (bp)																		
AAA		72.2	79.4	72.2	90.2	72.2	79.4	72.2	180.5	144.4	108.3	119.1	108.3	65.0	83.0	112.6		
AA		215.6	237.2	215.6	269.5	215.6	237.2	215.6	539.0	431.2	323.4	355.8	323.4	194.1	248.0	238.3		
A		349.1	384.0	349.1	436.3	349.1	384.0	349.1	872.6	698.1	523.6	575.9	523.6	314.2	401.4	326.4		
BBB		503.0	553.3	503.0	628.8	503.0	553.3	503.0	1257.6	1006.1	754.6	830.0	754.6	452.7	578.5	439.0		
BB		1653.2	1818.6	1653.2	1901.2	1653.2	1818.6	1653.2	4133.1	3306.5	2149.2	2364.1	2149.2	1322.6	1686.3	1099.6		
B		2599.0	2858.9	2599.0	2988.8	2599.0	2858.9	2599.0	6497.4	5197.9	3378.6	3716.5	3378.6	2079.2	2650.9	1664.8		
Oil Price	80.0																	
Real estate																		
Residential, %YoY	-2.2	0.3	0.0	-3.5	0.2	0.7	-0.3	0.6	-9.0	-6.0	-2.5	-5.0	-9.0	-9.0	0.5	-0.8	1.0	0.0

Source: ING

EMU Greek exit scenario

Absolute numbers (financial market variables all year-end)

Fig 33 EMU break up scenarios -- Greek exit 2013

	EA17	DEU	FRA	NLD	BEL	LUX	AUT	FIN	GRC	IRL	ITA	PRT	ESP	UK	Poland	USA	Asia ex Japan	Japan	
Macro economic drivers																			
GDP, %YoY	0.6	1.3	0.7	1.0	1.2	2.0	0.9	1.1	0.8	0.8	-0.7	-0.9	0.2	1.9	3.1	1.7	8.3	0.9	
Unemployment, %	11.1	6.6	11.4	5.5	8.8	5.0	5.2	8.2	21.3	15.3	9.7	15.2	23.1	8.1	8.0	7.3	4.3	4.8	
CPI, %YoY	1.7	1.6	1.6	1.7	1.7	2.0	1.6	1.9	10.9	0.4	1.2	0.9	1.4	1.7	2.8	2.3	3.8	-0.1	
Interest rates - SWAP (%)																			
Central bank rate															4.0				
3M euribor	0.7								8.3					1.1	4.0	1.5		0.2	
2Y	1.3								7.8										
10Y	2.5								8.1										
30Y	2.8								8.3										
Equity, %YoY																			
	1													4	0	2		2	
FX (local currencies per USD)																			
	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	3.57	0.91	0.91	0.91	0.91	0.68	3.56				70
Local currency/USD (USD per local currency)	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	0.28	1.10	1.10	1.10	1.10	1.47					0.01
(local currencies per DEM)									3.00				(EUR/GDP) 0.75		3.91				(EUR/JPY) 77
Government bond yields (%)																			
2Y		0.7	1.5	0.8	2.9	1.1	1.4	1.0	7.3	6.1	4.5	10.7	3.7						
5Y		1.7	2.7	2.1	4.0	2.0	2.7	2.0	7.9	6.9	5.6	11.3	4.5						
10Y		2.1	3.2	2.5	4.4	2.4	3.1	2.7	7.6	6.5	5.6	10.2	5.1	2.7	5.6	1.6			1.1
Credit spreads corporate bonds (bp)																			
AAA		40.6	42.6	40.6	50.8	40.6	42.6	40.6	101.5	81.2	60.9	67.0	60.9	36.5	46.7	70.8			
AA		121.3	127.3	121.3	151.6	121.3	127.3	121.3	303.2	242.6	181.9	200.1	181.9	109.2	139.5	149.8			
A		196.3	206.2	196.3	245.4	196.3	206.2	196.3	490.9	392.7	294.5	324.0	294.5	176.7	225.8	205.2			
BBB		283.0	297.1	283.0	353.7	283.0	297.1	283.0	707.4	565.9	424.4	466.9	424.4	254.7	325.4	276.0			
BB		790.7	830.2	790.7	909.3	790.7	830.2	790.7	1976.7	1581.4	1027.9	1130.7	1027.9	711.6	806.5	624.5			
B		1099.6	1154.5	1099.6	1264.5	1099.6	1154.5	1099.6	2748.9	2199.1	1429.4	1572.4	1429.4	989.6	1121.6	836.4			
Oil Price																			
	95.0																		
Real estate																			
Residential, %YoY	0.2	1.7	1.6	-1.3	1.2	2.3	1.8	2.5	1.0	-1.9	-1.0	-2.9	-3.0	1.0	-1.0	1.7			

Source: ING

EMU Greek exit scenario

Absolute numbers (financial market variables all year-end)

Fig 34 EMU break up scenarios -- Greek exit 2016

	EA17	DEU	FRA	NLD	BEL	LUX	AUT	FIN	GRC	IRL	ITA	PRT	ESP	UK	Poland	USA	Asia ex Japan	Japan
Macro economic drivers																		
GDP, %YoY	1.8	1.5	1.8	1.6	1.7	2.1	1.7	2.1	3.4	2.9	1.6	2.1	2.2	2.2	5.2	2.5	8.7	0.9
Unemployment, %	9.5	5.2	9.8	4.4	7.4	4.1	4.3	6.7	16.8	12.9	8.6	13.5	20.6	5.7	8.0	6.3	4.2	4.1
CPI, %YoY	1.9	1.9	1.8	1.8	2.0	2.1	1.8	2.1	3.4	1.9	1.8	1.8	1.9	2.0	2.5	2.2	4.0	0.1
Interest rates - SWAP (%)																		
Central bank rate															4.0			
3M euribor	2.4								5.8					3.1	4.2	1.5	3.7	
2Y	3.1								5.1									
10Y	3.2								5.5									
30Y	3.7								5.7									
Equity, %YoY																		
	11													11	0	10		6
FX (local currencies per USD)																		
Local currency/USD (USD per local currency)	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	1.52	0.77	0.77	0.77	0.77	0.62	2.77			100
(local currencies per DEM)	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	0.66	1.30	1.30	1.30	1.30	1.63				0.01
									1.00					(EUR/GDP) 0.8	3.6		(EUR/JPY) 130	
Government bond yields (%)																		
2Y		2.4	2.6	2.5	2.7	2.5	2.5	2.5	5.0	3.1	3.0	3.4	2.8					
5Y		2.7	3.1	2.9	3.2	2.8	2.9	2.8	5.3	4.1	3.8	4.8	3.4					
10Y		2.8	3.4	3.1	3.9	2.9	3.2	3.0	5.3	4.9	4.4	6.3	4.2	3.3	4.8	2.7		1.4
Credit spreads corporate bonds (bp)																		
AAA		17.1	17.1	17.1	21.4	17.1	17.1	17.1	42.9	34.3	25.7	28.3	25.7	17.1	19.7	31.5		
AA		51.2	51.2	51.2	64.0	51.2	51.2	51.2	128.0	102.4	76.8	84.5	76.8	51.2	58.9	66.6		
A		82.9	82.9	82.9	103.6	82.9	82.9	82.9	207.3	165.8	124.4	136.8	124.4	82.9	95.3	91.2		
BBB		119.5	119.5	119.5	149.3	119.5	119.5	119.5	298.7	238.9	179.2	197.1	179.2	119.5	137.4	122.7		
BB		341.4	341.4	341.4	392.6	341.4	341.4	341.4	853.6	682.9	443.9	488.2	443.9	341.4	348.3	283.9		
B		474.8	474.8	474.8	546.0	474.8	474.8	474.8	1187.0	949.6	617.3	679.0	617.3	474.8	484.3	380.2		
Oil Price																		
	125.0																	
Real estate																		
Residential, %YoY	3.0	2.8	3.7	1.3	2.2	4.3	2.8	3.9	4.5	4.3	2.3	2.7	3.9	5.5	2.5	5.0		

Source: ING

EMU Greek exit scenario

Differences to base (financial market variables all year-end)

Fig 35 EMU break up scenarios -- Greek exit 2012

	EA17	DEU	FRA	NLD	BEL	LUX	AUT	FIN	GRC	IRL	ITA	PRT	ESP	UK	Poland	USA	Asia ex Japan	Japan	
Macro economic drivers																			
GDP, %YoY	-1.6	-1.0	-1.4	-1.3	-1.3	-1.2	-1.2	-1.3	-7.5	-1.9	-2.0	-1.9	-2.0	-1.0	-1.2	-0.5	-0.4	-0.5	
Unemployment, %	0.8	0.5	0.8	0.5	0.7	0.5	0.6	0.6	3.7	1.0	1.0	1.0	1.1	0.5	0.5	0.2	0.1	0.2	
CPI, %YoY	0.1	-0.2	-0.2	-0.5	-0.3	-0.2	-0.1	-0.1	21.0	-0.8	-0.4	-0.7	-0.9	-0.2	0.5	-0.2	-0.3	-0.2	
Interest rates - SWAP (%)																			
Central bank rate															0.3				
3M euribor	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	8.0	-0.6	-0.6	-0.6	-0.6	-0.5	0.0	0.5		0.0	
2Y	-0.3	-0.3																	
10Y	-0.3	-0.3																	
30Y	-0.5	-0.5																	
Equity, %YoY																			
	-25.0													-20.0	-25.0	-22.0	-7.0	-7.0	
FX (local currencies per USD)																			
Local currency/USD (USD per local currency)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	4.3	0.3	0.3	0.3	0.3	0.1	0.0	0.0	0.0	0.0	-5.0
(local currencies per DEM)	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-1.2	-0.4	-0.4	-0.4	-0.4	-0.2	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	-0.15	6.0	0.0	0.0	0.0	-33.0
Government bond yields (%)																			
2Y		-0.60	-0.40	-0.60	0.30	-0.40	-0.40	-0.50	-86.30	2.10	1.30	5.00	0.80						
5Y		-0.50	-0.20	-0.40	0.40	-0.40	-0.20	-0.40	-24.90	2.00	1.40	4.70	0.90						
10Y		-0.50	-0.20	-0.30	0.30	-0.40	-0.10	-0.30	-13.80	1.50	1.00	3.30	0.70	-0.70	0.80	-0.70			-0.30
Credit spreads corporate bonds (bp)																			
AAA	29	29	34	29	36	29	34	29	72	58	43	48	43	26	33	37			
AA	86	86	101	86	108	86	101	86	216	172	129	142	129	78	99	78			
A	140	140	164	140	175	140	164	140	349	279	209	230	209	126	161	108			
BBB	201	201	236	201	252	201	236	201	503	402	302	332	302	181	231	145			
BB	744	744	864	744	856	744	864	744	1860	1488	967	1064	967	504	759	419			
B	1170	1170	1358	1170	1345	1170	1358	1170	2924	2339	1520	1672	1520	793	1193	635			
Oil Price																			
	-15.0																		
Real estate																			
Residential, %YoY	-2.08	-1.2	-1.5	-2.0	-1.3	-1.3	-1.3	-1.4	-5.5	-3.0	-2.5	-2.5	-4.0	-4.0	-2.0	-0.8			0.0

Source: ING

EMU Greek exit scenario

Differences to base (financial market variables all year-end)

Fig 36 EMU break up scenarios -- Greek exit 2013

	EA17	DEU	FRA	NLD	BEL	LUX	AUT	FIN	GRC	IRL	ITA	PRT	ESP	UK	Poland	USA	Asia ex Japan	Japan
Macro economic drivers																		
GDP, %YoY	-0.6	-0.5	-0.6	-0.5	-0.6	-0.5	-0.5	-0.4	1.0	-0.7	-0.8	-0.7	-0.8	-0.5	-0.6	-0.3	-0.4	-0.2
Unemployment, %	1.2	0.8	1.2	0.7	1.0	0.6	0.8	0.7	3.3	1.4	1.4	1.4	1.6	0.6	1.3	0.3	0.2	0.2
CPI, %YoY	-0.1	-0.3	-0.3	-0.2	-0.4	-0.2	-0.3	-0.2	10.0	-0.3	-0.5	-0.4	-0.3	-0.3	0.0	-0.1	-0.2	-0.2
Interest rates - SWAP (%)																		
Central bank rate																		
3M euribor	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	7.0	-0.6	-0.6	-0.6	-0.6	-0.7	-0.3	0.2		0.0
2Y	-0.7	-0.7																
10Y	-0.4	-0.4																
30Y	-0.3	-0.3																
Equity, %YoY																		
	-7.0													-3.0	-5.0	-5.0	-4.0	-4.0
FX (local currencies per USD)																		
Local currency/USD (USD per local currency)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2.9	0.2	0.2	0.2	0.2	0.1		0.0	0.0	-15.0
(local currencies per DEM)	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-1.1	-0.3	-0.3	-0.3	-0.3	-0.3		0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	-0.1	3.0	0.0	0.0	-42.0
Government bond yields (%)																		
2Y		-0.90	-0.70	-0.90	-0.40	-0.80	-0.80	-0.80	-44.70	0.60	0.10	2.00	-0.10					
5Y		-0.50	-0.20	-0.40	0.10	-0.40	-0.30	-0.40	-13.70	1.00	0.60	2.40	0.20					
10Y		-0.50	-0.20	-0.40	0.10	-0.40	-0.30	-0.30	-8.20	0.70	0.40	1.90	0.30	-0.80	0.50	-0.80		-0.30
Credit spreads corporate bonds (bp)																		
AAA	14	14	16	14	18	14	16	14	36	28	21	23	21	10	16	22		
AA	42	42	49	42	53	42	49	42	106	85	64	70	64	30	49	47		
A	69	69	79	69	86	69	79	69	172	137	103	113	103	49	79	65		
BBB	99	99	113	99	124	99	113	99	248	198	149	163	149	71	114	87		
BB	277	277	316	277	318	277	316	277	692	553	360	396	360	198	282	197		
B	385	385	440	385	443	385	440	385	962	770	500	550	500	275	393	264		
Oil Price																		
	-15.0																	
Real estate																		
Residential, %YoY	-0.78	-0.8	-0.9	-0.8	-0.8	-0.7	-0.7	-0.5	4.0	-0.9	-1.0	-0.9	-1.0	-1.0	-1.0	-0.3		

Source: ING

EMU Greek exit scenario

Differences to base (financial market variables all year-end)

Fig 37 EMU break up scenarios -- Greek exit 2016

	EA17	DEU	FRA	NLD	BEL	LUX	AUT	FIN	GRC	IRL	ITA	PRT	ESP	UK	Poland	USA	Asia ex Japan	Japan
Macro economic drivers																		
GDP, %YoY	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	1.5	0.2	0.2	0.2	0.2	0.2	0.5	0.0	0.0	0.0
Unemployment, %	0.6	0.2	0.6	0.2	0.4	0.2	0.4	0.2	0.8	0.9	0.8	0.9	1.0	0.5	0.0	0.3	0.1	0.1
CPI, %YoY	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.0	1.5	-0.1	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0
Interest rates - SWAP (%)																		
Central bank rate																		
3M euribor	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	3	-0.4	-0.4	-0.4	-0.4	-0.4	0.0	-1.5		0.0
2Y	-0.3	-0.3																
10Y	-0.2	-0.2																
30Y	0.3	0.3																
Equity, %YoY																		
	6.0													5.0	8.0	3.0	2.0	2.0
FX (local currencies per USD)																		
Local currency/USD (USD per local currency)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
(local currencies per DEM)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.6	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Government bond yields (%)																		
2Y		-0.50	-0.50	-0.50	-0.40	-0.50	-0.50	-0.50	-2.40	-0.30	-0.30	-0.20	-0.40					
5Y		-0.35	-0.20	-0.30	-0.20	-0.30	-0.30	-0.30	-1.70	0.10	0.00	0.30	-0.10					
10Y		-0.35	-0.20	-0.30	0.00	-0.30	-0.30	-0.30	-1.80	0.30	0.10	0.70	0.10	-0.40	0.0	-0.30		-0.10
Credit spreads corporate bonds (bp)																		
AAA	3	3	3	3	4	3	3	3	9	7	5	6	5	3	4	6		
AA	10	10	10	10	13	10	10	10	26	20	15	17	15	10	12	13		
A	17	17	17	17	21	17	17	17	41	33	25	27	25	17	19	18		
BBB	12	12	12	12	15	12	12	12	30	24	18	20	18	12	14	12		
BB	34	34	34	34	39	34	34	34	85	68	44	49	44	34	35	28		
B	47	47	47	47	55	47	47	47	119	95	62	68	62	47	48	38		
Oil Price																		
	-5.00	-1.1%	-1.4%	-1.8%	-1.2%	-0.9%	-1.1%	-0.8%	11.1%	-2.9%	-2.4%	-2.7%	-3.5%					
Real estate																		
Residential, %YoY	0.37	0.3	0.2	0.3	0.2	0.3	0.3	0.4	4.5	0.3	0.3	0.2	0.4	0.5	0.5	0.0		

Source: ING

EMU Complete euro break-up

Absolute numbers (financial market variables all year-end)

Fig 38 EMU break up scenarios – complete euro break-up 2012

	EA17	DEU	FRA	NLD	BEL	LUX	AUT	FIN	GRC	IRL	ITA	PRT	ESP	UK	Poland	USA	Asia ex Japan	Japan
Macro economic drivers																		
GDP, %YoY	-8.9	-7.4	-9.1	-8.4	-8.3	-7.7	-7.7	-6.5	-13.1	-7.9	-10.1	-12.7	-9.6	-5.0	-6.6	-0.2	6.7	-1.1
Unemployment, %	13.2	8.4	13.8	7.1	10.6	7.0	7.1	11.2	22.4	18.9	11.5	17.0	25.9	10.8	16.8	9.5	5.1	5.5
CPI, %YoY	4.5	-0.9	1.2	0.7	1.1	0.8	0.8	0.8	18.6	9.5	10.3	13.1	12.9	1.2	4.9	1.2	3.0	-0.6
Interest rates - SWAP (%)																		
Central bank rate		0.3	0.5	0.3	0.5	0.3	0.3	0.3	10.8	5.8	5.3	7.3	7.3		5.0			
3M euribor		0.0	0.5	0.0	0.0	0.0	0.0	0.0	7.0	5.0	4.0	5.5	5.5	0.5	5.25	1.5		0.2
2Y		0.3	1.3	0.4	1.3	0.5	0.4	0.3	11.5	6.5	5.6	8.3	8.3					
10Y		1.4	2.6	1.6	2.6	1.6	1.6	1.6	11.8	6.8	5.9	8.6	8.6					
30Y		1.9	3.3	2.1	3.4	2.1	2.1	2.1	12.0	7.0	6.1	8.9	8.9					
Equity, %YoY	-35													-25	-45	-30		-9
FX (local currencies per USD)	1.18	0.96	1.13	1.04	1.13	1.04	1.04	1.04	4.81	1.28	1.28	1.92	1.92	0.71	5.10			55
Local currency/USD (USD per local currency)	0.85	1.04	0.88	0.96	0.88	0.96	0.96	0.96	0.21	0.78	0.78	0.52	0.52	1.42				0.02
(local currencies per DEM)		1.00	1.18	1.08	1.18	1.08	1.08	1.08	5.00	1.33	1.33	2.00	2.00	0.74	5.31			57
Government bond yields (%)																		
2Y																		
5Y		0.1	1.5	0.4	2.0	0.3	0.7	0.3	10.9	7.0	5.9	7.8	8.9					
10Y		0.5	2.1	0.8	2.4	0.7	1.2	0.8	11.4	6.7	5.9	7.3	8.9		6.6			
Credit spreads corporate bonds (bp)																		
AAA		1.2	2.8	1.5	3.1	1.4	1.8	1.6	10.8	6.7	5.9	8.1	8.9	0.8	6.6	0.8		0.7
AA		108.3	124.5	108.3	135.4	108.3	124.5	108.3	270.7	216.6	162.4	178.7	162.4	86.6	124.5	129.2		
A		323.4	371.9	323.4	404.3	323.4	371.9	323.4	808.6	646.8	485.1	533.6	485.1	258.7	371.9	273.3		
BBB		523.6	602.1	523.6	654.5	523.6	602.1	523.6	1309.0	1047.2	785.4	863.9	785.4	418.9	602.1	374.4		
BB		754.6	867.7	754.6	943.2	754.6	867.7	754.6	1886.4	1509.1	1131.8	1245.0	1131.8	603.6	867.7	503.6		
B		2479.9	2851.8	2479.9	2851.8	2479.9	2851.8	2479.9	6199.7	4959.7	3223.8	3546.2	3223.8	1735.9	2529.5	1133.9		
Oil Price	55																	
Real estate																		
Residential, %YoY	-6.8	-5.5	-6.5	-9	-6	-5.5	-6	-5	-10	-8.5	-5.5	-7.5	-10	-15	-4.5	-1.5		

Source: ING

EMU Complete euro break-up

Absolute numbers (financial market variables all year-end)

Fig 39 EMU break up scenarios – complete euro break-up 2013

	EA17	DEU	FRA	NLD	BEL	LUX	AUT	FIN	GRC	IRL	ITA	PRT	ESP	UK	Poland	USA	Asia ex Japan	Japan
Macro economic drivers																		
GDP, %YoY	-2.2	-1.9	-2.7	-2.6	-2.3	-1.7	-2.2	-2.0	-2.7	-1.1	-2.4	-2.5	-1.5	-0.6	0.7	0.8	7.2	-0.6
Unemployment, %	14.4	9.3	15.9	8.8	11.8	8.4	8.6	11.7	23.8	19.4	12.3	18.0	26.7	10.9	17.0	9.5	5.5	5.8
CPI, %YoY	2.3	-0.8	0.2	-0.5	0.1	-0.1	-0.1	-0.5	9.4	5.2	6.2	7.3	7.7	1.0	3.3	1.4	2.5	-0.7
Interest rates - SWAP (%)																		
Central bank rate		0.2	0.5	0.2	0.4	0.2	0.2	0.2	7.0	4.5	4.0	5.0	5.0		4.0			
3M euribor		0.2	0.8	0.2	0.2	0.2	0.2	0.2	6.3	4.3	3.3	4.8	4.8	1.3	4.2	1.8		0.2
2Y		0.5	1.3	0.7	1.3	0.7	0.7	0.5	7.8	5.3	4.9	6.1	6.1					
10Y		1.6	2.6	1.7	2.6	1.8	1.7	1.8	8.1	5.6	5.2	6.4	6.4					
30Y		2.1	3.4	2.2	3.3	2.3	2.2	2.3	8.3	5.8	5.4	6.7	6.7					
Equity, %YoY	-7													7	-10	-8		-1
FX (local currencies per USD)	1.18	0.98	1.13	1.05	1.13	1.05	1.05	1.05	3.92	1.26	1.26	1.82	1.82	0.71	4.28			65
Local currency/USD (USD per local currency)	0.85	1.02	0.88	0.95	0.88	0.95	0.95	0.95	0.26	0.79	0.79	0.55	0.55	1.42				0.02
(local currencies per DEM)		1.00	1.15	1.08	1.15	1.08	1.08	1.08	4.00	1.28	1.28	1.85	1.85	0.72	4.37			66
Government bond yields (%)																		
2Y		0.3	1.4	0.5	1.5	0.5	0.7	0.4	7.3	5.4	4.9	5.7	6.3					
5Y		0.9	1.9	1.1	2.0	1.1	1.3	1.1	7.9	5.5	5.1	5.7	6.4		5.9			
10Y		1.3	2.7	1.5	2.7	1.5	1.7	1.6	7.6	5.5	5.1	6.0	6.5	1.0	5.1	1.4		1.0
Credit spreads corporate bonds (bp)																		
AAA		56.9	59.7	56.9	71.1	56.9	59.7	56.9	142.1	113.7	85.3	93.8	85.3	51.2	65.4	88.7		
AA		169.8	178.3	169.8	212.2	169.8	178.3	169.8	424.5	339.6	254.7	280.2	254.7	152.8	195.3	187.6		
A		274.9	288.6	274.9	343.6	274.9	288.6	274.9	687.2	549.8	412.3	453.6	412.3	247.4	316.1	257.0		
BBB		396.1	416.0	396.1	495.2	396.1	416.0	396.1	990.4	792.3	594.2	653.6	594.2	356.5	455.6	345.7		
BB		1027.9	1079.3	1027.9	1182.1	1027.9	1079.3	1027.9	2569.7	2055.8	1336.2	1469.9	1336.2	925.1	1048.4	726.4		
B		1429.4	1500.9	1429.4	1643.8	1429.4	1500.9	1429.4	3573.6	2858.9	1858.3	2044.1	1858.3	1286.5	1458.0	972.9		
Oil Price	65																	
Real estate																		
Residential, %YoY	-3.2	-4	-3.5	-7	-4	-3	-3	-3	-4	-1.5	-1	-2.5	-2.5	0	-3.	1		

Source: ING

EMU Complete euro break-up

Absolute numbers (financial market variables all year-end)

Fig 40 EMU break up scenarios – complete euro break-up 2016

	EA17	DEU	FRA	NLD	BEL	LUX	AUT	FIN	GRC	IRL	ITA	PRT	ESP	UK	Poland	USA	Asia ex Japan	Japan
Macro economic drivers																		
GDP, %YoY	2.2	2.0	2.3	1.9	2.0	2.5	2.0	2.6	2.5	3.5	2.0	2.5	2.6	2.7	4.7	3.0	9.2	1.2
Unemployment, %	12.4	7.8	13.8	7.5	10.2	7.1	7.3	9.8	19.4	16.2	10.7	15.8	23.6	7.4	10.5	7.0	4.8	4.5
CPI, %YoY	2.1	1.8	2.0	1.7	2.1	2.1	1.8	2.1	2.7	2.6	2.4	2.6	2.7	2.0	2.5	2.2	4.0	0.1
Interest rates - SWAP (%)																		
Central bank rates		2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.0	4.0	3.7	4.0	4.0		4.0			
3M euribor		2.5	3.1	2.5	2.5	2.5	2.5	2.5	4.8	4.8	4.3	4.8	4.8	3.3	4.2	1.5		0.2
2Y		2.6	2.9	2.8	3.0	2.8	2.8	2.6	5.1	4.8	4.7	5.2	5.2					
10Y		2.9	4.3	3.1	4.3	3.1	3.1	3.1	5.5	5.2	5.3	5.6	5.6					
30Y		3.4	5.0	3.6	5.1	3.6	3.6	3.6	5.7	5.4	5.8	5.8	5.8					
Equity, %YoY	15													6	10	17		6
FX (local currencies per USD)	0.83	0.76	0.80	0.78	0.80	0.78	0.78	0.78	1.53	0.85	0.85	1.02	1.02	0.67	2.85			100
Local currency/USD (USD per local currency)	1.20	1.32	1.25	1.28	1.25	1.28	1.28	1.28	0.65	1.18	1.18	0.98	0.98	1.50				0.01
(local currencies per DEM)		1.00	1.05	1.02	1.05	1.02	1.02	1.02	2.00	1.11	1.11	1.33	1.33	0.88	3.74			132
Government bond yields (%)																		
2Y		2.3	2.7	2.5	2.7	2.5	2.5	2.3	5.0	4.7	4.4	5.0	5.0					
5Y		2.4	3.2	2.6	3.2	2.6	2.6	2.6	5.3	5.0	4.7	5.3	5.3		4.8			
10Y		2.5	4.0	2.7	4.0	2.7	2.7	2.7	5.3	5.0	4.9	5.3	5.3	3.4	4.8	2.7		1.2
Credit spreads corporate bonds (bp)																		
AAA		18.9	18.9	18.9	23.6	18.9	18.9	18.9	47.2	37.7	28.3	31.1	28.3	18.9	21.7	34.6		
AA		56.3	56.3	56.3	70.4	56.3	56.3	56.3	140.8	112.7	84.5	92.9	84.5	56.3	64.8	73.2		
A		91.2	91.2	91.2	114.0	91.2	91.2	91.2	228.0	182.4	136.8	150.5	136.8	91.2	104.9	100.3		
BBB		131.4	131.4	131.4	164.3	131.4	131.4	131.4	328.5	262.8	197.1	216.8	197.1	131.4	151.1	134.9		
BB		375.6	375.6	375.6	431.9	375.6	375.6	375.6	938.9	751.1	488.2	537.1	488.2	375.6	383.1	312.2		
B		522.3	522.3	522.3	600.6	522.3	522.3	522.3	1305.7	1044.6	679.0	746.9	679.0	522.3	532.7	418.2		
Oil Price	105																	
Real estate																		
Residential, %YoY	4.0	3.5	4.2	1.5	2.5	4.6	3	4	3	6.5	4	5	6		5			

Source: ING

EMU Complete euro break up

Differences to base (financial market variables all year-end)

Fig 41 EMU break up scenarios – complete euro break-up 2012

	EA17	DEU	FRA	NLD	BEL	LUX	AUT	FIN	GRC	IRL	ITA	PRT	ESP	UK	Poland	USA	Asia ex Japan	Japan	
Macro economic drivers																			
GDP, %YoY	-8.9	-8.2	-9.1	-8.6	-8.6	-8.7	-8.0	-8.9	-9.9	-8.7	-9.5	-9.8	-9.5	-6.0	-9.0	-2.0	-2.0	-3.0	
Unemployment, %	3.2	2.4	3.7	2.3	3.0	2.2	2.5	3.3	4.3	4.3	3.2	3.4	4.0	2.8	4.0	1.5	1.0	0.7	
CPI, %YoY	2.8	-2.7	-0.6	-1.1	-0.8	-1.4	-1.1	-1.2	18.0	8.5	8.0	12.0	12.0	-1.0	2.0	-1.0	-1.5	-0.7	
Interest rates - SWAP (%)																			
Central bank rate		-0.5	-0.3	-0.5	-0.3	-0.5	-0.5	-0.5	10.0	5.0	4.5	6.5	6.5		1.0				
3M euribor		-1.0	-0.5	-1.0	-1.0	-1.0	-1.0	-1.0	6.0	4.0	3.0	4.5	4.5	-0.5	1.0	1.0		0.0	
2Y		-1.4	-0.4	-1.2	-0.3	-1.2	-1.2	-1.4	9.9	4.9	4.0	6.7	6.7						
10Y		-1.3	-0.2	-1.2	-0.1	-1.1	-1.2	-1.1	9.1	4.1	3.2	5.9	5.9						
30Y		-1.0	0.4	-0.9	0.5	-0.8	-0.9	-0.8	9.1	4.1	3.2	6.0	6.0						
Equity, %YoY	-50.0													-35.0	-45.0	-40.0	-15.0	-17.0	
FX (local currencies per USD)																			
Local currency/USD (USD per local currency)	0.5	0.2	0.4	0.3	0.4	0.3	0.3	0.3	4.1	0.6	0.6	1.2	1.2	0.1	0.0	0.0	0.0	0.0	-15.0
(local currencies per DEM)	-0.6	-0.4	-0.5	-0.4	-0.5	-0.4	-0.4	-0.4	-1.2	-0.6	-0.6	-0.9	-0.9	-0.2	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.2	0.1	0.2	0.1	0.1	0.1	4.0	0.3	0.3	1.0	1.0	-0.11	25.0	0.0	0.0	0.0	-41.00
Government bond yields (%)																			
2Y		-0.7	-0.3	-0.6	-2.0	-1.0	-1.2	-0.8	-86.4	-1.3	0.0	-6.7	4.0						
5Y		-1.0	-0.6	-1.2	-2.0	-1.1	-1.8	-1.1	-24.9	-1.2	-0.5	-6.1	3.6						
10Y		-1.0	-0.6	-1.1	-1.9	-1.1	-1.6	-1.2	-13.8	-0.3	-0.2	-3.1	3.2	-2.00	1.20	-1.20			-0.50
Credit spreads corporate bonds (bp)																			
AAA	65	65	79	65	81	65	79	65	162	130	97	107	97	48	75	54			
AA	194	194	236	194	243	194	236	194	485	388	291	320	291	142	223	114			
A	314	314	382	314	393	314	382	314	785	628	471	518	471	230	361	156			
BBB	453	453	551	453	566	453	551	453	1132	905	679	747	679	332	521	209			
BB	1571	1571	1897	1571	1806	1571	1897	1571	3926	3141	2042	2246	2042	918	1602	454			
B	2469	2469	2982	2469	2839	2469	2982	2469	6173	4938	3210	3531	3210	1442	2518	687			
Oil Price	-40.0																		
Real estate																			
Residential, %YoY	-6.66	-7.0	-8.0	-7.5	-7.5	-7.5	-7.0	-7.0	-6.5	-5.5	-5.5	-5.0	-5.0	-10.0	-7.0	-1.5			

Source: ING

EMU Complete euro break up

Differences to base (financial market variables all year-end)

Fig 42 EMU break up scenarios – complete euro break-up 2013

	EA17	DEU	FRA	NLD	BEL	LUX	AUT	FIN	GRC	IRL	ITA	PRT	ESP	UK	Poland	USA	Asia ex Japan	Japan
Macro economic drivers																		
GDP, %YoY	-3.4	-3.7	-4.0	-4.1	-4.1	-4.2	-3.6	-3.5	-2.5	-2.6	-2.5	-2.3	-2.5	-3.0	-3.0	-1.2	-1.5	-1.7
Unemployment, %	4.5	3.5	5.7	4.0	4.0	4.0	4.2	4.2	5.8	5.5	4.0	4.2	5.2	3.4	4.5	2.5	1.4	1.2
CPI, %YoY	0.5	-2.7	-1.7	-2.4	-2.0	-2.3	-2.0	-2.6	8.5	4.5	4.5	6.0	6.0	-1.0	0.5	-1.0	-1.5	-0.8
Interest rates - SWAP (%)																		
Central bank rate		-0.80	-0.5	-0.8	-0.6	-0.8	-0.8	-0.8	6.0	3.5	3.0	4.0	4.0		0.0			
3M euribor		-1.1	-0.5	-1.1	-1.1	-1.1	-1.1	-1.1	5.0	3.0	2.0	3.5	3.5	-0.5	0.0	0.5		0.0
2Y		-1.5	-0.7	-1.4	-0.8	-1.3	-1.4	-1.5	5.8	3.3	2.9	4.1	4.1					
10Y		-1.4	-0.3	-1.2	-0.4	-1.2	-1.2	-1.2	5.2	2.7	2.3	3.5	3.5					
30Y		-1.1	0.3	-0.9	0.2	-0.9	-0.9	-0.9	5.2	2.7	2.3	3.6	3.6					
Equity, %YoY																		
	-15.0														-10.0	-15.0	-5.0	-7.0
FX (local currencies per USD)																		
Local currency/USD (USD per local currency)	0.5	0.3	0.4	0.3	0.4	0.3	0.3	0.3	3.2	0.6	0.6	1.1	1.1	0.1		0.0	0.0	-20.0
(local currencies per DEM)	-0.6	-0.4	-0.5	-0.4	-0.5	-0.4	-0.4	-0.4	-1.1	-0.6	-0.6	-0.9	-0.9	-0.3		0.0	0.0	0.0
	0.0	0.0	0.2	0.1	0.2	0.1	0.1	0.1	3.0	0.3	0.3	0.9	0.9	-0.08	15.0	0.0	0.0	-53.00
Government bond yields (%)																		
2Y		-1.3	-0.8	-1.2	-1.8	-1.4	-1.5	-1.4	-44.7	-0.1	0.5	-3.0	2.5					
5Y		-1.3	-1.0	-1.4	-1.9	-1.3	-1.7	-1.3	-13.8	-0.5	0.0	-3.3	2.1					
10Y		-1.3	-0.8	-1.4	-1.7	-1.3	-1.7	-1.4	-8.3	-0.4	-0.1	-2.4	1.7	-2.50	0.80	-1.00		-0.40
Credit spreads corporate bonds (bp)																		
AAA	30	30	33	30	38	30	33	30	76	61	46	50	46	25	35	40		
AA	91	91	99	91	114	91	99	91	227	182	136	150	136	74	105	85		
A	147	147	161	147	184	147	161	147	368	295	221	243	221	120	169	117		
BBB	212	212	232	212	265	212	232	212	531	424	318	350	318	173	244	157		
BB	514	514	565	514	591	514	565	514	1285	1028	668	735	668	411	524	299		
B	715	715	786	715	822	715	786	715	1787	1429	929	1022	929	572	729	401		
Oil Price																		
	-45.0																	
Real estate																		
Residential, %YoY	-4.23	-6.5	-6.0	-6.5	-6.0	-6.0	-5.5	-6.0	-1.0	-0.5	-1.0	-0.5	-0.5	-2.0	-3.0	-1.0		

Source: ING

EMU Complete euro break up

Differences to base (financial market variables all year-end)

Fig 43 EMU break up scenarios – complete euro break-up 2016

	EA17	DEU	FRA	NLD	BEL	LUX	AUT	FIN	GRC	IRL	ITA	PRT	ESP	UK	Poland	USA	Asia ex Japan	Japan
Macro economic drivers																		
GDP, %YoY	0.6	0.7	0.7	0.5	0.5	0.6	0.5	0.8	0.6	0.8	0.6	0.6	0.6	0.7	0.0	0.5	0.5	0.3
Unemployment, %	3.5	2.8	4.6	3.3	3.2	3.2	3.4	3.3	3.4	4.2	2.9	3.2	4.0	2.2	2.5	1.0	0.7	0.5
CPI, %YoY	0.3	0.0	0.2	0.0	0.1	0.1	0.0	0.0	0.8	0.6	0.5	0.7	0.7	0.0	0.0	0.0	0.0	0.0
Interest rates - SWAP (%)																		
Central bank rate		-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	1.5	1.5	1.2	1.5	1.5					
3M euribor		-0.3	0.3	-0.3	-0.3	-0.3	-0.3	-0.3	2.0	2.0	1.5	2.0	2.0	-0.3	0.0	-1.5		0.0
2Y		-0.8	-0.5	-0.7	-0.5	-0.6	-0.7	-0.8	1.7	1.4	1.3	1.8	1.8					
10Y		-0.6	0.8	-0.4	0.9	-0.4	-0.4	-0.4	2.0	1.7	1.8	2.1	2.1					
30Y		-0.1	1.6	0.1	1.6	0.2	0.1	0.2	2.3	2.0	2.3	2.4	2.4					
Equity, %YoY																		
	10.0														10.0	10.0	3.0	2.0
FX (local currencies per USD)																		
Local currency/USD (USD per local currency)	-0.1	0.0	-0.1	0.0	-0.1	0.0	0.0	0.0	-0.6	-0.1	-0.1	-0.3	-0.3	-0.1	0.0	0.0	0.0	0.0
(local currencies per DEM)	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	1.0	0.1	0.1	0.3	0.3	0.1	4.0	0.0	0.0	2.0
Government bond yields (%)																		
2Y		-0.6	-0.4	-0.5	-0.4	-0.5	-0.5	-0.7	-2.4	1.3	1.1	1.4	1.8					
5Y		-0.6	-0.1	-0.6	-0.2	-0.5	-0.6	-0.5	-1.8	1.0	0.9	0.8	1.8					
10Y		-0.6	0.4	-0.7	0.1	-0.5	-0.8	-0.6	-1.9	0.4	0.6	-0.4	1.2	-0.30	0.0	-0.30		-0.30
Credit spreads corporate bonds (bp)																		
AAA	5	5	5	5	6	5	5	5	13	10	8	8	8	5	6	9		
AA	15	15	15	15	19	15	15	15	38	31	23	25	23	15	19	20		
A	25	25	25	25	31	25	25	25	62	50	37	41	37	25	30	27		
BBB	24	24	24	24	30	24	24	24	60	48	36	39	36	24	29	25		
BB	68	68	68	68	79	68	68	68	171	137	89	98	89	68	73	57		
B	95	95	95	95	109	95	95	95	237	190	123	136	123	95	1	76		
Oil Price																		
	-25.0																	
Real estate																		
Residential, %YoY	1.34	1.0	0.7	0.5	0.5	0.6	0.5	0.5	3.0	2.5	2.0	2.5	2.5	2.5	3.0	0.5		

Source: ING

Contacts

Developed Markets		Title	Telephone	Email	
London	Mark Cliffe	Global Head of Financial Markets Research	+44 20 7767 6283	mark.cliffe@uk.ing.com	
	Rob Carnell	Chief International Economist	+44 20 7767 6909	rob.carnell@uk.ing.com	
	James Knightley	Senior Economist, UK, US, Scandinavia	+44 20 7767 6614	james.knightley@uk.ing.com	
	Chris Turner Tom Levinson	Head of Foreign Exchange Strategy Foreign Exchange Strategist	+44 20 7767 1610 +44 20 7767 8057	christopher.turner@uk.ing.com tom.levinson@uk.ing.com	
Amsterdam	Maarten Leen	Principal Economist	+31 20 563 4406	maarten.leen@ing.nl	
	Martin van Vliet	Senior Economist, Eurozone	+31 20 563 9528	martin.van.vliet@ing.nl	
	Teunis Brosens	Senior Economist, US	+31 20 563 6167	teunis.brosens@ing.nl	
	Dimitry Fleming	Senior Economist, Netherlands	+31 20 563 9497	dimitry.fleming@ing.nl	
	Padhraic Garvey	Head of Developed Markets Debt Strategy	+31 20 563 8955	padhraic.garvey@ingbank.com	
	Jeroen van den Broek	Head of Developed Markets Credit Strategy	+31 20 563 8959	jeroen.van.den.broek@ingbank.com	
	Mark Harmer	Head of Developed Markets Credit Research	+31 20 563 8964	mark.harmer@ingbank.com	
	Maureen Schuller	Senior Credit Strategist	+31 20 563 8941	maureen.schuller@ingbank.com	
	Alessandro Giansanti	Senior Rates Strategist	+31 20 563 8801	alessandro.giansanti@ingbank.com	
	Job Veenendaal	Quantitative Strategist	+31 20 563 8956	job.veenendaal@ingbank.com	
	Roelof-Jan van den Akker	Technical Analyst	+31 20 563 8178	roelof-jan.van.den.akker@ingbank.com	
	Brussels	Peter Vanden Houte	Chief Economist, Belgium, Eurozone	+32 2 547 8009	peter.vandenhoute@ing.be
		Carsten Brzeski	Senior Economist, Germany, Eurozone	+32 2 547 8652	carsten.brzeski@ing.be
Manuel Maleki		Economist, France	+32 2 547 3995	manuel.maleki@ing.be	
Julien Manceaux		Economist, Switzerland	+32 2 547 3350	julien.manceaux@ing.be	
Milan	Paolo Pizzoli	Senior Economist, EMU, Italy, Greece	+39 02 89629 3630	paolo.pizzoli@ing.it	
Emerging Markets		Title	Telephone	Email	
New York	H David Spiegel	Global Head of Emerging Markets Strategy	+1 646 424 6464	david.spiegel@americas.ing.com	
	Gustavo Rangel	Chief Economist, Brazil, Argentina, Chile, Peru	+1 646 424 6465	gustavo.rangel@americas.ing.com	
	Natalia Corfield	Senior Credit Analyst	+1 646 424 6086	natalia.corfield@americas.ing.com	
London	Simon Quijano-Evans	Head of Research & Chief Economist, EMEA	+44 20 7767 5310	simon.quijano@uk.ing.com	
Bulgaria	Elena Ganeva	Economist, Bulgaria, Croatia	+359 2 917 6720	elena.ganeva@ingbank.com	
Czech Rep	Vojtech Benda	Senior Economist, Czech Republic	+420 2 5747 4432	vojtech.benda@ing.cz	
Hungary	David Nemeth	Senior Economist, Hungary	+36 1 255 5581	nemeth.david@ing.hu	
India	Upasna Bhardwaj	Economist, India	+91 22 3309 5718	upasna.bhardwaj@ingvysyabank.com	
Mexico	Debora Luna	Economist, Mexico	+52 55 5258 2095	debora.luna@americas.ing.com	
	Ezequiel Garcia	Economist, Mexico	+52 55 5258 2064	ezequiel.garcia@americas.ing.com	
Philippines	Joey Cuyegkeng	Economist, Philippines	+632 479 8855	joey.cuyegkeng@asia.ing.com	
Poland	Mateusz Szczurek	Chief Economist, CEE	+48 22 820 4698	mateusz.szczurek@ingbank.pl	
	Rafal Benecki	Senior Economist, Poland	+48 22 820 4696	rafal.benecki@ingbank.pl	
	Grzegorz Ogonek	Economist, Poland	+48 22 820 4608	grzegorz.ogonek@ingbank.pl	
Romania	Vlad Muscalu	Economist, Romania	+40 21 209 1393	vlad.muscalu@ing.ro	
	Ana-Maria Morărescu	Junior Economist, Romania	+40 21 209 1290	ana.morarescu@ing.ro	
Russia	Dmitry Polevoy	Economist, Russia & Kazakhstan	+7 495 771 7994	dmitry.polevoy@ingbank.com	
	Egor Fedorov	Senior Credit Analyst	+7 495 755 5480	egor.fedorov@ingbank.com	
Singapore	Tim Condon	Head of Research & Chief Economist, Asia	+65 6232 6020	tim.condon@asia.ing.com	
	Prakash Sakpal	Economist, Asia	+65 6232 6181	prakashb.sakpal@asia.ing.com	
Slovakia	Eduard Hagara	Senior Economist, Slovakia	+421 2 5934 6392	eduard.hagara@ing.sk	
Turkey	Sengül Dağdeviren	Head of Research & Chief Economist, Turkey	+90 212 329 0752	sengul.dagdeviren@ingbank.com.tr	
	Muhammet Mercan	Senior Economist, Turkey	+90 212 329 0751	muhammet.mercan@ingbank.com.tr	
	Ömer Zeybek	Economist, Turkey	+90 212 329 0753	omer.zeybek@ingbank.com.tr	
Ukraine	Alexander Pecherytsyn	Head of Research, Ukraine	+38 044 230 3017	alexander.pecherytsyn@ingbank.com	
	Halyna Antonenko	Financial Markets Research Analyst	+38 044 590 3584	halyna.antonenko@ingbank.com	

Disclosures Appendix

ANALYST CERTIFICATION

The analyst(s) who prepared this report hereby certifies that the views expressed in this report accurately reflect his/her personal views about the subject securities or issuers and no part of his/her compensation was, is, or will be directly or indirectly related to the inclusion of specific recommendations or views in this report.

IMPORTANT DISCLOSURES

Company disclosures are available from the disclosures page on our website at <http://research.ing.com>.

The *remuneration of research analysts* is not tied to specific investment banking transactions performed by ING Group although it is based in part on overall revenues, to which investment banking contribute.

Securities prices: Prices are taken as of the previous day's close on the home market unless otherwise stated.

Conflicts of interest policy. ING manages conflicts of interest arising as a result of the preparation and publication of research through its use of internal databases, notifications by the relevant employees and Chinese walls as monitored by ING Compliance. For further details see our research policies page at <http://research.ing.com>.

FOREIGN AFFILIATES DISCLOSURES

Each ING legal entity which produces research is a subsidiary, branch or affiliate of ING Bank N.V. See back page for the addresses and primary securities regulator for each of these entities.

AMSTERDAM Tel: 31 20 563 9111	BRUSSELS Tel: 32 2 547 2111	LONDON Tel: 44 20 7767 1000	NEW YORK Tel: 1 646 424 6000	SINGAPORE Tel: 65 6535 3688
Bratislava Tel: 421 2 5934 6111	Geneva Tel: 41 22 593 8050	Manila Tel: 63 2 479 8888	Prague Tel: 420 2 5747 3111	Taipei Tel: 886 2 2734 7600
Bucharest Tel: 40 21 222 1600	Hong Kong Tel: 852 2848 8488	Mexico City Tel: 52 55 5258 2000	Sao Paulo Tel: 55 11 4504 6000	Tokyo Tel: 81 3 5210 0100
Budapest Tel: 36 1 235 8800	Istanbul Tel: 90 212 367 7011	Milan Tel: 39 02 89629 3610	Seoul Tel: 82 2 317 1800	Warsaw Tel: 48 22 820 5018
Buenos Aires Tel: 54 11 4310 4700	Kiev Tel: 380 44 230 3030	Moscow Tel: 7 495 755 5400	Shanghai Tel: 86 21 6841 3355	
Dublin Tel: 353 1 638 4000	Madrid Tel: 34 91 789 8880	Paris Tel: 33 1 56 39 32 84	Sofia Tel: 359 2 917 6400	

Research offices: legal entity/address/primary securities regulator

Amsterdam	ING Bank N.V., Foppingadreef 7, Amsterdam, Netherlands, 1102BD. <i>Netherlands Authority for the Financial Markets</i>
Bratislava	ING Bank N.V., pobočka zahraničnej banky, Jesenskeho 4/C, 811 02 Bratislava, Slovak Republic. <i>National Bank of Slovakia</i>
Brussels	ING Belgium S.A./N.V., Avenue Marnix 24, Brussels, Belgium, B-1000. <i>Financial Services and Market Authority (FSMA)</i>
Bucharest	ING Bank N.V. Amsterdam - Bucharest Branch, 11-13 Kiseleff Avenue, 011342, Bucharest 1, Romania. <i>Romanian National Securities and Exchange Commission, Romanian National Bank</i>
Budapest	ING Bank N.V. Hungary Branch, Dozsa Gyorgy ut 84/B, H - 1068 Budapest, Hungary. <i>Hungarian Financial Supervisory Authority</i>
Istanbul	ING Bank A.S., ING Bank Headquarters, Resitpasa Mahallesi Eski Buyukdere Cad. No: 8, 34467 Sariyer, Istanbul, Turkey. <i>Capital Markets Board</i>
Kiev	ING Bank Ukraine JSC, 30-a, Spaska Street, Kiev, Ukraine, 04070. <i>Ukrainian Securities and Stock Commission</i>
London	ING Bank N.V. London Branch, 60 London Wall, London EC2M 5TQ, United Kingdom. <i>Authorised by the Dutch Central Bank</i>
Manila	ING Bank N.V. Manila Branch, 20/F Tower One, Ayala Triangle, Ayala Avenue, 1226 Makati City, Philippines. <i>Philippine Securities and Exchange Commission</i>
Mexico City	ING Grupo Financiero (México) SA de CV, Bosque de Alisos 45-B, Piso 4, Bosques de las Lomas, 05120, Mexico City, Mexico. <i>Comision Nacional Bancaria y de Valores</i>
Milan	ING Bank N.V. Milano, Via Paleocapa, 5, Milano, Italy, 20121. <i>Commissione Nazionale per le Società e la Borsa</i>
Moscow	ING BANK (EURASIA) ZAO, 36, Krasnoproletarskaya ulitsa, 127473 Moscow, Russia. <i>Federal Financial Markets Service</i>
Mumbai	ING Vysya Bank Limited, Plot C-12, Block-G, 7th Floor, Bandra Kurla Complex, Bandra (E), Mumbai - 400 051, India. <i>Securities and Exchange Board of India</i>
New York	ING Financial Markets LLC, 1325 Avenue of the Americas, New York, United States, 10019. <i>Securities and Exchange Commission</i>
Prague	ING Bank N.V. Prague Branch, Nadrazni 25, 150 00 Prague 5, Czech Republic. <i>Czech National Bank</i>
Singapore	ING Bank N.V. Singapore Branch, 19/F Republic Plaza, 9 Raffles Place, #19-02, Singapore, 048619. <i>Monetary Authority of Singapore</i>
Sofia	ING Bank N.V. Sofia Branch, 49B Bulgaria Blvd, Sofia 1404 Bulgaria. <i>Financial Supervision Commission</i>
Warsaw	ING Bank Slaski S.A, Plac Trzech Krzyzy, 10/14, Warsaw, Poland, 00-499. <i>Polish Financial Supervision Authority</i>

Disclaimer

This report has been prepared on behalf of ING (being for this purpose the wholesale and investment banking business of ING Bank NV and certain of its subsidiary companies) solely for the information of its clients. ING forms part of ING Group (being for this purpose ING Groep NV and its subsidiary and affiliated companies). It is not investment advice or an offer or solicitation for the purchase or sale of any financial instrument. While reasonable care has been taken to ensure that the information contained herein is not untrue or misleading at the time of publication, ING makes no representation that it is accurate or complete. The information contained herein is subject to change without notice. ING Group and any of its officers, employees, related and discretionary accounts may, to the extent not disclosed above and to the extent permitted by law, have long or short positions or may otherwise be interested in any transactions or investments (including derivatives) referred to in this report. In addition, ING Group may provide banking, insurance or asset management services for, or solicit such business from, any company referred to in this report. Neither ING Group nor any of its officers or employees accepts any liability for any direct or consequential loss arising from any use of this report or its contents. Copyright and database rights protection exists in this report and it may not be reproduced, distributed or published by any person for any purpose without the prior express consent of ING. All rights are reserved. Any investments referred to herein may involve significant risk, are not necessarily available in all jurisdictions, may be illiquid and may not be suitable for all investors. The value of, or income from, any investments referred to herein may fluctuate and/or be affected by changes in exchange rates. Past performance is not indicative of future results. Investors should make their own investigations and investment decisions without relying on this report. Only investors with sufficient knowledge and experience in financial matters to evaluate the merits and risks should consider an investment in any issuer or market discussed herein and other persons should not take any action on the basis of this report. This report is issued: 1) in the United Kingdom only to persons described in Articles 19, 47 and 49 of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 and is not intended to be distributed, directly or indirectly, to any other class of persons (including private investors); 2) in Italy only to persons described in Article No. 31 of Consob Regulation No. 11522/98. Clients should contact analysts at, and execute transactions through, an ING entity in their home jurisdiction unless governing law permits otherwise. ING Bank N.V. London Branch is authorised by the Dutch Central Bank. It is incorporated in the Netherlands and its London Branch is registered in the UK (number BR000341) at 60 London Wall, London EC2M 5TQ. ING Financial Markets LLC, which is a member of the NYSE, FINRA and SIPC and part of ING, has accepted responsibility for the distribution of this report in the United States under applicable requirements. ING Vysya Bank Ltd is responsible for the distribution of this report in India.