



Sticking together

The future of the Eurozone

January 2012

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The data referred to in the report is valid as at 22 December 2011.

Executive summary

Over the past few months - and more precisely since July 2011 - the Eurozone crisis has escalated. The initial impact was on the financial markets, where government bond spreads, especially in, but not limited to, the so-called peripheral countries, reached previously unimaginable levels. Bank funding had been under severe stress for some time, and had leapt up to levels close to those during the Lehman default of September 2008. During summit after summit, European leaders had fallen short of delivering credible solutions to contain, let alone solve, the crisis. And indeed, in November, even politicians acknowledged that a breakup of the Eurozone, in whatever form, could no longer be excluded.

In this context, Eurozone breakup scenarios have become 'en vogue' and it is high time that we too put in our bid. This report starts by describing the current crisis and its background. Then we discuss the likelihood of a Eurozone breakup in some detail, as well as what to us is the more likely 'Sticking Together' scenario. Our report also offers an overview of events since the Lehman default. In short, it aims to provide the reader with an overview, in-depth analysis and a likely future path of development.

We highlight that the loss of confidence in financial markets and the rapid contagion stems from the deep financial integration within the Eurozone. Cross-border exposures have become so large that a substantial write-down of foreign debt would make it very difficult for governments to bail out all defaulting banks. Countries with weak growth potential will be even less able to bear significant losses. Throughout the past decade, the relative competitive position of the Eurozone periphery compared to the core has reduced, leading to a gradual worsening of the fundamental imbalances within the Eurozone that were present from the start. And these imbalances have, in the current environment, become critical. Solving this fundamental divergence will be imperative for keeping the monetary union together over the longer term.

To manage the pressures in the short to medium term, policy makers have several tools at their disposal, including central bank intervention to secure the functioning of the financial system as well as overarching political solutions to prop up countries in distress. Meanwhile, while the threat of a breakup will continue to linger, the probability of its manifestation will be low. Key factors are the Eurozone's legally binding arrangements such as the Maastricht and Lisbon treaties. For precisely those reasons, an unravelling of the Eurozone - either based on a unilateral initiative or as a result of multilateral agreement - would be accompanied by severe negative consequences: countries may retaliate by re-establishing tariff barriers, eroding the Internal Market. Moreover, these legal issues make the required secrecy for a breakup scenario even more unlikely: any breakup is therefore destined to be disorderly, involving bank runs and posing serious threats to the (global) banking system. Such a scenario is unlikely.

The Eurozone is likely to stick together. We believe that politicians will bring the crisis sufficiently under control in incremental, perhaps grudging, steps towards fiscal union. Peripheral countries will put up with austerity and reform. The European Central Bank (ECB) will add its weight by providing ample liquidity to the banking system. Consequently, tensions in the interbank market will slowly recede and credit conditions will stabilise. Yields of government bonds will decline, reducing the cost of refinancing government debt and preventing large countries from becoming insolvent. But a recession for the Eurozone in 2012, albeit mild, is inevitable.

Given the many legal and political issues facing the crisis management, however, the downside risk to this 'muddle through' scenario is substantial. The persistent weakness in confidence and the recessionary conditions will keep the monetary union under severe pressure. Fear of government and bank defaults and of a potential Eurozone breakup is likely to linger for the foreseeable future.

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Introduction

The ongoing European sovereign debt crisis has its origin in deep cross-border financial integration, debt accumulation and diverging competitiveness between Eurozone member states. The financial crisis of 2008 marked a shift in funding conditions, turning boom into bust and laying bare the fundamental imbalances.

The road to European monetary integration

After the fall of the Berlin wall in 1989, West Germany, under the leadership of Helmut Kohl, had a strong desire to reunify Germany and integrate East Germany into the European Union. This ambition was, however, met with scepticism by most other European nations, especially France and the United Kingdom, who feared that a reunified Germany would disturb the balance of power in Europe by becoming the largest and most economically powerful country in Western Europe. This resulted in what has been labelled a 'grand bargain': France (under François Mitterand) supported the German reunification and the automatic EU membership of the former East Germany, but only on the condition of the creation of a new common European currency.

The introduction of a common currency would be the final stage of monetary integration that began in 1979 with the establishment of the European Exchange Rate Mechanism. The French idea was that a common currency would fully integrate Germany into Europe, and perhaps also increase France's economic power so that it would dominate decision making in the, yet to be established, European Central Bank (although it did not turn out that way). German reunification took place in 1990, followed two years later by the blueprint for monetary union with the signing of the Maastricht Treaty. As such, it should be stressed that the European Monetary Union was the result of a political agenda, and not economic reasons per se. From the start, it was clear that few of the economic conditions necessary for smooth convergence were satisfied. The euro was therefore, at least from an economic perspective, a risky project from the outset.

Deep financial integration

Arguably, the current widespread loss of confidence in the financial position of Eurozone member states stems from the deep financial integration between countries. The creation of the European Monetary Union (EMU) in 1999, and the introduction of the euro coins and notes in 2002, has stimulated a rapid increase in cross-border investments and loans. The global financial liberalisation that started in the 1990s further pushed the size of international exposures upwards. Domestic banks across the Eurozone have in this process lent large sums of money to governments, banks, companies and households in other Eurozone countries.

As a result, the total foreign exposure of banks has increased dramatically over the past decade. From the beginning of 2005 to the end of 2007, the exposure of French banks to Italian debtors quadrupled from USD 124 billion to USD 481 billion. Similarly, the exposure of French banks to Greece increased from USD 19 billion to USD 64 billion. Other Eurozone countries show similar patterns, with Italian exposure to Ireland more than doubling from USD 10 billion to USD 27 billion and Spanish exposure to Portugal increasing from USD 48 billion to USD 76 billion.¹ These amounts put the current situation into context, illustrating why a write-down of Greek government debt has such a large impact on, for example, French banks, in turn leading to losses for Belgian stakeholders etc.

The size of these cross-border exposures has become so large, relative to GDP, across Eurozone countries that a substantial write-down of foreign debt would make it very expensive for governments to bail out all the banks that would fail as a consequence. Countries with weak growth potential would be even less able to bear significant losses. This potential pressure on government finances is essentially where the cross-border

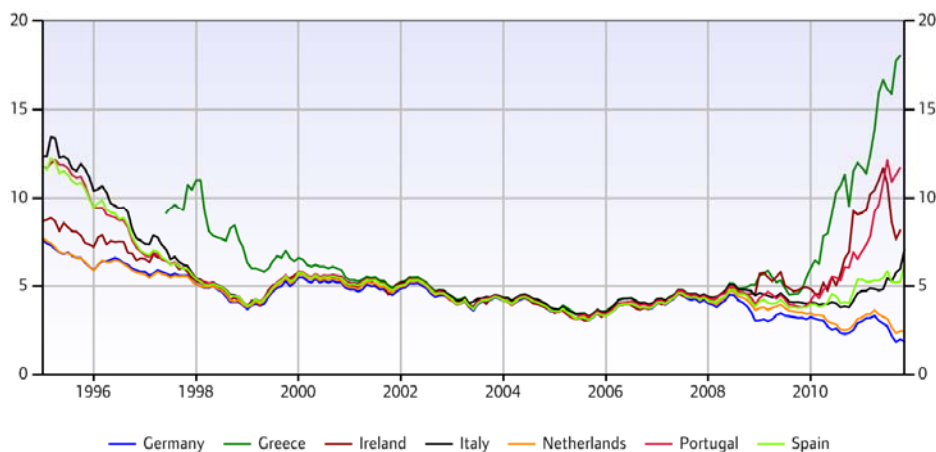
¹ Bank for International Settlements (BIS).

contagion stems from. France has a particularly large exposure to Eurozone periphery debt.² A write-off of the magnitude of 75% for the whole periphery would imply a EUR 511 billion shortfall for French banks, amounting to a stunning 27% of French GDP.

The boom in financial cross-border flows was further stimulated by the forceful convergence of interest rates across Eurozone member countries, leading to a significant drop in yields for the periphery countries. Although fiscal discipline differed vastly across many member countries, and the Maastricht Treaty explicitly ruled out a bailout of a member state in distress, financial markets came to apply a unified 'risk of default' treatment to all Eurozone sovereign states. This view was maintained in spite of the fact that the Stability & Growth Pact (which, among other directives, stipulated a maximal budget deficit of 3% GDP) was violated almost from the outset. Ironically, Germany was the first country to breach the deficit threshold – in 1994: even before the EMU came into existence.

Chart 1: 10-year government bond yields

(Yield expressed as annual rate, in percent)



Sources: IHS Global Insight; OECD.

In 1999, Germany and Italy paid a similar yield on their 10-year government bonds; 3.88% and 3.92% respectively, while, just four years earlier, Italy had had to pay 12.4% on the same bond (see Chart 1). These favourable financing conditions led to a flush of money, which over time has fuelled further divergence between the Eurozone core and periphery.³ Between 2000 and 2010 the periphery witnessed a large increase in lending to its residents. In relative terms, the most sizeable increase took place in Greece, where total loans as a percentage of GDP more than doubled.

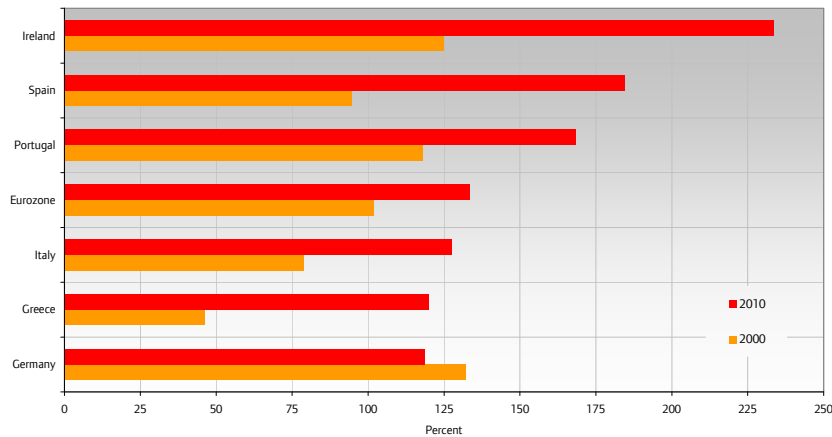
In Portugal and Greece, the abundant access to cheap financing led to permanent government deficits and current account deficits, making these countries increasingly vulnerable to external shocks. The low interest rate environment, coupled with strong economic growth, fuelled the uptake of mortgages in Ireland and Spain, leading to a construction and housing boom. Although real estate markets have continued to fall since the 2008 financial crisis, the level of residential loans as a share of GDP in Ireland was still a staggering 234% in 2010 (see Chart 2).

² The periphery is here defined as Portugal, Italy, Ireland, Greece and Spain.

³ The core is here defined as Germany, the Netherlands, Finland and Austria.

Chart 2: Private debt levels

(Total loans to residents as percentage of GDP)



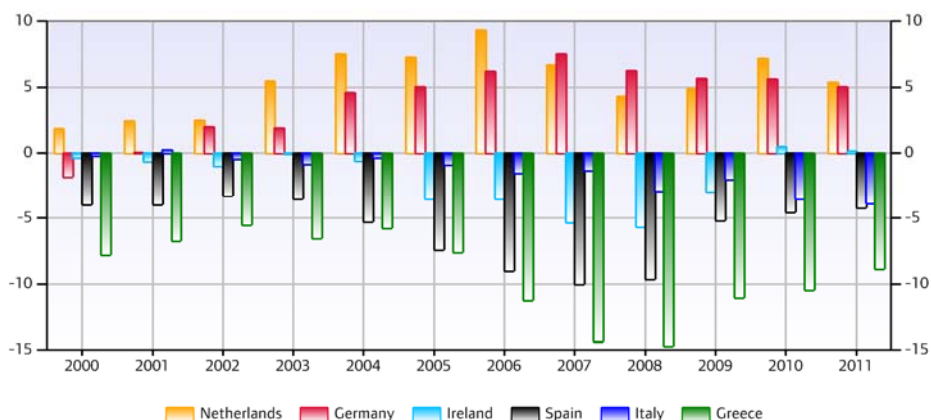
Sources: IHS Global Insight; Eurostat.

Growing economic divergence

The boom in the periphery trickled down to the labour markets, leading to a general increase in wage levels. Unit labour costs in the periphery increased steadily from 2000 until the outbreak of the financial crisis in 2008, while they actually fell in Germany. Higher wages, together with slow growth in productivity, reduced the relative competitive position of the Eurozone periphery compared to the core, and has led to a worsening of the fundamental imbalances within the Eurozone. The divergence in competitiveness is mirrored by a permanent current account surplus in the core and a permanent deficit in the periphery (see Chart 3). In 2007, Greece showed a current account deficit of 14% compared to a deficit of 10% in Spain, 5.3% in Ireland and 1.3% in Italy. At the same time, the core countries (represented by Germany and the Netherlands), showed a strong surplus (of 7.5% and 6.7%, respectively). Solving this fundamental divergence will be imperative for keeping the monetary union together.

Chart 3: Current account balance

(Current account balance as percentage of GDP)



Sources: IHS Global Insight; National Statistics offices.

The developments over the past decade have set the stage for the current crisis; deep cross-border financial integration, large divergence in competitive positions and growth potential, and the accumulation of high

public and private debts. The financial crisis of 2008 pushed the Eurozone over the edge, further increasing the divergence in growth and putting government finances under severe strain.

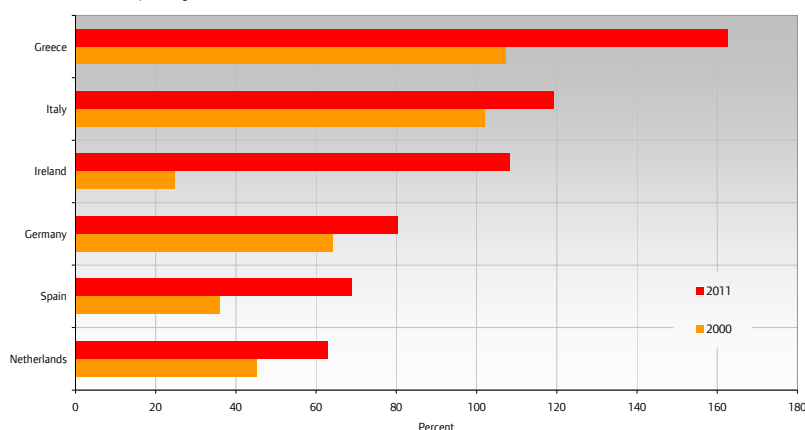
Painful correction

The recession in the Eurozone in 2008/09 was the deepest since the great depression of the 1930s. Starting in the financial sector, it pushed many financial institutions into difficulties, with some having to be bailed out by their national governments. Trust between banks disappeared, as it was unclear who was sitting on the bad risks. The interbank lending rate increased dramatically, and banks unwound their positions, creating a credit crunch. Lending conditions tightened as banks tried to hoard all the capital they could find to beef up their books, and this hurt real businesses.

The policy efforts to secure financial stability and cushion the real effects of the bust led to a large increase in public deficits and government debt (see Chart 4). As the recovery from the recession proved to be slow and protracted, the sustainability of the large debts became questionable. In the aftermath of the financial crunch, in September 2008 yields on government bonds started to diverge: first the yield on Greek bonds began to increase, and then more countries followed, indicating widespread contagion across the Eurozone periphery.

Chart 4: Public debt levels

(Government debt as percentage of GDP)



Sources: IHS Global Insight; National Statistics Offices.

The fear of governments being unable to repay their debt turned into a self-fulfilling prophecy, with higher yields leading to higher debt levels, and yet higher yields. Between May 2010 and May 2011, Greece, Ireland and Portugal all received bailout packages from the IMF, EU and European Central Bank (ECB). Over the years since 2008, politicians have tried to come up with solutions to the escalating situation, both at a national level and for the Eurozone as a whole. Many political summits have taken place and several market adjusting measures have been implemented. Each of these political interventions has failed to put an end to the escalation of the crisis: merely bringing about temporary relief. For a detailed overview of crisis developments since 2008, see the Appendix 'Timeline of crisis dynamics'.

Politicians working overtime

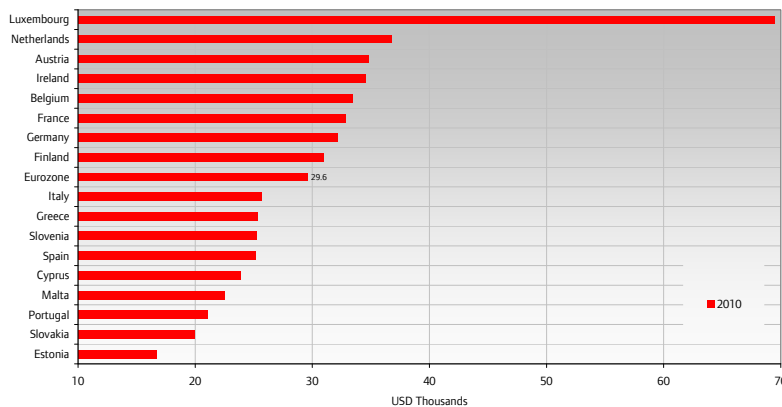
A new, more radical step in the direction of fiscal union was taken at the most recent European summit in Brussels on 8th and 9th December. European politicians agreed to draft a treaty with targets for budget deficits and government debt levels, similar to the Maastricht Treaty of 1992. This time, however, automatic sanctions will be enforced and an 85% majority required to overrule implementation of the sanctions. Moreover, the European leaders agreed to add the goal of budget stability to their constitution, as is currently the case in Germany. The summit also agreed to enhance measures to stem the current panic and provide a firewall against bank failures and government funding problems. Voluntary 'haircuts', as agreed in the Greek bailout, will no

longer be part of future rescue operations.⁴ The European Stability Mechanism (ESM) has been brought forward and will now come into force in July 2012. The fund is planned to contain EUR 500 billion and will replace the current European Financial Stability Facility (EFSF). The IMF will also receive an additional EUR 200 billion from national central banks to support governments in distress.

As the treaty on fiscal union is likely to involve the vote of national parliaments, which may be reluctant to hand over more sovereign power to Europe, the proposed measures came short of solving the Eurozone crisis. The current policies also lack an explicit commitment to a transfer of funds between member states. The European Central Bank (ECB) lowered its interest rate to 1 per cent on 8th December, but remained reluctant to step up its programme of government bond buying. Additional funds are also necessary to provide a complete barrier to further Eurozone contagion; Italy and Spain are facing government debt refinancing requirements in 2012 of EUR 320 billion and EUR 142 billion, respectively.⁵ Despite the summit's efforts, tensions in the financial markets remain and credit conditions are excessively tight. Rating agency Moody's indicated that the results of the summit were insufficient and that downgrades of sovereign ratings across the Eurozone are likely. Even before the summit, Standard & Poor's had put 15 countries in the European Union on negative watch, reflecting their deteriorating sovereign financial positions and the spread of the crisis to countries previously regarded as safe. The widespread heterogeneity across the current group of 17 Eurozone member countries is reflected in considerable differences in terms of per capita production (see Chart 5).

Chart 5: Wealth distribution across the 17 Eurozone members

(Real GDP per capita; real 2005 PPP USD per person)



Sources: IHS Global Insight; National Statistics Offices.

To be met with some success, any policy measure will have to address issues in the short as well as the long run: first stemming the financial panic, and secondly reducing the fundamental divergence between member countries. Crisis intervention should keep panic from spreading, avert disorderly defaults of individual member states and prevent failures of systemically important banks. More fundamental changes in the political structure of the Eurozone include some form of transfer or fiscal union, with strong countries financially supporting those in trouble. The alternative would be a Eurozone breakup. The turmoil in the markets has already affected the real economy, with a Eurozone recession expected in 2012.⁶ A contraction of the Eurozone economy will further increase the pressure on government finances, and thereby their sovereign lending rates. National governments are pushing hard to reform their economies, and are putting austerity measures in place. The current loss of confidence and impending Eurozone recession will keep the monetary union under severe pressure. Fear of government defaults and a potential Eurozone breakup is likely to linger for the foreseeable future.

⁴ Indeed, since such 'haircuts' were agreed in principle between Angela Merkel, German Chancellor, and Nicolas Sarkozy, French President, during a Deauville meeting in October 2010, financial market unrest was elevated to a higher level. According to anecdotal evidence, Jean Claude Trichet, former ECB president, regularly showed graphs demonstrating the adverse effect hereof to the Franco/Germantandem EU summits.

⁵ The Economist, 'The IMF and the euro', 10th December.

⁶ As of December 2011, most forecasters anticipate negative growth in the Eurozone in 2012.

Scenario I: a Eurozone breakup

Given the speed of escalation and current level of stress in the Eurozone, breakup scenarios have become ‘en vogue’. In this section we too will put in our bid. While by no means rigorously tested, we will argue – we hope convincingly – that the consequences of a breakup would be highly damaging for both a country that leaves the euro and those that remain within the currency union. A breakup is therefore unlikely, although not impossible.

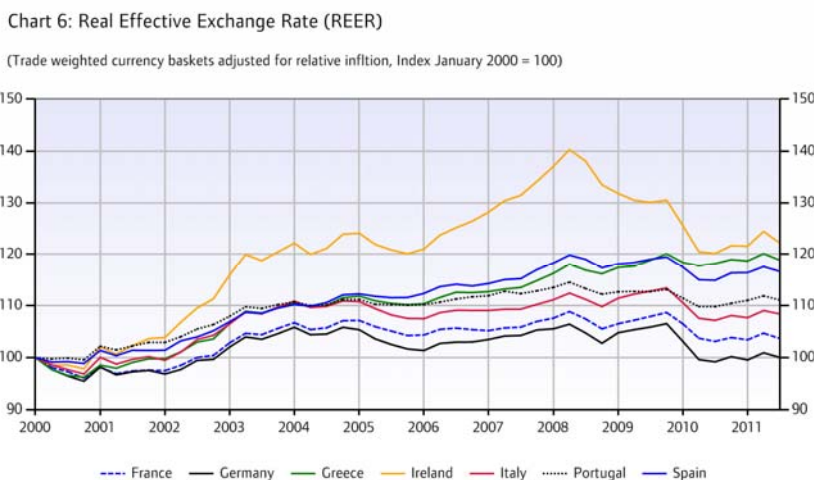
We will elaborate on this: firstly with a discussion of why a country would want to break away from the Eurozone and then with an in-depth analysis of the economics of a breakup. We will make a distinction between an orderly breakup and a – far more likely – disorderly situation, rounding off this section by looking at the costs of a breakup and concluding remarks.

Arguments for a breakup

There can be a number of reasons for a member country to leave the Eurozone. For the sake of developing the argument, two representative countries – Germany and Greece – serve as illustration. The former stands for a group of countries – ‘core’ or ‘strong’ – that includes the Netherlands, Finland, Austria and (perhaps) France, with relatively strong current accounts, well managed government finances and reasonable growth potential; the latter for a group of countries – ‘peripheral’ or ‘weak’ – that includes Portugal, Italy, Ireland and Spain, with weak current accounts, less well managed government finances and low or even negative growth prospects.⁷

A decision to leave the Eurozone can be based on competitiveness as well as cyclical arguments, both of which we will consider.

Firstly, the often-heard competitiveness argument: the real effective exchange rate (REER) provides a measure of a country’s international competitiveness, and this has shown an increasing, and currently large, divergence between Eurozone member countries over the past decade. Germany’s low REER reflects its strong position in international markets, and potential for export and economic growth. This trend is also evident in German unit labour cost developments over the same period and contrasts with the picture for Greece; the high Greek REER and steadily increasing unit labour costs reflect its weakened competitive position (see Chart 6).



⁷ This group of countries is often referred to as the PIIGS.

Assuming that Greece has a potentially attractive export package, it could, as the argument goes, quickly restore its competitive position by leaving the Eurozone, reintroducing the Drachma and subsequently devaluing its currency.⁸ In doing so, Greece would avoid the alternative route, a process of internal devaluation, or austerity, which would entail the slow and painful process of a lowering of wages and of government spending. For Germany, however, competitiveness cannot be the reason to leave the Eurozone. If it were to leave the Eurozone, its competitive position would erode because the newly introduced Deutschmark would be revalued. That, interestingly, would force Germany down the path of internal devaluation to restore its competitive position in world markets.⁹ It should be emphasised that this reasoning also holds, in essence, if Greece were to leave the Eurozone; in that case Germany would also revalue, at least against Greece. Germany, therefore, is not interested in a breakup of the Eurozone: either voluntary or initiated by Greece.

Secondly, the less-heard cyclical argument: by leaving the Eurozone, Greece would be able to fine-tune monetary policy to the need of its business cycle. In particular, it could use at certain times a dose of monetary stimulus to reinvigorate economic activity. ECB monetary policy would be impotent, or at least less potent, in this respect as it is aimed at the (in effect, non-existent) 'average' Eurozone country, or in this example the average of booming Germany and slumping Greece. Germany, in turn, would also have a potential interest in breaking up the Eurozone on the basis of this argument because the ECB's monetary policy would not fit its needs either. In light of the German expansion, monetary policy would be too loose and threaten to push domestic inflation higher. From this perspective, both Germany and Greece could therefore have an interest in leaving the Eurozone.

By considering these two arguments, it seems as if Greece has a fairly strong case to leave the Eurozone. It could improve its competitive position with a stroke of the pen and receive monetary independence as a bonus. One may even wonder why Greece has not already done so. But life is not that simple. The key point is that the Eurozone is economically and financially highly integrated, and this integration is backed up by legally binding arrangements such as the Maastricht and Lisbon treaties. As we will see below, precisely for those reasons unravelling of the Eurozone - based either on a Greek or (an unlikely) German initiative - would be accompanied by a severe negative impact on the economies of both countries.

An orderly breakup¹⁰

At first glance it may seem simple for a country to leave a monetary union. It is a matter of passing a law through parliament to introduce a new currency. Subsequently, contracts would have to be redenominated in the new currency, including demand deposits and accounts held with banks, and new banknotes and coins released. Computers would have to be reprogrammed, as would vending and payment machines.

In theory, that essentially looks like, and probably is, a mechanical operation. In practise, however, there are at least two snags. Firstly, the operation would require meticulous preparation.¹¹ Unravelling the Eurozone would be a completely new experience for policy makers; there are no examples of breaking up a monetary union between sovereign nations comparable to the Eurozone.¹² Such lack of precedent implies the ever-present probability of policy mistakes.¹³

Secondly, one could introduce a new currency into the highly integrated Eurozone only if the operation were made without prior publicity - essentially as a 'big bang' - otherwise the disintegration process would be

⁸ That presumes that inflation in Greece would be kept under control, which is by no means certain given that imports would be more expensive due to the devaluation. If inflation did occur, the benefits of a cheaper currency would be (partly) offset by higher prices for Greek export goods.

⁹ This hinges on Germany clinging to an export model for its growth. One could also argue that Germany should use the increased wealth from the revaluation to rebalance its current account. But we consider that to be less likely to happen.

¹⁰ We broadly follow *Breaking up the Eurozone: Blessing or Disaster*, Rabobank Working Paper Series, no 2010/01/Oct 2010.

¹¹ The euro was agreed in the Maastricht Treaty of 1992 and came into circulation in 2002. It took three years of intensive preparation.

¹² There are examples of monetary unions that disintegrated, such as the Austrian-Hungarian Monetary Union, the Soviet Union and even the breakup process of Yugoslavia. But such disintegration was part of a full-blown political, economical and financial disintegration, whereas a Eurozone breakup would aim only at monetary disintegration while keeping economic and financial integration in place.

¹³ During the credit crisis of 2008/09, we saw that, in a crisis, policy mistakes are easily made. The refusal of the United States government to bail out Lehman Brothers triggered a complete crunch in interbank funding worldwide.

disorderly. The point is that such required secrecy is unlikely to be met, so that the dissolution would indeed be disorderly. That, in turn, reinforces the probability of policy mistakes.

Let us first take the view that the dissolution would be orderly: an assumption that will be dropped in the second paragraph. It should be considered that an exit from the euro would have major consequences beyond the border of the country leaving, since the financial markets of the Eurozone are highly integrated - as manifested in the cross-border holdings of sovereign debt by banks and cross-border interbank funding. Without such integration, the redenomination of debt and bank liabilities such as deposits and current accounts would go smoothly. Firms and households would not be affected; with the new currency the value of their assets (and liabilities) would not change. A devaluation (or revaluation, for that matter) following the introduction of the new currency would be irrelevant for their asset and liability position. But, in the case of cross-border financial holdings, things are different. To consider the possibility of a country leaving cross-border contracts denominated in euros or reverting to a new currency, we will again compare Greece and Germany as representing the weak and strong countries - Greece with a net foreign debt position and Germany with a net foreign asset position.

If Greece were to break away from the Eurozone and convert its debts across the board into the new currency which it subsequently devalues, the value of that debt in the hands of the foreign investors would immediately decline - to the extent of that devaluation. This implies a de facto default. On the other hand, if the debt were to remain denominated in euros, Greek debtors would have to face a loss as they would have to purchase euros in the market with the newly devalued currency.¹⁴ That would cause a problem, as it is unlikely that foreign investors would be willing to build up Greek new currency positions. Such a market for its new currency, therefore, may not exist and Greece would formally default on its debt, forcing a debt restructuring. So, in either case, Greece would default, most likely with the result of severe wealth redistribution.¹⁵ The losers in this case would be foreign Greek asset holders, such as German banks.

At this juncture, it should be pointed out that such a default situation could also occur within the present Eurozone context. More specifically, the Greek government can technically default while remaining in the Eurozone. It has in practice already done so. In the case of a Eurozone breakup, however, matters would be made worse because the corporate sector would also be drawn into defaults, as the corporate sector's cross-border debt position would be affected in the same way as that of a government: something that would not happen in a case of a controlled default within the Eurozone framework.¹⁶ German banks, therefore, would suffer more in the case of a Eurozone breakup as they hold Greek corporate assets as well.

If Germany were to break away from the Eurozone, the effect described above would, in essence, be the same. Following such a breakaway, there would be a revaluation of the new German currency, which, by definition, implies a devaluation of the Greek currency (and other currencies). The German foreign asset position (denominated in euros) would record a loss as described in the case of a Greek exit, and its banks (and other foreign assets holders) may suffer.¹⁷ Again, the corporate sector would be drawn into difficulties because the mismatch between foreign assets and domestic liabilities (due to the redenomination) would increase the probability of default.

In summary, the high level of integration of financial markets in the Eurozone would cause (one off) wealth redistribution effects in favour of the breakaway country; their debt would be reduced. Such effects would also occur in the case of a Eurozone (sovereign) default, but matters would be made worse as the defaults would extend to the corporate sector. In that sense, government defaults are to be preferred, as is the continuation of the Eurozone.

¹⁴ The freedom allowed to the Greek government in the denomination choice may be constraint by legal issues. Contracts written under Greek law will most likely contain a redenomination clause, whereas that can be expected to be absent in contracts under for example UK law. In the latter case, Greece would have to commit breach of contract to be able to redenominate.

¹⁵ For Greece this could be 26-36% of GDP as a one off (implied) wealth transfer to Greece. This estimate is based on the assumption of a devaluation in the region of 30-40% (see Rabobank, 2010, referred to in footnote 8).

¹⁶ This point is made by UBS Global Economic Perspectives, September 6, 2011 www.ubs.com/economics.

¹⁷ An effect possibly to cost 8% of GDP (Rabobank, 2010).

Besides a high level of financial integration, the Eurozone (and more generally the EU) is highly economically integrated. This implies extensive intra-Eurozone cross-border trade. That, it should be realised, is a two way street: a fact to be kept in mind when evaluating an exit from the Eurozone to stimulate exports from Greece. It suggests that a sharply devalued national Greek currency would make imports into Greece more expensive. Therefore, Greece may, and is even highly likely to, face retaliatory tariff barriers erected by its Eurozone trading partners. The Eurozone would re-enter the world of trade barriers: a world that the EU internal market has so successfully combated over past decades.¹⁸

To better understand this reaction pattern, we should consider the legal issues that surround a Eurozone exit. The point here is that there is no such thing as leaving the Eurozone, at least legally. In the words of the Eagles' famous 'Hotel California': *'you can check out any time you like but you can never leave'*.¹⁹ The Maastricht Treaty contains no opt-out clause. This was intentional, and designed to raise both commitment and the cost of exit, while lowering the latter's probability. And neither does the Lisbon Treaty have such a clause, on the basis of which a member state could negotiate a Eurozone exit. Even more strongly, that treaty contains elements that make the adoption of the euro irrevocable.²⁰ The only neat legal way to leave the Eurozone is by negotiating an amendment of the Lisbon Treaty: a process that would be lengthy, involving approvals of all 27 EU countries, and possibly requiring referenda.^{21, 22} Thus, with legal options for leaving the Eurozone virtually non-existent, a country would be left with the possibility of exiting unilaterally - by declaring its independence from the Eurozone and EMU. This would be unlikely to be met with enthusiasm by the other EU and or Eurozone members, and indeed might easily lead to the retaliatory trade barriers already mentioned. The path to Eurozone independence, in other words, is extremely hazardous, legally as well as politically.

A disorderly breakup

The legal issues just discussed provide another reason why secrecy, required for an orderly exit from the Eurozone, is unlikely to be met. In this context we will now drop that assumption and consider the consequences of a disorderly breakup of the Eurozone. The main point here is that such a process would involve bank runs, and pose serious threats to the banking system. That holds for an exit by Greece as well as by Germany. The consequences described below are therefore clearly more likely than those of an orderly breakup scenario.

With respect to Greece, the moment that depositors learn, or even have the faintest suspicion, that the country intends to leave the Eurozone, they would withdraw money from the banks. Since the beginning of 2010, the Greek banking system has indeed experienced a significant reduction in its deposit base (see Chart 7). This can be done by transferring deposits out of the country or, in extreme cases, simply taking cash abroad in a suitcase; in that way the depositor could avoid the redenomination and subsequent devaluation that would be part of the Greek exit. As a consequence Greece would, during the run-up to the exit, be confronted with severe funding problems in its banking system. Given that foreign banks and other investors (for the same reasons as depositors) would be extremely reluctant to fund Greek banks, these latter institutions would have to survive with the lifeline of ECB funding. Meanwhile, shares in Greek banks would be dumped, cutting off bank access to the equity markets. Greek banks would consequently have to shrink their balance sheets significantly, with dire consequences for the loan supply to Greek firms and households. In a worst case scenario, the Greek banking system would completely collapse, even before its euro exit. That implies nationalisation of the banks in Greece, by a government that is already under severe financial stress.

¹⁸ The internal market programme only (not the customs union) has provided economic benefits of 2.5% of GDP annually over the past 15 years, implying an amount of EUR 240 billion - EUR 518 per citizen - compared to a situation without the internal market. See http://ec.europa.eu/internal_market/top_layer/benefits_en.htm.

¹⁹ We owe this reference to the famous Eagles song to UBS (2011).

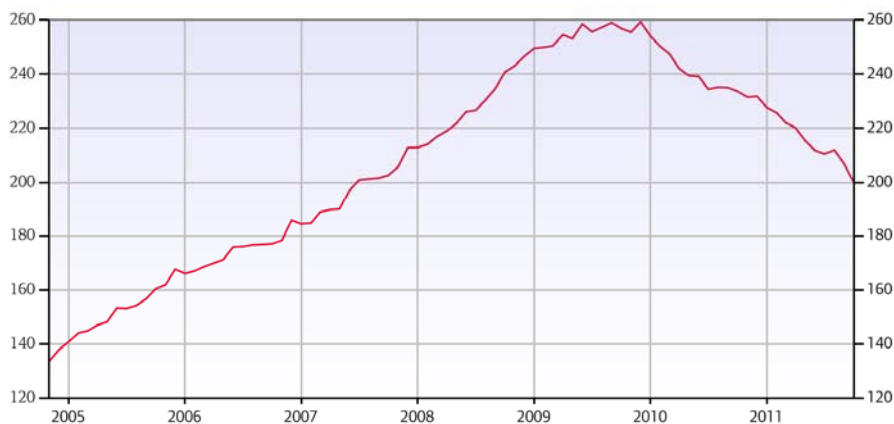
²⁰ Particularly articles 4(2), 118 and 123(4) of the Treaty (UBS, 2011).

²¹ In principle, the route via amendment of the Maastricht Treaty should be open as well. It is perhaps even more hazardous as there is intentionally no opt out clause in that treaty.

²² Expulsion from the Eurozone, politically not excluded since the remarks made by Merkel and Sarkozy after the Greek prime minister Papandreu raised the possibility of a referendum on the 27 October 2011 bail out package, is legally virtually impossible. It requires that the country to be expelled itself approves of that act. Apart from that, it could argue against such an act before the European Court of Justice (UBS, 2011).

Chart 7: Monetary aggregates - Greece

(Deposits and cash, M2 definition, EUR billion)



Sources: IHS Global Insight; Bank of Greece.

To avoid this, Greece would have to close its banking system during the transition period.²³ That period should be as short as possible, perhaps no more than a week, but we have already argued that this seems almost impossible. Apart from that, before the start of such a transition period, capital restrictions would need to be imposed to avoid the 'silent' bank runs described above. Here, the problem is also a legal one. Under EU internal market regulations, the imposition of capital restrictions is simply not allowed. Imposing them unilaterally would therefore immediately raise issues with other Eurozone or EU partners, with a potentially negative impact on trade. Indeed, we can see a paradox emerging: the unfolding of events as described would weaken the case for a Eurozone exit for reasons of competitiveness.

In the case of Germany, leaving the Eurozone would not lead to a bank run. The problem for these banks, however, would be on the asset side of their balance sheets. They most likely hold a collection of euro denominated assets, which would be devalued in the new currency and would require capitalisations in case of a (not unlikely) sizeable revaluation of the new currency against the euro. Without this, banks would have to shrink their balance sheets, as in the case of Greece, with negative consequences on the loan supply. On the other hand, during the run up of the breakup, banks in Germany would see the reverse of a bank run: a flow of money into the banks. The latter would drive down the interest rate and provide some compensation for the asset side woes of German banks.

We stress here that these effects for Germany would not only arise in case of a German exit. As they hinge on revaluation, they would also occur in the event of a Greek exit and Greece's new currency devaluation: essentially the flipside of the German revaluation. Similarly, the effects for Greece would occur in the event of a German exit, although their size may differ. In all, it is likely that a breakup - by Greece or Germany - would badly affect their banking systems. There are only losers: it is a lose-lose game.

The costs quantified

So far, we have developed (and structured) some thoughts on what, at least in policy circles, has been considered unthinkable for quite some time: a Eurozone breakup.²⁴ The next step that we take is to reflect on the costs of a breakup. We will then be quantifying the unthinkable,²⁵ based on a number of existing studies.

²³ Some argue that raising the interest rate on deposits would also provide a clue to solving the issue. But given the expected size of the devaluation, unrealistically high interest rates would have to be paid, up to 50% (Rabobank, 2010).

²⁴ Academic economists never ruled out a breakup, as witnessed by early studies from Hall Scott (1998), When the euro falls apart, International Finance 1, pp. 207-228 and Peter Garber (1998), A Note on the Role of Target in a Stage III Crisis, NBER Working Paper no. 6619, and more recent work by Barry Eichengreen (2007), The Breakup of the Euro Area, NBER Working Paper no. 13393.

²⁵ Here we actually use the title of the ING report Cliffe. M., 'Quantifying the Unthinkable' ING Global Economics, 2010.

Of these studies, ING (2011) and UBS (2011) are most prominent. They indicate the fairly sizeable effects of the breakup. But, as these calculations lack rigorous foundation, they should be interpreted with quite a lot of care.²⁶

ING²⁷ bases its analysis, as we do, on two breakup scenarios: one where only one country (Greece) leaves and another, quite extreme one, where the Eurozone completely breaks up - in all possible parts of its 17 constituent countries. According to this study, in the case of a Greek exit, Greece would suffer from the cost of a cumulatively 4% lower GDP (compared to no breakup) over the period 2012-2014, with the remainder of the Eurozone still affected by a relatively small, but still not trivial, output shortfall of 1% (Germany) to 2% (Italy, Portugal) of GDP. Were the Eurozone to break up completely, the estimates would be far more significant, perhaps even more post-Lehman like; Greece -11%, and the remainder of the Eurozone between -10% (Ireland) and -13% (France) cumulative fall in output (compared to no breakup).

The UBS study takes a different angle and makes a distinction between a 'weak' and a 'strong' country leaving the Eurozone as well as initial costs - for example, those of bank recapitalisations - and recurring costs such as higher finance costs and trade stagnation. Furthermore, the costs are calculated in euro per capita, rather than in percentage shortfall of GDP. The results indicate that if a 'weak' country, such as Greece, were to leave the Eurozone, it would cost them between EUR 9,000 and 11,500 per capita in initial costs and EUR 3,000-4,000 per capita in recurring costs; representing 30%-40% cumulative GDP loss over 3 years.²⁸ For a 'strong' country, like Germany, the figures are EUR 6,000-8,000 initial costs and EUR 3,500-4,500 recurring costs; implying 18-23% cumulative GDP loss.²⁹ Using a 'back of an envelope' calculation of total breakup costs, the average figure would be 24%-31% of Eurozone GDP; and that would still be on the low side as the German weight in the Eurozone GDP is far higher than that of Greece.

Comparing both estimates, it is immediately clear that the ones in the UBS study are significantly higher than those produced by ING. The latter seem to us to belong more to a strong recession scenario, and are perhaps more applicable in the case of an orderly breakup. As we have argued above, such an orderly breakup seems unlikely. If the Eurozone were indeed to break up, and does so in a disorderly manner, this would bring a depression - rather than a recession - into the picture. The UBS figures seem more in line with such qualification and are therefore a better indication of what a Eurozone breakup would cost. And that cost seems disproportionately high.

A Eurozone breakup: concluding remarks

Let us add some final words on the Eurozone break up scenario: perhaps further imbedding its implication in the reader's mind.

We have argued that conventional wisdom teaches that a Eurozone breakup may be attractive for the 'weak' country: it would improve its competitive position and allow it to implement a monetary policy suitable to its business cycle. Moreover, quitting the Eurozone would, according to that conventional wisdom, be mechanical and, therefore, straightforward for policy makers.

Those arguments, however, proved to be a myth in the light of the reality of the extraordinarily high economic and financial integration of the Eurozone. The meticulous preparation and secrecy that would be required - as well as the inexperience of policy makers in unravelling a 'beast' like the Eurozone - would lead to a high probability of policy mistakes which in turn would be a prelude to complete chaos.

If such chaos could - for whatever miraculous reason - be avoided, the effect of a complete breakup could perhaps be managed. Indeed, governments and businesses alike in peripheral countries may default on their

²⁶ Writers indeed admit that they are quantifying the unquantifiable. See ING (2011), p. 8

²⁷ The ING report Cliffe, M., EMU Break-up, Pay Now, Pay Later, ING Global Economics, 2011 is an updated version of the 2010 report referred to in the previous note.

²⁸ Atradius Economic Research calculations.

²⁹ Interestingly, UBS calculates that, if in a Eurozone survival scenario Greece, Portugal and Ireland were to default on their debt and a 50% haircut were needed, the costs for Germany would be EUR 1,000 per capita.

debt after a devaluation of their new currency, causing banks and other asset holders in the core countries to suffer losses. In addition, although the competitive benefit of devaluation for peripheral countries may come under pressure as various EU agreements are violated, EU governments may prevent re-establishment of tariff barriers between EU countries, thus saving the Internal Market from severe erosion.

But, if chaos did indeed ensue, things really would go sour. Bank runs would dry up short term funding in peripheral countries with the ECB, in the process of being dismantled, no longer willing to provide support, while, in the core countries, large scale devaluations of debt and accompanying losses would occur. Bank runs are likely, and large recapitalisations would be needed. Indeed, as capital markets are closed off, governments would no longer be able to do so due to lack of fiscal room, and would therefore be unable to deliver support. Bank failures would be inevitable, just as in a credit crunch, and, at the very least, banks would be severely hampered in their main task of providing lubricant to the economy. Investment and international trade would be halted, or at least would contract in the economically densely integrated Eurozone. Big swings in exchange rates of the newly established currency caused by high uncertainty would exacerbate the situation, as would the functioning of the Internal Market as tariff barriers are re-established. Consumer and producer confidence would diminish severely, causing further deterioration, leading to a wave of corporate defaults. The number of insolvencies would increase (from already historically high levels) as credit constrained firms are hit with falling revenues.

The big hit to Europe would be felt throughout the world. European banks and investors would withdraw their funds, hurting emerging markets and Eastern European countries. Demand for exports would drop, hurting export led markets in Asia and Latin America. Oil and commodity exporters would see the prices for their goods plummet as demand wanes. The US 'decoupling' would prove to be an illusion, as it is pulled into recession by Europe.

The collapse of the European Monetary Union - and thereby of the grand European social project - would bring about a big change to European cohesion and national society. The common goal of integration and solidarity would be replaced by nations defending their own turf at the cost of others. Countries that leave the euro would try to prevent money from flowing out by installing trade barriers and capital controls. The financial infrastructure in Europe would be fractured and become dysfunctional, creating transfer problems. Europe would regress by thirty - perhaps forty - years as the dust of the financial Armageddon scenario starts to settle.

This, perhaps somewhat impressionistic, view of what is likely to happen if the Eurozone breaks up in a disorderly fashion is indeed precisely the reason why we think it is unlikely to occur. Europe has, since the aftermath of the Second World War, been a political project developed with economic means. This is, we believe, deeply entrenched in policy makers' minds. They, the politicians, will stick together, for better or worse.

Scenario II: sticking together

Given the unlikely breakup of the Eurozone, in this section we will develop our main economic scenario for the Eurozone in the coming year. Coordinated policy intervention and an adequate buffer in terms of emergency funds should in our opinion be enough to stave off an escalation of the crisis. This will lead to a mild recession scenario for the Eurozone in 2012. However, given the many legal and political issues that may get in the way of crisis management, the downside risks to this ‘muddle through’ scenario are substantial.

Sticking together

Extensive research carried out to determine the underlying conditions for an optimal currency zone has identified four principal factors. Firstly, there should be a high degree of trade and financial integration within the currency zone in question. Secondly, the individual members of the currency zone should display similar economic structures and show a sufficient degree of synchronisation across the business cycle. Thirdly, the various members of the monetary union should have comparable growth rates in productivity. Fourth and finally, there should be a high degree of labour mobility to offset differences in economic activity and employment. Already, since the inception of the euro, it has been clear that few of these conditions are met for the cluster of Eurozone members, and now the imbalances have reached a critical point. If the monetary union is to remain intact, a combination of measures is needed that address the three main financial/economic challenges that the Eurozone currently faces:

1. The unsustainable sovereign debt levels in the periphery member states;
2. The unsustainable current account imbalances within the Eurozone;
3. The unsustainable dispersion in productivity growth within the Eurozone.

The first of these three challenges - dealing with the debt levels - needs to be addressed both in the short and long terms. Bond yields on periphery debt have become prohibitively high and the confidence in international financial markets has to return soon. This might be achieved by either (A) the introduction of Eurobonds, (B) the purchase of distressed bonds by EFSF/ESM or (C) the purchase of periphery bonds as well as significantly stepped up funding support for the banking sector by the ECB, supported by convincing steps towards fiscal union by governments. The two remaining challenges must be addressed through structural reforms over the longer term. Box 1 (on page 22) sketches a ‘dream’ scenario that addresses the challenges.

1. Unsustainable sovereign debt levels in the periphery member states

A. Eurobonds

In November 2011 the European Commission suggested the introduction of Eurobonds as a measure against the rapidly increasing interest rates on sovereign debt in certain Eurozone countries.³⁰ Issuing governments bonds under joint liability would reduce the rate for countries in distress, while increasing the costs for more stable countries. As all countries guarantee the total debt, Eurobonds would be implemented together with strong fiscal and economic rules to reduce moral hazard and ensure sound public finances. European treaties may need to be amended to make such reforms possible. The introduction of these mutually guaranteed bonds issued by the Eurozone would imply a significant financial relief to the periphery, since international investors are expected to regard them essentially as ‘risk free’, or at least carrying very low default risk. The yields on these newly created Eurobonds will presumably be lower than a weighted average of the yields of the individual

³⁰ Not to be confused with the original meaning of Eurobonds: bonds denominated in a different currency than that of the issuing country, e.g. a US dollar denominated sovereign bond issued by Kenya.

member states. This will nevertheless mean a higher bond yield for Germany and a lower yield for Italy, for example. According to estimates from the German Economic Research Office (Ifo), the yield on a 10 year Eurobond compared to a similar German bond would be slightly more than 200 basis points higher. If the current yields on bonds issued by the EFSF are used as a proxy for the spread, a less depressed figure of 50 to 100 basis points emerges.

A positive effect that favours all member states, irrespective of their initial creditworthiness, is the downward pressure on the yield due to increased liquidity. The Eurozone as a whole would constitute the largest issuer of sovereign bonds in the world and thereby increase its appeal to international investors. As such, a move towards Eurobonds would imply a certain gain for countries with low creditworthiness, but a trade-off between the opposing effects of credit risk and liquidity premium for countries with high creditworthiness. The effect of a lower liquidity premium is however quite small for a country like Germany, since its bonds are already very liquid. The liquidity benefit for Germany, according to European Commission estimates, is less than 10 basis points. For smaller issuers (like the Netherlands and Finland) the positive effect will be higher, but still short of 20 basis points. Therefore, the introduction of Eurobonds by necessity means a significant wealth transfer from the high creditworthy countries (first and foremost Germany) to those with weak credit standings. As this consequence is fully understood by both Germany's politicians and citizens, we expect Eurobonds to be issued only in limited amount, if at all.

B. The European Financial Stability Fund

An alternative instrument for restoring calm in financial markets, which is already operational, is the European Financial Stability Facility (EFSF). The EFSF (and its planned successor ESM) is a special purpose vehicle that can issue bonds to raise funds for EU countries in financial trouble.³¹ The total guarantee commitment adds up to almost EUR 780 billion but, if the commitments made by the five countries in trouble (whose guarantees, for obvious reasons, are impaired) are removed, the amount is reduced to EUR 494 billion. The amount currently committed seems insufficient, however, as the funds needed to rescue the whole periphery in case of distress approaches EUR 1 trillion. Moreover, it should be stressed that this amount concerns guarantees and not real money. The original idea was that these guarantees would convince institutional investors and several countries outside Europe (mainly the BRIC nations) to invest in the fund. The appetite for doing so, however, has so far turned out to be limited. This stability buffer nevertheless constitutes an important firewall against further deterioration and we expect it to be reinforced sequentially.

C. ECB intervention and steps towards fiscal union

This essentially leaves ECB intervention to be pursued³² but, until now, ECB intervention has been relatively limited and largely sterilized.³³ The large scale purchase of distressed Eurozone debt would imply money creation. Apart from being beyond the original mandate of the ECB, money creation may increase the money supply and will then increase the risk of high inflation. It goes without saying, therefore, that this is considered highly undesirable by the traditionally low inflation member countries (in particular Germany). The effect of an increase in the monetary base is, however, ambiguous. Monetary expansion may lead to higher GDP growth instead of inflation if production capacity is not fully used. Another possibility is that the newly created money would be trapped in the financial system, in which case credit supply would come to a standstill but inflation would not accelerate (and may even decelerate or turn into deflation). Since production capacity is

³¹ Countries as well as banks can currently apply to the EFSF for emergency loans if they are faced with too high funding costs in the open market. At the summit of 26 October 2011 it was decided that the EFSF will be leveraged to EUR 1 trillion, on top of the EUR 200 billion or so still left in the fund. Leverage could take place by guaranteeing the first 20-30% losses on newly issued government bonds. This idea, however, failed to catch on and other possibilities for leverage are being discussed: possibly with the involvement of the ECB and the IMF. The EFSF is supposed to disappear when the ESM comes into force somewhere in mid 2012, but there is talk of keeping both funds alive. The EUR 500 billion that should go into the ESM has not yet been delivered, and will arrive in small incremental steps.

³² ECB could become a lender of last resort by expanding its securities markets programme (SMP), and purchasing government bonds at a larger scale. This would serve to end the spiral of higher interest rates and secure government funding across member states. It is however questionable whether ECB's mandate allows such interventions, and there is strong opposition from the German side as they fear a loss of credibility for the central bank and the euro as a strong currency.

³³ The amount of money injected into the economy by purchasing the distressed bonds is entirely counterbalanced by the sale of other (e.g. German) bonds.

not fully utilised at the moment (at least not in terms of labour market participation) the risk of higher inflation appears limited. Moreover it can be argued that inflation is not entirely undesirable for the governments that have become excessively leveraged over the past three years, which might mean that their tolerance of inflation has grown.

Chart 8: The ECB loan officer survey - conditions for loan supply

(Net percentage balance of tightening versus easing conditions)



Sources: IHS Global Insight; ECB.

The ECB is currently also intervening in the banking sector by providing financial institutions with ample liquidity. The current tensions in the financial system have led to a credit crunch for businesses, increasing rates and tightening loan conditions (see Chart 8) so the ECB can ease this market by further stimulating the use of banks' loan facilities. This should reduce the tensions in the interbank market (see Chart 9), and make loans to businesses possible while the financial institutions also rebalance their books.

Chart 9: Tension in interbank markets - counterparty risk

(3-month interbank rates minus 3-month overnight rate swaps, percentage points)



Source: IHS Global Insight.

To ease the currently considerable funding constraints, the ECB has stood firm in providing liquidity. On the 21st December, following its earlier announcement that it would do so, the ECB introduced its first extension of three-year loans (LTROs) to the Eurozone banking system. The ECB has committed to meeting the demand in full and the allocation of loans amounts to EUR 489 billion (roughly comparable to 5% of aggregate Eurozone GDP), to a total of 523 banks. This provision of longer-term funding to banks should strengthen their ability to fund other vital parts of the Eurozone economy, i.e. governments and non-financial firms. While this action has had a positive effect on yield spreads on government debt securities and other financial assets, it is not clear what the ECB will do to offset the addition of funds under the LTRO. Since September, the ECB's balance

sheet has already expanded by more than EUR 300 billion, or 14%. We expect the ECB to continue to support the banking system via this channel.

ECB intervention, in whatever form, can offer a long-lasting solution to the crisis only if bonds are bought from countries that are temporarily illiquid but fundamentally solvent. However, the ECB can offer relief to distressed countries for a limited amount of time, until investor sentiment improves. While it is difficult to distinguish between solvent and illiquid countries, it is clear that Greece is insolvent: in accordance with the various vulnerability indicators summarised in Table 1, Greece scores poorly on almost every count and the figures show that its sovereign debt is unsustainable, whereas Spanish sovereign debt is still relatively low. We can also see that the total net external debt position ranges from low in Ireland to high in Portugal and Spain and unsustainable in the case of Greece. The economic growth projections and the rankings in the World Bank 'Doing Business' survey are included in the table as an indication of general business confidence.³⁴ Ireland clearly stands out as best in class, as its economic growth prospects are relatively solid and its business environment is considered one of the best in the world. These indicators are likely to favourably affect the bond spreads, as evident from the last column of Table 1.

Table 1: Vulnerability indicators

	Net external debt/Total export ³⁵	Government debt/GDP 2012 ^f	Real GDP growth 2012 ^f	Budget balance 2012 ^{f, a}	Doing business ^{f, b}	Bond yield ^c
Greece	267%	166%	-2%	-8.0%	135	35.4%
Italy	93%	121%	0.3%	-2.5%	77	6.9%
Spain	195%	67%	1.1%	-5.4%	133	5.2%
Portugal	170%	106%	-1.8%	-4.7%	30	13.0%
Ireland	42%	109%	3.4%	-8.6%	10	8.5%
Germany	-35% ³⁶	84%	1.3%	-0.9%	19	1.9%

^f Forecast. ^a IHS Global Insight. ^b World Bank Business Indicators. ^c Bloomberg, 19 December 2011 closing rate on 10 year government bonds.

Steps towards fiscal union are currently being taken to improve the long term financial position of governments. This would allow for much stricter control of the budgetary discipline of the Eurozone member states, keeping the accumulation of debt within limits. The original Growth & Stability Pact had a similar aim, but failed to live up to its promise when countries breached the agreed limits, due to a lack of political will to implement the agreed fines. The recent EU summit of 8th and 9th December sought to address this shortcoming by making fines more automatic and requiring an 85% majority to keep the sanctions from being imposed. For full implementation of fiscal union, Eurozone members would have to transfer a large degree of sovereignty to the European Commission: a move currently unsupported by public opinion. A more moderate version of fiscal union is therefore likely to be implemented, aided by requirements attached to the emergency funds from the EU and the IMF if countries violate the agreements.

It was also stated at the summit that the private sector would be shielded from any additional debt restructuring or debt cancellation schemes of peripheral countries. The 'haircuts' that banks had to accept in the most recent Greek debt restructuring led to sharp increases in interbank lending rates and, since then, the interbank market has remained squeezed. It is to be hoped that this statement can reverse this undesirable development. While the initial market response was positive, it remains to be seen exactly how new 'haircuts'

³⁴ Many other proxies could have been selected: for example the Index of economic freedom or the Corruption Perception Index

³⁵ Figures concern the situation at year end 2009. The ratio is the gross external debt minus external asset claims divided by the sum of the export of goods and services, income revenues and private transfers

³⁶ For Germany the ratio is net *assets* divided by total imports

can be avoided. Therefore investors are expected to continue to be wary of engaging in investments concerning periphery debt.³⁷

A significant increase in ECB involvement, through its government bond purchasing programme as well as its funding of banks, is critical to steering the system away from defaults and a future credit crunch. We believe that the ECB will continue on this path while at the same time calling for governments to step up their efforts towards fiscal union. Those steps, we believe, will only – and grudgingly – be taken if indeed the abyss of a breakup gets sufficiently close.

Additionally, other major issues, current account imbalances and differences in productivity growth all need to be addressed, as we consider now.

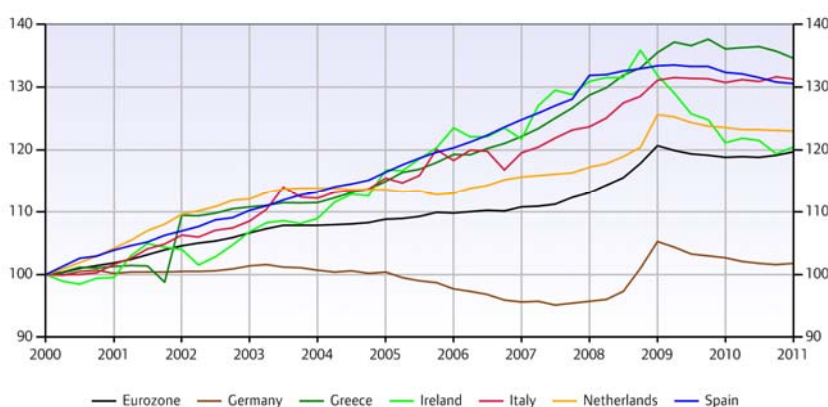
2. Unsustainable current account imbalances

To address the second challenge that the Eurozone faces - the current imbalance of trade flows - the periphery has to export more and import less. The traditional instrument to achieve this is currency depreciation, but the value of the euro against other currencies is determined by developments in all European markets. Trade flows both between Eurozone members and between the Eurozone countries and the rest of the world. More than half of the exports from Italy, Greece and Ireland are to countries outside the Eurozone, and the gradual depreciation of the euro's effective exchange rate since May 2011 is in this respect a helpful trend.

The introduction of the euro has eliminated the possibility of depreciation within the internal market, meaning that more complex alternatives must be sought. This would probably involve a painful internal adjustment process for countries in the periphery, with a reduction in wages and prices in order to regain international competitiveness (see Chart 10). As has been evident in the case of Greece, this process can easily lead to civil discontent. In its programme for Greece, for example, the IMF focuses on the reduction of wage rigidities, the current system of automatic wage indexing, the relatively high level of the minimum wage, removal of barriers to investment and export, liberalisation of regulated professionals and liberalisation of the transport sector. So far, progress in these fields has been disappointing.

Chart 10: Unit labour costs

(Index, January 2000 = 100)



Sources: IHS Global Insight; OECD.

³⁷ Governments that experience troubles meeting their financial obligations could see a reduction and/or rescheduling of their debt, similar to the agreement reached for Greece earlier this year. While this would improve the long term financial stability of a country in distress, it would inevitably create tensions elsewhere in the Eurozone. The moral hazard argument is strong and extending such a scheme to countries other than Greece seems unfeasible given the amounts at stake. The creditors would see a reduction in their assets, making them very much unwilling to voluntarily agree to further arrangements. Large scale debt reductions will also place the banking and pension sectors in other Eurozone countries in trouble as they will have difficulties maintaining their own solvability.

On the other hand, the intra-European imbalances could also be reversed if the core countries imported more from the periphery. An increase in consumer spending or a fall in the savings rate in the core countries therefore seems necessary. An increase in purchasing power could be accomplished by tax reductions or wage increases. The first of these is however unlikely, since the central governments of the core countries have seen their debt positions worsen over recent years. The same argument applies to wages in the public sector. And, while wage levels in the private sector are first and foremost the outcome of a bargaining process between employer and employee, rising unemployment and poor growth prospects make significant wage increases appear implausible.

A reduction in the savings rate is also unlikely, since even the very low interest on savings accounts has not succeeded in persuading consumers in the core countries to increase their spending. Structural economic reform in the core, to boost productivity and purchasing power, could support expenditure on imported goods and services. The positive effect on the export sectors across the core countries may be stronger, however, and even worsen current imbalances. Again, the process of rebalancing the wage level seems less difficult with higher inflation. The adaptation process will be less painful if inflation indexation is fully applied in the core countries, while wages are kept from increasing in the periphery.

While austerity measures are being imposed on the peripheral countries, there are limited, if any, signs of preparedness in core countries to beef up their own economies. Their fiscal room for manoeuvring is limited simply as a result of the debt levels built up after the post-Lehman crisis. The Eurozone economy therefore seems caught in a deflationary fiscal spiral. This can be broken if significant steps towards fiscal union are taken, rather than the current hesitant and grudging ones. If that happened, the financial markets would consider a much larger economy of which the actual debt level stands out favourably compared, for example, to the US and Japan. But until irreversible and significant steps towards fiscal union are taken, we can expect only a limited contribution to this end.

3. Unsustainable dispersion of productivity growth

The final challenge - the increase in productivity in the periphery - is expected to be the most protracted and complex adjustment process. The increase of total factor productivity can be achieved by augmenting capital or labour productivity or by stimulating both. An increase in capital productivity nevertheless implies investment in new capital goods, which are very likely to be imported and therefore contribute further to trade imbalances. Serious economic reforms to enhance labour productivity are urgently called for. The IMF reforms already mentioned are partly supposed to contribute to productivity growth. But massive investment in education, with perhaps more far-reaching fundamental changes to society, is needed. Corruption in governments and the business community should be reduced and red tape cut to improve the incentive to start and develop a new business.

Box 1: An ideal outcome

A 'dream scenario' would involve immediate and far-reaching actions by European policy makers. Firstly, Germany would agree on unprecedented bond purchases of sovereign periphery debt. This would have such a significant downward effect on yield spreads that Italy's and Spain's sovereign debt would become sustainable in the short term. Shortly after that, Eurozone members would agree on full fiscal union. A European Ministry of Finance would be established and would raise taxes directly from European citizens. This newly created Ministry would guarantee a balanced budget of all Eurozone member states. Such a fiscal union would imply a stream of subsidies from the Eurozone core to the uncompetitive periphery until the growth and competitiveness of the periphery is restored. This is likely to come with strings attached to reduce the moral hazard and ensure reform progress in the countries under supervision.

All funding beyond tax revenues would be implemented by the issuance of Eurobonds, which would carry an AAA rating from all external rating agencies. The Ministry would bring the total government debt within the Eurozone back to a much more sustainable level. Finally, the European Commission (perhaps with support from the IMF) would force the periphery to carry out fundamental structural economic reforms. This would include radical tax reforms, severe measures to combat corruption and nepotism, privatisation of state owned enterprises, drastic improvement of the education system, far-reaching reform of the labour market to reduce rigidity, and a significant improvement in the business environment by the reduction of red tape and a strengthening of the legal framework. With these structural reforms, the periphery would manage to increase productivity, economic growth and competitiveness significantly and turn the current account deficits into persistent surpluses.

Economic implications of sticking together

An appropriate combination of the policy responses described throughout this section sets the scene for our benchmark scenario for future economic conditions in the Eurozone. As politicians successfully bring the crisis under control in incremental steps over 2012, financial markets and the economy would heave a sigh of relief. Pressure on the financial system would ease as fear of write-downs of government and private debt is reduced. Tensions in the interbank market would slowly recede and credit conditions would stabilise as the ECB provides ample liquidity to the system. Yields of government bonds would also decline, reducing the cost of refinancing government debt and preventing large countries from becoming insolvent. The financial panic would steadily abate.

But these stabilising conditions do not imply a return to the boom years that preceded the 2008/2009 financial crisis. Banks and other financial institutions face significantly stricter regulation, as they are forced to meet the criteria of the new Basel III accord by 1st January 2015. The European Banking Authority (EBA) requires banks to comply with stricter rules no later than July 2012. Banks must strengthen their balance sheets either by drawing money from the markets or by reducing their assets by cutting back on lending. Given these developments, credit conditions will ease but remain tight over the medium term: a small number of banks may even go bust as a result of the Greek government debt write-downs and stricter regulations.

The Eurozone economy will dip into a recession which is shallow and short-lived. Growth could resume in the second half of 2012, as business confidence steadily improves. With relative calm restored to financial markets and the fear of an outright Eurozone breakup out of the way, investment will pick up again as well. Consumers will resume spending as confidence returns. Financial markets will show positive returns for the year, easing the pressure on corporate and public pension funds.

Growth, however, will remain weak in the medium term as national governments implement large-scale austerity measures across the region. The increase in government debt, and large budget deficits over the past years, will be gradually corrected as governments cut back on spending and increase taxes. This process partly will take place under pressure from the IMF, the ECB and the European Commission. Trend growth in Europe will also fall, as population growth slows and the European population ages. Unemployment will remain difficult to control in many countries, especially in the periphery, owing to a combination of government austerity and reform efforts to regain competitiveness and restore sustainable growth profiles.

These developments are indicative of a further shift in the global balance of power, as Europe sees its economic and political significance being reduced as the relative size of its economy declines at a faster rate. For years the European economy has been outperformed by the emerging markets, reducing its power position on the global stage. Strong integration and unity – i.e. speaking with ‘one voice’ – were supposed to mitigate this loss, but Europe is now too occupied with restructuring its own internal market. The recession conditions and reduced growth prospects will further accelerate the process.

International trade will resume growth and will benefit from the continuing momentum in economic performance in the rest of the world. Emerging markets such as China, India and Brazil will continue to perform well, allowing the Eurozone as a whole to benefit from stable export demand. Credit conditions for export and other business investments will, however, remain tight as the financial sector continues its deleveraging process. Insolvency levels will remain elevated but come down slowly as economic growth stabilises. As such, the business environment will brighten gradually but the medium outlook promises no more than moderate growth.

Appendix: timeline of crisis dynamics

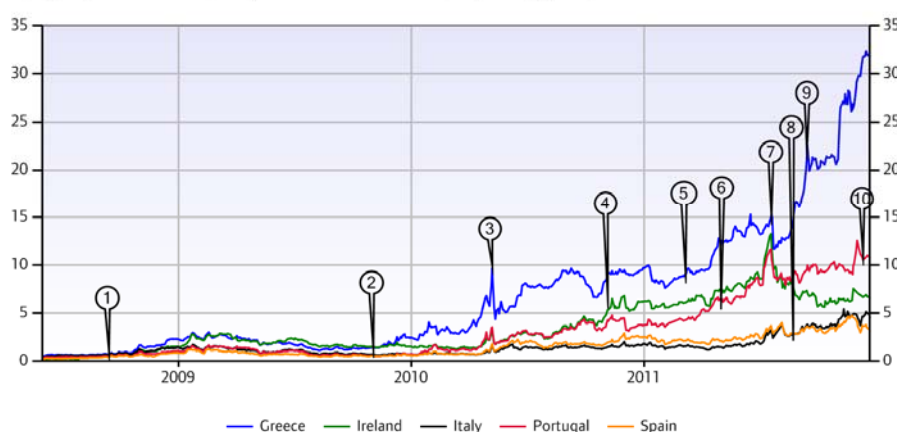
As alluded to in the previous chapters, the Eurozone’s problems have not suddenly materialised, but have been building up gradually since the inception of the common currency in 1999. Since early 2010, there has been a continuous flow of negative news about the economic situation in individual Eurozone countries and the political state of the Eurozone as a whole. A long series of political summits and support packages has followed, making it increasingly difficult to keep track of the chain of events. To put the currently discussed proposals and policy options into context, we need to revisit some key milestones in the crisis dynamics of past years.

A timeline overview of the crisis dynamics*

Activity started to slow in the second half of 2007, following several years of strong economic expansion and interest rate convergence across Eurozone countries. After consecutive quarters of gradually increasing pressure in financial markets, the financial sector’s problems culminated in the collapse of Lehman Brothers in September 2008 [1].³⁹ The ensuing credit crunch led to a sharp contraction in real economic activity across advanced markets, to which policy makers responded with unprecedented stimulus measures. These measures resulted in deep fiscal deficits and rapidly increasing sovereign debt levels across Eurozone member states. Already at that time, national government bonds within the Eurozone were witnessing a spectacular divergence in yields. While the public stimulus measures managed to stave off an outright collapse in the financial system, the pressure instead shifted to the public domain: the European Debt Crisis as we perceive it today began to take hold.

Long bond yield divergence within the Eurozone

(10-year government bond yield spreads over the German Bund, in percentage points)



Sources: IHS Global Insight, Atradius Economic Research.

The failure of Lehman Brothers launched a wave of panic, leading to a serious crunch in credit markets and failure of many financial institutions. Economic conditions continued to deteriorate sharply in the first quarter

³⁸ We link the numbered events in the text to the developments in peripheral bond yields in the graph below.

³⁹ Already in March 2008, the New York investment firm Bear Stearns had become the victim of a run on the bank as the sub-prime mortgage problems unfolded. JPMorgan Chase bailed out Bear Stearns, paying just USD 2 a share to take over the investment firm, which at the beginning of 2007 was trading for as high as USD 170 a share. The bankruptcy of Lehman Brothers on 15 September 2008 was quickly followed by a number of large financial failures. On 16 September the Federal Reserve Bank of New York stepped in to bail out AIG, a large insurance company. Shortly after that, on 25 September, Washington Mutual was seized by federal regulators in what is by far the largest bank failure in American history. In Europe, the Benelux bank Fortis was nationalised by the governments of the Netherlands, Belgium and Luxembourg on 29 September.

of 2009, signalling deep contraction across most major markets for the full year (i.e. negative growth of significant magnitude). While the global economy started to recover in the second half of 2009, the November **[2]** elections in Greece led to a shift in power. In this process, it became clear that the Greek fiscal deficit was larger than previously announced: amounting to more than 10% of GDP. Against the background of these weaker-than-expected fundamentals, the yields on Greek government debt started to increase rapidly relative to its Eurozone peers.

Following several months of gradually deteriorating market conditions, Greece's increasingly difficult funding situation became unsustainable. In May 2010 **[3]** Greece received its first financial support package, worth EUR 110 billion, put together jointly by the IMF and other Eurozone members. In addition, the European Union and the IMF mobilised a EUR 750 billion rescue fund to buffer against further funding shortages. Around this time, the European Central Bank (ECB) also initiated its Securities Markets Programme (SMP).⁴⁰

In parallel to the deterioration in Greek funding capacities, the large bank bailout action implemented by the Irish government in late 2008 started to weigh on sentiment. Following the sharp contraction in economic activity and deterioration in public finances, Ireland's increasingly difficult funding situation also became unsustainable. In November 2010 **[4]** Ireland, like Greece, received a financial support package - this time worth EUR 85 billion - put together jointly by the IMF and other Eurozone members. At the same time it was evident that Portugal was also on the verge of losing access to funding in capital markets, with contagion extending to all markets in the Eurozone periphery.

With the situation remaining critical, EU Finance Ministers assembled in mid-January 2011 to discuss an enlargement of the existing European Financial Stability Facility (EFSF). One month later, on the 14th February, they went one step further and agreed to establish the European Stability Mechanism (ESM), with a lending capacity of EUR 500 billion, a paid-in capital base, and collective action clauses. In March 2011 **[5]** a reformed EFSF structure, with increased lending capacity, was confirmed, to take effect in June. EU leaders also agreed on setting debt reduction targets and improving policy coordination, but the pressure continued to build up.

On the 8th April, an informal meeting was held to discuss a potential rescue package for Portugal. Following deterioration in its economic performance and poor public finances, Portugal's increasingly difficult funding situation finally became unsustainable. On the 16th May 2011 **[6]** Portugal receives a financial support package worth EUR 78 billion, put together jointly by the IMF and other Eurozone members. At this point, three Eurozone countries had lost access to funding in capital markets and the confidence showed no signs of abating.

On the 23rd June, a treaty was signed to launch the permanent ESM, to take effect from mid-2013. Two weeks later, EU finance ministers agreed to disburse another EUR 12 billion to Greece. As conditions in Greece rapidly worsened, it received its second rescue package, worth EUR 109 billion, on the 21st July 2011 **[7]**, including maturity extensions and private sector involvement. Around this time, the European Financial Stability Facility (EFSF) expanded in capacity to EUR 440 billion. Moreover, it was extended to include bond purchases in the primary and secondary markets, debt buybacks, bank recapitalisations and pre-emptive loans.

Crisis contagion in the debt markets continued to escalate, with Italian and Spanish bond yields steadily climbing. On the 4th August 2011 **[8]** the ECB extended its Securities Markets Programme (SMP) to purchase Italian and Spanish bonds, conditional on Eurozone approval of EFSF secondary market purchases. On the 16th September, an EU meeting was held in Poland, with representatives from the United States expressing their concern over the situation. The Eurozone debt crisis posed a risk to global financial stability and banking sector stress was growing.

⁴⁰ The Securities Markets Programme involves interventions by the Eurosystem in public and private debt securities markets in the euro area, to ensure depth and liquidity in those market segments that are dysfunctional. The objective is to restore an appropriate monetary policy transmission mechanism, and thus the effective conduct of monetary policy oriented towards price stability in the medium term. The impact of these interventions is sterilised through specific operations to re-absorb the liquidity injected and thereby ensure that the monetary policy stance is not affected.

On the 3rd October, following yet another meeting of EU Finance Ministers, Dexia was bailed out by the governments in Belgium, France and Luxembourg. This failure of a large and systemically important bank raised the temperature in the markets further, calling for resolute measures concerning bank recapitalisations. The critical situation required forceful measures and, on the 27th October 2011 **[9]** politicians agreed to further increase the capacity of the EFSF and the private sector pledged to write off 50% of the Greek debt. The uplift in financial markets that followed from this third bailout package for Greece was however brief. The announcement of a possible referendum over the Greek package increased uncertainty and sent markets into renewed turmoil. The Greek prime minister resigned and an interim government was put in place until the next elections, scheduled for March 2012.

The pressure in financial markets intensified rapidly and the crisis entered a new phase in November. The G20 summit of 3rd and 4th November concluded that the global recovery had weakened considerably since the previous meeting, particularly in advanced countries, leaving unemployment at unacceptable levels. In addition to the tensions in the financial markets, mostly due to the growing sovereign risks in Europe, the summit also signalled risks of a slowing of growth in emerging markets. The funding situation in Spain and Italy started to become critical, threatening the entire banking system and the EMU project as a whole. In response, the ECB stepped up its securities markets programme, purchasing Italian bonds. On the 30th November the Bank of Canada, the Bank of England, the Bank of Japan, the ECB, the Federal Reserve, and the Swiss National Bank announced coordinated actions in an attempt to ease the pressure on financial institutions and halt the escalating contagion.

But again, the long-term solutions to the debt crisis and the stability of the euro ultimately lay in the political domain. On the 5th December, French President Nicolas Sarkozy and German Chancellor Angela Merkel announced that they would press for a new treaty to strengthen Eurozone fiscal rules in an effort to restore confidence in the shared currency. They both rejected the idea of Eurozone government bonds as a solution to the crisis and said they would call for a bringing forward of the launch of the Eurozone's permanent rescue fund, the European Stability Mechanism, by one year: to 2012. On the 8th and 9th of December 2011 **[10]** a new step was taken in the direction of fiscal union at the European Summit in Brussels. Member states agreed to draft a treaty with targets on budget deficits and government debt levels, similar to the Maastricht Treaty of 1992, but this time with more automatic sanctions. This stance on budget discipline set the stage for a transfer union in which the core countries subsidise the periphery.

On the 21st December, ECB's first extension of three-year loans (LTROs) to the Eurozone banking system took place in accordance with an announcement made two weeks earlier. The ECB committed to meet the demand in full and the allocation amounted to EUR 489 billion, roughly comparable to 5% of aggregate Eurozone GDP, and involved the participation of 523 banks. This provision of longer-term funding to banks should strengthen their ability to fund other vital parts of the Eurozone economy, i.e. governments and non-financial firms. While this action has had a positive effect on yield spreads on government debt securities and on other financial assets, it is not clear what the ECB will do to offset the addition of funds under the LTRO. Since September 2011, the ECB's balance sheet has already expanded by more than EUR 300 billion, or 14%.

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