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Europe will work

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and reform its structural policies

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The European integration project, which began in the aftermath of the Second World War, and which has progressed step-by-step over more than 60 years, stands today at a critical juncture. The crisis in Europe has exposed a number of economic concerns with the 1999 monetary union – notably the lack of sufficiently strong fiscal discipline and of a Europe-wide fiscal authority. These problems have been compounded by large potential bank losses, both in a number of the periphery economies (particularly Ireland and Spain) and in core economies (particularly Germany and France). Market participants are still considering several different scenarios for the euro area – ranging from fiscal union, through remaining basically intact, to total break-up. We judge that the most likely outcome – our base case – is that the euro area will remain basically in its present form, and that none of the present members will leave. Europe's policymakers now seem to appreciate more clearly the nature and extent of the problems they face. Moreover, the political will to overcome them is strong.

Policy is advancing on a number of fronts. The full package seems bound to include stricter budget rules, policies to fix the banks, strengthened structural reform, macroprudential reform and perhaps a competitiveness "pact". Moreover, as the crisis-resolution mechanisms are made permanent, this stands to provide the euro area with many of the powers and tools required for long-term sustainability of monetary union. This present crisis is unlikely to be the last to afflict Europe: it may take further crises to impel policymakers to enact the full set of policies needed to create a truly sustainable monetary union. Europe's future path will not be straightforward. Even some years from now, monetary union may not have become fully sustainable. However, as structural policies bear fruit and structural characteristics converge, the union will become less prone to the sorts of problem that have been afflicting it, and better able to deal with new types of shock. This crisis may not be the last, but, provided that political will remains, we believe Europe will continue to advance, step-by-step, towards sustainability.

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Chapter III	–	Anatomy of the crisis	Bimal Dharmasena
Chapter IV	–	Policy challenges: the crisis and longer term	Preston Llewellyn, Jon Peace
Chapter V	–	The outlook for sovereign bonds and the euro	Jim McCormick, Nick Firoozye, Owen Job, Jens Nordvig
Chapter VI	–	New realities for bond managers	Vasant Naik, Mukundan Devarajan, Jeremy Rosten
Chapter VII	–	The outlook for European equities	Ian Scott
Chapter VIII	–	Enlargement and Emerging Europe	Peter Attard Montalto
Chapter IX	–	The future of Europe	
Annex	–	The Lisbon Treaty	Peter Attard Montalto

The authors of the report are employees of Nomura unless otherwise stated.

Foreword

As Asia's largest global investment bank, Nomura has long had a widespread presence across the whole of the Asian region. Nomura has also long had a significant presence in Europe, the Middle East and Africa, as well as in North America. But through its recent acquisition of the Asian and European businesses of Lehman Brothers, Nomura has now greatly increased its profile in Europe; and is also rapidly building out its presence in the United States.

We at Nomura thereby consider ourselves well placed to serve our rapidly expanding global client base. One of the ways in which we can do this is by undertaking serious research into the economic prospects of the principal regions that we serve.

With our roots in Asia, it was natural that the first of these Studies should concern the outlook for Asia. For that we asked Dr John Llewellyn, of Llewellyn Consulting, who had already published on a number of key thematic issues, including climate change, the prospects for India (while at Lehman Brothers), and the global implications of ageing populations (while at Nomura), to lead a Study looking at Asia in the broad. In so doing, he worked closely with our Asia-based economists, and drew freely on Nomura resources. The result, *The Ascent of Asia*, was published a year ago, and is available on our website.

The natural next step has been to turn our attention to Europe. For this, we asked Dr Llewellyn and Dr Peter Westaway, our Chief Economist Europe, to join forces. The original idea was that, examining the determinants of Europe's economic performance over the medium term, the Study would focus largely on the supply side. However, as the Western financial and economic crisis turned into a euro-area crisis, the Study of necessity had to consider a whole raft of further issues including, importantly, whether the euro area would continue in anything like its current form.

Dr Llewellyn and Dr Westaway, John and Peter, both of whom have extensive policy experience, have reached the conclusion that the euro area will survive, more or less in its present form. But to do so it will be necessary for its Member States to agree on, enact and enforce a number of fundamental reforms to the area's economic governance. And, if a number of the crisis economies are to achieve a satisfactory performance in the longer term, they will in addition have to enact a series of supply-side reforms.

In forming this view, John and Peter have drawn particularly widely upon Nomura resources – the Study has many contributions from Nomura's economists, its fixed income strategists, and its equity strategists. As a result the Study has a broad sweep. It starts with a careful look at the historical origins and imperatives that underpin the euro area, and then analyses the economic and policy causes of the current crisis in Europe, with emphasis on the analytics of debt, and the policy actions that seem, progressively, to be addressing many, though not yet all, of the current issues. The importance of Emerging Europe is explored, and further chapters look at the radical changes that are taking place in Europe's sovereign bond markets, and the implications of these for portfolio management. A further thoughtful chapter then considers the longer-run outlook for equities.

This Study is not the last word. The euro area is very much "work in progress." But we trust that our clients and other readers will find it useful and thought-provoking. And we particularly hope that readers will recognise and appreciate the breadth and depth of knowledge and expertise that Nomura brings to one of the most important issues of the period.

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The initiative and support for this Study came from **Hideyuki Takahashi**, Head of Global Research, **Tarun Jotwani**, Chief Executive Officer, Europe, Middle East and Africa, **Michael Guarnieri**, Global Head of Fixed Income Research, **Paul Norris**, Global Head of Equity Research, and **Paul Sheard**, Global Chief Economist.

Having published *The Ascent of Asia* in early 2010, Nomura sought a similar study on Europe – its prospects for the medium term, considered in a global context.

Scarcely had we started our work however than Europe, already buffeted by the Western financial/economic crisis of 2008, was plunged into further crisis, this time impelled by home-grown elements. Hence what started out as a study orientated primarily towards the medium-term determinants of growth acquired a more immediate and more urgent dimension.

This crisis in Europe has split economic analysts and commentators. Some foresee break-up of the euro area in the coming years. We, however, do not. Rather, we judge that Europe's leaders consider that Europe has too much to lose by breaking up, and hence that they will do whatever it takes to avoid that happening – and that they have the wherewithal to succeed. In forming that view, we have talked to a wide range of people, by no means all of whom agree with us. In offering our thanks, we of course stress that the judgements reached in this Study are our own.

The first raft of our appreciation is due to our three close collaborators, **Bimal Dharmasena**, **Dimitris Drakopoulos** and **Preston Llewellyn**.

Bimal undertook much of the basic research for the Study, and contributed to it at every level. Particularly importantly, he immersed himself deeply in the analytics of debt, thereby not only contributing to the backbone of the Study, but also finding ingenious ways to portray graphically the insufficiently-understood dynamic characteristics of debt.

Dimitris, who covers France, Greece, Ireland, and Portugal for Nomura Global Economics, not only provided a mine of information and analysis, but also displayed professional imagination and, in our view, sound judgement. He continually tested our thinking, all the while wrestling with data that are neither easy to penetrate nor, on occasion, as trustworthy as they might be.

Preston played a major role in helping to ensure that the historical, and even more the technical, material in the Study is presented in as clear, concise, and jargon-free a manner as possible. Preston worked through the entire text, sentence by sentence, to make sure that each said what it meant, and meant what it said.

Analysing the likely future of Europe involves understanding the interplay between politics, policy, and technical economic issues – what used to be called political economy – and few people do this well. We are grateful to those who gave of their time to discuss the future of Europe with us in those all-embracing terms.

Professor Iain Begg, Professorial Research Fellow at the European Institute of the London School of Economics and Political Science, has a deep knowledge and understanding of Europe and its governance. Iain was generous with his time in discussing, on a number of occasions, the principal ideas in this Study. And he kindly reviewed two drafts of Chapter 1. This would have been longer, and less satisfactory, but for his help.

Professor Jean-Paul Fitoussi, President of l'Observatoire Français des Conjonctures économiques (OFCE), a man of powerful and lively intellect, hosted one of us at a lunch in Paris that, as intellectually challenging as it was delightful, shaped our thinking considerably.

Dr Paola Subacchi, Research Director for International Economics at the Royal Institute of International Affairs (Chatham House), is also one of those particularly able to blend technical, policy, and political analysis in a powerful yet understandable way. We are grateful to her for a number of discussions.

William Keegan, himself not particularly keen on the euro, largely because of the flaws inherent in its construction, does not allow that to confuse his judgement about what is most likely to happen. William is uniquely able to place what is going on today in the broader sweep of Europe's post-war history: and his knowledge of European policymaking is legendary. He helped us through numerous conversations, spread over many months.

Special thanks are owed also to **Willem Buiter** who has forgotten more about debt crises than most will ever know. Willem's article *Sovereign Debt Problems in Advanced Industrial Countries* is a classic, and he was most generous, not least at a long lunchtime discussion in the Gulf, in sharing his thoughts with us.

Europe came up on the margins of virtually every meeting of the Accumulation Society this past year, and we benefited from observations by, among others, **Diane Coyle**, **Stephen King**, **Gerard Lyons**, **Bill Martin**, **Bridget Rosewell**, and **David Smith** (who has written much on this subject, and in 1999 wrote *Will Europe Work?*).

Europe's crisis being economic in origin but financial in its dynamics, it is difficult to understand how investors see the crisis, judge what they are likely to do, and assess how markets are likely to perceive the consequent policy reactions. We were therefore fortunate to have been aided by two highly experienced market analyst colleagues, **John Butler** and **Nick Firoozye**, who taught us a great deal. We also benefited from a fundamental discussion with **Jamil Baz**, whose penetrating mind led us to reflect on, and improved our understanding of, a number of issues at the interface of economic policy and market behaviour.

The situation in Europe's major banks lies at the heart of much of the current crisis in the euro area, and we could never have unravelled this area by ourselves. **Jon Peace**, Nomura's European banks' analyst, provided a cogent analysis and clear analytical presentation of the major banking issues, and wrote all of the sections on the banks in this Study.

The Western financial/economic crisis has stimulated interest in what has come to be known as "macro-prudential" regulation – policymaking in areas where the behaviour of the financial and economic system is qualitatively different from the simple sum of its parts. While it is far from clear what macro-prudential policies will finally be put in place in Europe, discussing the various current propositions enhances diagnosis of the crisis and its potential evolution. Here we were fortunate to have numerous helpful discussions, on a personal basis, with officials from HM Treasury, including **Angus Armstrong**, **Martin Beck**, **Creon Butler**, **Alastair Clark**, **Andrew Gurney**, and **Dave Ramsden**. And **Graham Bishop** not only discussed Europe's regulatory issues with us on a number of occasions, but also gave us access to his excellent website which carries and analyses all the developments concerning regulatory reform in Europe.

Assuming that Europe does indeed come through this crisis with the euro area still largely in place, reducing the very large debt/GDP ratios in many European economies will be possible only if they achieve brisk and sustained growth. And here it is structural policy reform that will be key. The Organisation for Economic Cooperation and Development (OECD) is the foremost body in this area, having over the past several decades assembled a mass of cross-country evidence and analysis. We are therefore particularly grateful for help from, and discussions with, **Andrew Dean**, **Jørgen Elmeskov**, and **Richard Herd** in the Economics Department. And we are grateful also to **John Martin**, Director of the OECD's Directorate for Employment, Labour and Social Affairs, and his colleagues, both for their excellent analytic and quantitative work in the all-important area of labour market reform, but also for their willingness to elaborate on it in numerous discussions and communications.

Europe today cannot be understood except in terms of its politics and its policymaking, about which **David Marsh** has great knowledge and experience. His extraordinarily well informed book *The Euro: The Politics of the New Global Currency,* is indispensable reading. We are grateful to David for several discussions, including at a long, slow dinner in London in which he expounded on a number of issues, and offered us intriguing insights which informed us considerably.

Emerging Europe will be a major part of Europe's future. In addition to discussions with **Peter Attard Montalto** (who has a chapter in the Study), we also had a most informative dinner discussion with **Erik Berglöf**, Chief Economist at the European Bank for Reconstruction and Development (EBRD), and his colleague, **Jeromin Zettelmeyer**.

Officials from a range of countries spoke widely and freely to us. Some prefer not to be named, but they know who they are, and are aware of our gratitude.

This Western crisis, and the additional crisis in Europe, has called into question not only economic policymaking, but also major parts of the theory on which it has been based. Post-crisis policymaking has had a distinct Keynesian flavour. But that is deceptive, not least because the problem was not necessarily, or certainly not only, a major deficiency of aggregate demand, but also a crisis of confidence combined with frozen or broken markets. We were therefore particularly fortunate to have a number of exchanges with **Max Corden** when he was writing his recent rethink of Keynesian theory, which resulted in *The theory of the fiscal stimulus: how will a debt-financed stimulus affect the future?*

John Nugée placed Europe's crisis usefully in long historical context and, most instructively, contrasted the approach of the US authorities with those in Europe. We also had valuable conversations with **Kate Barker**, **Simon Commander**, **Martin Donnelly**, **Andrew Fraser**, **Ian Harwood**, **Gerald Holtham**, **Mike Hume**, **Russell Jones**, **DeAnne Julius**, **Flemming Larsen**, **Thomas Marsoner**, **Peter Norman**, **Jan Fredrik Qvigstad**, **Pete Richardson**, **Odile Sallard**, **Herwig Schlögl**, **Andrew Sentance**, **Coen Teulings**, and **Michael Tory**.

In forming our view that Europe would do what it takes to come through this crisis with the euro area essentially intact, we tested the arguments for and against with a number of analysts. A particularly well-argued case for break-up was advanced by **Christopher Smallwood**, in an article published by Roger Bootle's Capital Economics. While we do not share Christopher's view that a break-up of the euro area, along north/south lines, would be in the economic or political interests of the two groups of countries, we recognise that there is a strong argument that cannot be dismissed. If we prove to be wrong in our basic judgement, it will be because we misunderstood, or misunderstood the force of, the principal arguments that Christopher so cogently advances. We are grateful to Christopher for a number of serious and engaging debates on the subject.

Many other members of Nomura made important contributions. Substantial written contributions are generally acknowledged in the text proper, and we would particularly like to acknowledge those by **Mukundan Devarajan**, **Nick Firoozye**, **Owen Job**, **Jim McCormick**, **Vasant Naik**, **Jens Nordvig**, **Peter Attard Montalto**, **Jon Peace**, **Jeremy Rosten**, and **Ian Scott**. In addition, **Alexandra Wilson** contributed usefully to Chapter 1. More generally, we owe much to **Paul Sheard**, Global Chief Economist, who was a solid source of support and encouragement throughout, as well as to **Jim McCormick**, **Michael Guarnieri**, and **Paul Norris**.

Brigid Janssen, who in an earlier life tutored one of us about the interrelationship of form and substance, and herself took this to a high level in her work on the OECD's *Jobs Study*, applied her constructive critical faculties to how best to present this Study. We are most grateful to her.

Kate Banham and her team then went carefully through the entire report, editing and re-checking everything from the drafting to the logic. And we are obliged also to **Diane Morrish** and **Ruth Llewellyn**, both of whom read the final, final version with great care. Inevitably, however, errors will remain, and for those we ourselves are solely responsible.

The cut off date for information in this Study is 24 February 2011. ■ John Llewellyn and Peter Westaway

Executive Summary

- The European integration project, which began in the aftermath of the Second World War, and which has progressed step-by-step over more than 60 years, stands today at a critical juncture.
- Monetary union was Europe's boldest step. While many economists argued that Europe was not yet ready, in 1999 political will trumped economic concerns: the euro area was established.
- Now, with the crisis in Europe, a number of these economic concerns have materialised – notably the lack of sufficiently strong fiscal discipline and of a Europe-wide fiscal authority.
- These problems have been compounded by large potential bank losses, both in a number of the periphery economies (particularly Ireland and Spain) and in core economies (particularly Germany and France).
- The euro area has the resources to deal with these (public and private) debt problems; in 2010, euro-area public debt was 84% of euro-area GDP, and its public deficit was 6%.
- The equivalent US public debt is over 90% of US GDP, and the US deficit, at over 11% of GDP, is almost twice that of the euro area.
- Moreover, it is likely that, over the next few years, US public debt will rise by more than that of the euro area. Nevertheless, market attention remains focused (at present) on Europe.
- The US moved earlier to address its banking issues; Europe has moved earlier to address its fiscal issues. Each must now follow the other's example if each is to overcome its debt challenges.
- The Lisbon Treaty – the determining document of current European political, economic, and institutional integration – has proved, and is continuing to prove, sufficiently flexible to allow important steps to be taken.
- The ECB's Securities Market Programme, the EU/IMF packages, and the establishment of the European Financial Stability Facility have created breathing room for Greece, Ireland, and Portugal.
- However, should a private and/or public debt crisis engulf Spain, this would be of systemic importance for the euro area: Spain is almost twice the economic size of Greece, Ireland, and Portugal combined.
- Hence, for the euro area finally to turn the corner, policy needs to create a firebreak before Spain. To do this, Europe must deal with its banks, starting in Spain.
- The cost of recapitalising the Spanish banking sector could be between €43bn and €80bn. Savings banks are the key risk, but if larger banks can raise enough equity, the cost could be as little as €24bn.
- Beyond that, Europe, in particular the euro area, faces longer-term, wide-ranging issues, some new and some old, spanning macroeconomic, structural, and institutional policies and settings.
- Large fiscal consolidations are required in Greece, Ireland, Portugal, and Spain. Public sector surpluses will have to be sustained for many years to put public finances on a sustainable footing.
- There are political limits to the feasible scale of fiscal retrenchment. However, further debt relief could be forthcoming once the banks have been fixed, and countries have eliminated their public sector deficits.
- Economic growth in the periphery economies is likely to be weak for some years because devaluation is not an option, structural settings are weak, and competitiveness cannot be increased quickly.
- Economic growth is the prime determinant of sustainability. Structural reforms being implemented in Greece, Portugal, and Spain in particular, have the scope progressively to increase growth in the long term.
- Emerging Europe is frequently overlooked in popular current discussion of Europe's future. However, enlargement is important – for the EU, the euro area, and the economies of Emerging Europe.
- Aspiration to join both the EU and the euro area is strong in Emerging Europe. Estonia joined the euro on 1 January 2011, and by 2020 a further eight countries, including Hungary and Poland, are likely to join.
- Continuing convergence stands to bring benefits to both areas. Collectively, the countries of Emerging Europe are likely to grow faster, perhaps considerably so, than the EU over the next several years.
- However, there are a number of difficulties to overcome. Enlargement will not solve the euro area's deeper problems, and it has moved down the priority list, at least for a while.
- Market participants are still considering several different scenarios for the euro area – ranging from fiscal union, through remaining basically intact, to total break-up.

- Any break-up would check the process of European integration, which was designed to be irreversible. Most probably the consequences would be tumultuous for the entire euro area and beyond.
- We take the declaration by the Heads of State on 16 December 2010, that they are "ready to do whatever is required" to protect the euro, as meaning what it says.
- Neither Chancellor Merkel nor President Sarkozy is likely to wish to go down in history as having presided over the dissolution of the euro area.
- Hence, we judge that the most likely outcome – our base case – is that the euro area will remain basically in its present form, and that none of the present members will leave.
- The sovereign debt crisis has fundamentally changed attitudes towards risk; investment decisions have become more complicated in light of this new risk paradigm.
- **Sovereign bond markets**. Risk estimates in this asset class have increased by more than 30% since the collapse of Lehman Brothers, with spread risk accounting for more than a third of the overall risk.
- With spread and credit risks coming to the fore, investment decisions have become more complicated: sovereign portfolio managers must include a healthy dose of credit analysis in their investment process.
- As the many policy uncertainties are removed, debt levels stabilise, and many temporary fixes are made permanent, equilibrium spreads will be determined largely by countries' fiscal situations.
- In our base-case "no break-up" scenario, spreads of peripheral sovereign debt to Bunds could tighten from current levels. In equilibrium, we believe average periphery spreads could narrow to approximately 90bp.
- **The euro**. In our base case, the risk premium of the euro gradually declines from its current level of about 10% to its pre-crisis level of around 3%.
- The real interest rate differential between the US and the euro area in turn stands to normalise towards its long-term average – a 20bp differential in favour of the US on the expected 10-year real rate.
- With US inflation slightly below 2%, euro-area inflation close to the ECB target, no major impact from a shift in reserve currency status, and no impact from a shift in valuation, the euro could reach 1.45 around 2015.
- **Equity markets**. We are optimistic regarding the outlook for European equities. Valuations are low, earnings growth is healthy, and the impact of the sovereign debt crisis looks to be overdone.
- We therefore continue to expect a 17% return from European equities in 2011 and continue to recommend overweighting financials.
- **Bank valuations**. A core/periphery (north/south) divide seems likely to persist as an investment theme for many years, given the long periods of adjustment necessary to bring debt back down to stable levels.
- Banks in the more leveraged periphery will likely continue to see slower loan growth, weaker margins, and weaker credit quality. Earnings will therefore likely continue to underperform those in core/northern Europe.
- **Conclusions**. Europe – being a collection of individual and individualistic nations – seems to need a crisis to provoke the reforms that are needed to prevent future crises.
- Europe's policymakers now seem to appreciate more clearly the nature and extent of the problems they face. Moreover, the political will to overcome them is strong. Policy is advancing on a number of fronts.
- The full package seems bound to include stricter budget rules, policies to fix the banks, strengthened structural reform, macroprudential reform, and perhaps a competitiveness "pact".
- Moreover, as the crisis-resolution mechanisms are made permanent, this stands to provide the euro area with many of the powers and tools required for long-term sustainability of monetary union.
- This present crisis is unlikely to be the last to afflict Europe: it may take further crises to impel policymakers to enact the full set of policies needed to create a truly sustainable monetary union.
- Europe's future path will not be straightforward. Even some years from now, monetary union may not have become fully sustainable.
- However, as structural policies bear fruit and structural characteristics converge, the union will become less prone to the sorts of problem that have been afflicting it, and better able to deal with new types of shock.
- This crisis may not be the last, but, provided that political will remains, we believe Europe will continue to advance, step-by-step, towards sustainability.■

Contents

From Marshall Plan to monetary union

To understand what Europe's future may hold, and in particular what the future of the euro area may be, it is necessary to understand, at least in broad outline, the region's recent history.

- Following two world wars Europe faced severe economic, social and political problems.
- Western leaders responded with a forward-looking vision that saw increased integration as the key to a strong united Europe and a long-lasting peace.
- Integration has proceeded in stages. It took until 1968 to form the Free Trade Area and Customs Union, and a further 25 years to complete the Single Market.
- The first stage of monetary union was implemented in 1999.

Europe's integration process has been long, and has involved considerable political commitment.

Introduction

There is a range of views on how best to define Europe. Basically, the region forms the Western-most part of the Eurasian supercontinent, with its eastern-most boundary with Asia typically taken as the Ural Mountains, the Ural River, and the Caspian Sea. To the south-east, the boundary is usually taken to be the Caucasus Mountains and the Black Sea.

Today Europe accounts for around one third of global GDP. Around 90% of this GDP is generated by the European Union (EU), the world's largest economic area,[1] with the world's third largest population. Within the EU, 17 of its 27 Member States have adopted the euro, the world's second most important international currency, known, by a generation of school children, as their only sovereign currency. (For more see Boxes: *Europe's institutions* and *Europe today*).

The roots of Europe's advanced integration are deep, and stem back to two world wars.

Europe in the aftermath of World War II

After two world wars Europe's economies were devastated

In 1945, following the end of the Second World War, the economies of Europe were physically devastated. Years of bombing and conflict had destroyed infrastructure, and killed or displaced millions of people. Demobilisation was set to release millions of soldiers into civilian life, into economies geared to the production of the materiel of war rather than the needs of peacetime.

Europe, from its Atlantic coast right across to Russia, thus faced two urgent and pressing needs:

- Reconstruction and restructuring of its war-torn economies; and
- Putting in place policies and structures – political, military, and economic – to prevent such a conflict ever happening again – something that had manifestly not been achieved after World War I.

The first major development as the war ended was the emergence of an East-West divide. By 1946, what UK Prime Minister Winston Churchill called an *'iron curtain'* had *'descended across the Continent'*.[2] By 1948 most countries in Eastern Europe, many of which had been independent, found themselves under the Soviet Union umbrella or as satellite states aligned with the Soviet Union:

- The Baltic countries, under soviet rule: Estonia, the Western part of Romania (modern day Moldova), Latvia, Lithuania, Ukraine, and Byelorussia (modern Belarus).
- The satellite states, with communist governments: Albania, Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, and Romania.
- Yugoslavia – a communist dictatorship under Marshal Tito – remained independent, notwithstanding great pressure from the Kremlin.
- Austria was occupied by the Soviet Union, but communism was never imposed.

In many Western countries, meanwhile, economic adjustment was proving difficult and painful, economic growth was hesitant and slow, and there was significant political disillusionment, Communist parties were gaining a hold, often through democratic means. Italy in particular had

a strong and influential communist party. The rapid advancement of communism in Europe – reminiscent for many of the rise of the Nazi party in the 1930s – and the Soviet Union's growing sphere of influence caused unease in the West. Relations between West and East deteriorated, marking the beginning of the Cold War between the Soviet Union and its former allies.

A forward-looking vision for a strong and united Europe

Amid increasing fears of another war and a growing Soviet bloc, Western leaders sought to rebuild Europe so as to form a strong economic and democratic bloc to face the power from the East. Particular care needed to be directed at Germany. The economic, military, political, and territorial restrictions imposed at the Treaty of Versailles after WWI had caused much resentment there, and fuelled nationalistic ambitions that, in part at least, led to WWII.

Leaders saw closer integration as key to long- lasting peace

Led by the US, western policymakers saw not just greater co-operation, but increased integration between Western nations, as the primary way of re-establishing economic growth and prosperity, and thereby reducing the future likelihood of such conflicts. Indeed, even before the end of the war the allied nations had, at Bretton Woods in July 1944, laid the foundations for post-war international monetary and financial order. Agreements were signed to establish:

- The International Monetary Fund (IMF);[3]
- The original institution of the World Bank, the International Bank for Reconstruction and Development (IBRD); and
- A system of fixed exchange rates and convertibility of currencies.[4] World currencies were to be pegged to the US dollar, and be kept within +/- 1% of parity.[5]

As regards Europe, unity and prosperity were seen as the essential foundations for sustained peace. Jean Monnet in 1943:

> *"There will be no peace in Europe, if the states are reconstituted on the basis of national sovereignty... The countries of Europe are too small to guarantee their peoples the necessary prosperity and social development. The European states must constitute themselves into a federation..."* [6]

Not all Americans found the argument convincing, however. George Ball, an American diplomat at the time, questioned Monnet's attitude to, and hopes for, a united Europe, asking:

> *"Was Monnet really right in believing that a change in institutions would cause men and women to conform their thoughts and actions to a new set of principles? Could allegiance to a united Europe someday play the same activating role that national sovereignty had played in the past?"* [7]

The United Kingdom, although playing little direct part in the founding of the new united Europe, considered it important that unity in Europe be achieved. Its prime minister, Winston Churchill, was early in calling, in 1946, for *'a kind of United States of Europe'*, saying that:

> *"If Europe were once united in the sharing of its common inheritance, there would be no limit to the happiness, to the prosperity and the glory … its ... people would enjoy."* [8]

Robert Schuman, Prime Minister of France from 1947 to 1948, initiator of many of Europe's key institutions, the Schuman Declaration, and regarded as one of the founding fathers of the European Union,[9] believed:

> *"Our century that has witnessed the catastrophes resulting in the unending clash of nationalities and nationalisms, must attempt and succeed in reconciling nations in a supranational association."* [10]

The US provided substantial aid to Europe

The recovery and reconstruction of Western Europe was facilitated in large part by the Marshall Plan, whereby the US provided not only substantial material aid – over 5%-odd of US GDP over about four years[11] – but also, and probably in the long run even more importantly, the transfer of knowledge concerning the institutions and policies necessary to construct and operate a large modern economy. The Organisation for European Economic Co-operation[12] (OEEC) was established, in 1948, to design the initial economic structures and policies, and to distribute the US aid to its seventeen members as they took their first steps towards creating a progressively more open and unified European economy. (For more information see Box: *The Marshall Plan*.)

The Marshall Plan

*Europe's US-led post-World War II reconstruction policies laid the intellectual foundation for a wider world.**

Europe's experience in the years immediately following World War II was that any single-country economic recovery risked creating, through higher imports, an unsustainable deficit in the current account of the balance of payments. This obliged the authorities to tighten policy to reduce the demand for imports. However, the unfortunate corollary was that the slowdown in deficit countries' imports in turn slowed partner countries' exports, spreading the slowdown.

The risk was that Europe as a whole would fail to sustain economic recovery and that political discontent would grow – Italy, and, increasingly, France, were at risk of going communist. The spectre of Western Europe falling under the influence, if not the domination, of the Soviet Union troubled leaders on both sides of the Atlantic, who had seen, in Germany post-1918, the discontent and, ultimately, the tumult, that could flow from national economic failure.

Hence, not least to safeguard its own interests, the US conceived the Marshall Plan, officially the European Recovery Plan (1948-1952). The Marshall Plan is remembered by many primarily for its generosity: at its peak, in 1949, the US was transferring annually nearly 2½% of its GDP to Europe.

Arguably, however, the even greater contribution of the Plan was to lay the intellectual, and thereby the policy, foundations for the development of Europe and beyond.

Executed through the Organisation for European Economic Cooperation (OEEC), the Marshall Plan formulated a series of internationally compatible economic recovery plans based on two fundamental economic principles:

- One country's imports are another country's exports, so that a recovery in one, provided that it is sustained, induces recovery in others; and
- Guaranteeing free trade among partner countries is the best way to generate the confidence that is required for investment to take place on a scale sufficient to sustain economic growth in partner economies collectively.

The policy succeeded. In the words of historian Alan Milward (1984) "…there developed in the reconstruction period an institutionalized pattern of economic interdependence in Western Europe which was a better basis for Western Europe's economic and political existence than the comprehensive regulation by treaty of major political issues which was attempted after 1918 and which failed."

The four years of the Marshall Plan itself saw the fastest period of growth in European history. The poverty and starvation of the immediate post-war years progressively disappeared, and the threat of communism sweeping Continental Europe receded. Thereafter, Western Europe experienced an unprecedented two decades of sustained increases in living standards and social conditions, together with the sought-for political stability.

Many of Europe's policymakers came to see the benefits of economic integration through the free movement of goods, services and capital; and this encouraged them to continue to pursue such policies, through the progressive further easing of trade barriers, including, importantly, tariff reductions, and the setting-up of institutions to coordinate the development of Europe's economies. Establishing the European Commission provided further impetus in a number of directions. The most important, in the minds of many, has been its active, dogged, and basically successful policy of creating the single European market.

Not all policies have been so well regarded. The Common Agricultural Policy in particular, which for years led to over-production of many basic agricultural commodities, has been criticised by many, including by the US. However, this policy did much – as did agricultural protection in Japan – to prevent income differentials between rural and urban areas from widening to levels that could have proved socially and politically unacceptable.

In due course, the US vision that gave rise to the Marshall Plan was extended to other countries. In 1961, the US and Canada joined, and the OEEC was transformed into the Organisation for Economic Cooperation and Development (OECD). And then, most notably perhaps, in 1964 Japan was brought into the Organisation, and thereby into the "club" of economies that espoused and practiced the free international flow of goods, services and capital.

Intriguingly and largely unexpectedly, one of the greatest successes of the EU was to come later still. By the time of the collapse of the former Soviet Union, in the early 1990s, Western Europe had become a rich, prosperous, market-based economy approaching the size of the US. The EU thus acted as a powerful magnet for the smaller countries of the former Soviet Union, enabling them to become democratic, materially richer and socially more stable than could have happened had there not been a modern and prosperous Europe to which to adhere.■

**This account is based on conversations between the author and various Marshall Plan participants – most now deceased. Two useful references include Marjolin (1986) and Milward (1984).*

Europe's integration 1949 to 1969

The ECSC was Europe's first supranational community

The first international organisation to be created to foster European integration was the Council of Europe, on 5 May 1949. Then the Schuman Declaration, almost exactly a year later on 9 May 1950, renewed co-operation between France and Germany, and proposed the formation of a "common market" for two core industries of the time, coal and steel. In 1951 France, Germany, Italy, Belgium, the Netherlands, and Luxembourg formed The European Coal and Steel Community (ECSC), Europe's first supranational community. (Many years later, in 1985, 9 May was designated 'Europe Day', to commemorate the first move towards creating what is, today, the EU).

The Treaty of Rome created the EEC and set the objective of the single market

In 1957, the Treaty of Rome was signed, a landmark moment for European integration. The treaty aimed to enhance economic co-operation, strengthen the unity of the economies, and expand the efficiency gains of the common market beyond heavy industry. The treaty created the European Economic Community (EEC) and the European Atomic Energy Community (Euratom). (For more information on Europe's Treaties, see Box: *The ties that bind: the Treaty base of the EU.*)

Integration was to proceed in stages

The latter aimed at greater co-operation on nuclear power. The EEC, initially consisting of the six ECSC member nations,[13] was assigned with overseeing European integration and establishing a single common market, with a common external trade policy; and a free trade area, with the free movement of goods, services, capital and labour between its Member States. Economic integration was to proceed in stages.

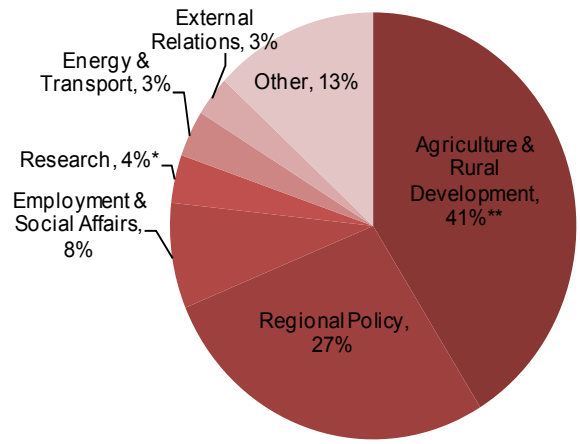
In 1960, Austria, Denmark, Norway, Portugal, Sweden, Switzerland and the United Kingdom established the European Free Trade Association (EFTA) as an alternative trading bloc, for European countries either unable, or not wishing, to join the EEC.[14]

In 1961, the United Kingdom, Ireland, and Denmark applied to join the EEC. The UK's application however was vetoed by French President Charles de Gaulle in 1963, after which negotiations with all applying nations, including Norway's in 1962, were suspended. The four countries were to try again in 1967, only to receive the same treatment. Norway (along with Switzerland) to this day remains outside the EU.

The CAP was established in 1962

In 1962, the Common Agricultural Policy (CAP) was established. Its aim was to provide financial incentives to the farming communities of Member States to ensure that Europe had a viable, productive agricultural sector for a stable and more nearly self-sufficient food supply. Over the decades expenditure on the CAP has risen steadily. As a proportion of the EU's total budget however, expenditure has, over the past 20 years, decreased from its peak of almost 75% in the mid 1980s, to under 45% in 2009, notwithstanding successive enlargement of the EU. This has been due, in large part, to successive reforms. (For more information on the European budget, see Figure 1.)

Figure 1. Expenditure of the EU budget 2010, by policy area



The EU's annual budget, compared to the euro area's GNI, is relatively small at around 1.2% in 2010 (€141.5bn)

The European Parliament and the Council of the European Union share legislative and budgetary power including for the EU's annual budget

The EU budget is not a stabilisation instrument, but a fund to improve the life of its citizens

Over 40% of the EU budget is spent on agriculture and rural development

Source: The General Budget of the EU for financial year 2010
Notes: * includes direct research. ** of which market related expenditure & direct aid to agriculture accounts for over 75%

The ties that bind: the Treaty base of the EU

Peter Attard Montalto

Authority to bind the 27 Member States together is derived from the treaty base of the EU, whereby sovereign states cede authority in certain areas to the European Union. The Lisbon Treaty however takes things a step further.

The EU in its present form is the product of a more-than-60-year process, whereby Member States have agreed to co-operate in a progressively larger number of areas. A succession of treaties over the years has created numerous different bodies and overlapping centres of power ('competences'). However, in 1992 the EU became one body, under a single consolidated Treaty, which defines the institutions of the EU and their powers ('competences') over certain areas where Member States have ceded national authority.

The process has been pursued in the spirit of the Schuman Declaration of 1950, which set out the aims of collectivism and solidarity, peace, and a step-by-step process to build a supranational, unified democratic Europe (which today might be dubbed a 'superstate').

The legal foundations of the EU were originated in the Treaty of Brussels in 1948, which was fundamentally a mutual defence and security agreement. Separately, in 1951, the Paris Treaty established the European Coal and Steel Community (ECSC). This was, and remains, of considerable significance as an organisation that ties France and Germany together in their energy and industrial needs, so essential in consolidating the peace after World War II. It was followed in 1957 with the creation of the European Atomic Energy Community (Euratom), which further tied Member States together, in the area of nuclear energy.

However the Treaty of Rome, in establishing the European Economic Community (EEC), also in 1957, brought Member States together in a more far-reaching way, with Europe becoming a supranational entity across multiple competences. Common policies were established for agriculture, transport, and trade, to bring about a customs union with a common tariff policy. It also charged the Union with seeking its own enlargement; and it brought into being the European Commission, the European Parliament, the European Council and the European Court. Although these institutions have since evolved somewhat, their basic form and aims remain unchanged (for more information, see Box: *Europe's institutions*). Thus was formed the EU as it is today. Freedom of movement and open borders were then defined in the Schengen Agreement in 1985.

The first major revision to the Treaty of Rome was made with the Single European Act in 1986, whereby Member States ceded further competences to Europe. In particular it created a free market for capital, goods, services, and labour through the creation of a single market rather than just a customs union. The Treaty was born out of disquiet among Member States in the 1980s on the limits to the benefits they were receiving from Europe, because of internal trade restrictions and apparent political deadlock. The Treaty also speeded up the process of policymaking within the European Community and allowed its institutions more readily to take on a life of their own. The Treaty also formalised European political cooperation (EPC), which started the process of sharing a common foreign and security policy.

Institutionally, there was a big leap forwards in 1992 with the Maastricht Treaty (also called the Treaty on European Union), where the European Union (EU) as an entity first came into being, though in a very different form. It comprised three separate pillars – the European Community (EC), which took over from the previous EEC and was governed by 'community integration' (the Commission, the European Parliament, and the Council structure); the Common Foreign and Security Policy (CFSP); and the Police and Judicial Co-operation in Criminal Matters (PJCC), the last two being governed by 'intergovernmental cooperation' (separate agreements on a multilateral basis). Additional competences were ceded to these bodies, including competition, common agricultural policy, research policy, environmental law, social policy, energy, consumer protection. The Treaty also established the euro as a policy goal of the single market and laid out the rules for joining – from where the 'Maastricht Criteria' got their name. The two other pillars also extended co-operation more systematically into other areas. The Treaty of Amsterdam signed in 1997 took many of these areas of power further, and also introduced the High Representative for EU foreign policy and importantly established the ECB.

The Treaty of Nice in 2001 paved the way for the expansion of the EU to the current 27 Member States, and provided for the institutional reforms that were necessary to accommodate these new Member States, as well as a number of other changes. Of note Qualified Majority Voting (QMV) was added in a wider range of areas of policymaking in the Council, replacing unanimous voting, considered to be less effective for the development of operational policy (due to the risk of veto). However, the Treaty was widely criticised for not going far enough in promoting further integration or undertaking more serious institutional reform, and it kept the three-pillar set-up. In the light of this criticism and the considerable time taken to ratify it, the EU decided that a further big-bang change was needed. In December 2001 the European Convention was signed. This eventually produced the draft text for a constitutional treaty, the aims of which were far broader than previous treaties in that they sought to define not only specifics of competences and institutions of the EU, but also the broader aims, even the 'precepts', of Europe. It also provided for wide-ranging new powers for the EU in more policy areas, and new Community posts including President of the European Council and High Representative of the Union for Foreign Affairs and Security Policy.

An intergovernmental conference, whose purpose was to move the draft text of the Constitution towards a treaty that could be signed, watered down some of the proposals that were deemed by many to be too integrationist. The final text was then submitted for ratification by the Member States, but the process fell apart with 'No' votes in referenda in France and the Netherlands. The Constitutional Treaty died there, and the EU entered a 'period of reflection' through to 2007.

At this time the German Presidency of the Council, determined to drive the EU project forwards, took the existing draft Constitution through another intergovernmental conference. The result was a document broadly similar in many ways to the original constitution, but with a number of important country-specific opt-outs that were granted to drive the process through to ratification. The Treaty of Lisbon was eventually signed on 13 December 2007, and the difficult process of ratification began in individual Member States. The failure of the first Irish referendum, as well as some issues in the Czech Republic, resulted in the Treaty finally coming into force in December 2009, 11 months later than planned.

The Treaty of Lisbon

The Treaty of Lisbon comprises two parts, the first The Treaty on European Union, the second The Treaty on Function of the European Union.

The first is still very constitutional in its style, even though it is not formally a constitutional treaty. Its introduction talks of the beliefs and precepts of the Union, and establishes the European Union as having a 'legal personality' that makes it more state-like than a collection of individual states. It also removes the previous three pillar system in favour of one single European Union that has exclusive competence in some areas including monetary policy, customs union, the internal market, and economic cohesion; and shares competences with Member States, where both have powers.

Moreover, a co-ordinating role was established in many other policy areas, including general economic policy and foreign and security policy. The first part also has procedures for how the Treaty can be amended further by the Council, and provides for the Council to undertake much faster treaty revisions using the 'simplified revision procedure', one option of which is the 'Passerelle Clause' that allows Member States to shift decision-making in certain areas to the more rapid QMV.

The second part of the Lisbon Treaty amalgamates the existing Treaties into one, and defines in detail the competences and rules of the European Union, including on economic policy. The use of generalities and broad principle, as opposed to detailed prescriptions in both parts of the Treaty, also make it more constitution-like.

The Treaty of Lisbon is a big change from the step-by-step process of previous treaties. In some ways it is the final treaty, having established a single European Union, and has the ability to amend itself in faster and more simplified ways. The generality of its provisions in many areas also allows for much greater power for the Commission, and the Parliament and Council together, under a new 'co-decision' framework to advance policy in areas in which the EU has competence.

Policy can now be made by a quasi-sovereign entity through a simple vote, rather than through intergovernmental conferences and long processes of ratification. Significantly, the Treaty also has the explicit ability to amend itself (rather than simply laying down the provisions for new policy where power is already given up, or how new treaties should be formed). The issue is whether this framework is sufficient or whether further powers will have to be given to the EU. The Lisbon Treaty does allow for greater co-operation between subsets of Member States, but it remains to be seen whether this will be taken up for fear of a two-speed EU. (For more see Annex: *The Lisbon Treaty*.)

Throughout the process of successive treaties, the Commission in particular has gained an increasingly important role, both as 'guardian of the Treaties' and the process of treaty change, but also in driving the process of EU integration forwards to ever-closer union. Such a role is in part a result of the additional powers it has been given by those very treaties (much of the generality on policy aims, but also a result of an understanding of the need for a constant actor that can overcome the vagaries of a European Council, which is fundamentally a political organ of Member States).

This role stands to be solidified during the current crisis, though other EU institutions have also been gaining power in a similar fashion, most notably the European Central Bank, with its role in not only monetary policy, but as a wider guardian of economic and fiscal policy integration. Particularly in these difficult times, where the politics of integration are coming up against domestic politics, these integrationist actors will play a key role in policy formation.

These facts are important for considering the response of the EU to its current economic challenges – a matter considered further in Chapter IV: *Policy challenges: the crisis and longer term*.■

In 1967, following ratification of the Merger Treaty of 1965, the EEC, the ECSC and Euratom were combined to form the European Communities (EC), comprising a single Council and a single Commission. [15] The Commission was appointed 'Guardian of the Treaties', tasked with ensuring that legislation approved by the European Council was properly implemented in the Member States. (For more information on the institutional framework that exists today, see Box: *Europe's institutions.*)

The Free Trade Area and Customs Union took until 1968

By 1968, tariffs and quotas for imports from Member States had been abolished, marking the formal creation of the Free Trade Area. In the same year, 18 months ahead of schedule, customs duties and controls between the original six nations were abolished, allowing, for the first time, 'free' and more fluid cross-border trading between the Member States. Common external tariffs and quotas were also set up for trade with countries outside the community. Import duty was now paid at the EC's external border, and was the same, irrespective of which Member State the imports were destined for.

Creation of the customs union completed the next main stage of Europe's economic integration. The single trading area, with its fewer impediments, boosted inter and intra-European trade, bolstering Europe's period of strong economic growth – "Les Trentes Glorieuses"[16] – and helped the area to become the world's largest trading group.

Expansion and closer integration 1970 to 1990

The UK, Ireland and Denmark joined the EC in 1973

In 1969 the French president Charles de Gaulle resigned, and accession negotiations resumed. In a referendum in 1972 the Norwegians voted against joining the EC. The UK, Ireland and Denmark, however, joined the following year, marking the first of the Community's expansions. That same year, negotiations began for a future agreement with Spain, under the regime of General Franco.

Europe's last dictatorships fell by the mid 1970s

Over the following two years Western Europe's last dictatorships – the long-running Estado Novo regime[17] in Portugal, the regime of the Colonels in Greece, and General Franco's regime in Spain – came to an end, making way for further enlargement of the area. Over this same period, [18] political leaders agreed the need to include a democratic element to the EC's parliamentary process. The first direct elections for a European Parliament took place in 1979, filling the 410 seats, and were to take place every five years after that.

In 1975, amid a period of global recession marked by low growth, high unemployment and high inflation from the quadrupling of the oil price following the Arab-Israeli conflict of 1973, the EC set up the European Regional Development Fund (ERDF). The fund was to strengthen economic and social cohesion, by redressing imbalances between the Community's regions through a redistribution of wealth. The purpose of this fund was not to counteract asymmetric shocks by offering counter-cyclical assistance to members. Today about 45% of the EU's (relatively small) annual budget[19] is spent on competitiveness and cohesion for growth and employment. (For more on the EU budget, see Figure 1.)

In November 1978, following disruption in the supply of Iranian oil production, the world once again entered a period of sharply rising oil prices and inconsistent supply, continuing for Europe what has become known as 'Eurosclerosis' – a period during much of the 1970s and first half of the 1980s which, notwithstanding reasonable economic growth, was marred by poor job creation and high unemployment. Over the decade from 1976, employment in the US grew by 2.3% per year on average, whereas it stagnated in the EC.

The EMS was introduced in 1979

In 1979 the European Monetary System (EMS) was introduced to co-ordinate monetary policy and maintain stable exchange rates between the various currencies of the Community. Currencies of Member States were essentially fixed against one another, being allowed to fluctuate only within specific, narrow limits of +/- 2.25% of the new central unit of account consisting of a basket of Community currencies, the European Currency Unit (ECU). The currencies of Member States remained freely floating against those of non-Member States. Policy was implemented through the Exchange Rate Mechanism (ERM), and marked a first and significant step towards monetary union.

Europe's institutions

The EU is not a federation. Member States remain independent sovereign nations, with some of the decision-making processes delegated to the European level, enacted through its institutions.

The EU has three primary institutions, collectively often referred to as the 'decision-making triangle'. The European Parliament, the Council, and the Commission have differing political and administrative functions, but all contribute to produce and implement EU policy and law. The powers of the three institutions are defined in Europe's Treaties.

Europe's Treaties form the area's primary legislation upon which the large body of secondary legislation (regulations, directives, procedures etc.) is based. To be enacted the Treaties require agreement from the leaders of each of the EU's Member States, and ratification by their parliaments.

The European Parliament (EP) is tasked with representing the interests of the 500 million-odd citizens of the 27 Member States. The Parliament shares legislative and budgetary powers with the Council of the European Union including for the EU's annual budget. The Parliament does not have the power to propose legislation.

The 736-odd Members of the European Parliament (MEPs) are directly elected by the EU's citizens every five years, making it the only directly elected body of the EU. It operates through specialised committees. The president is elected by the MEPs.

The Council of the European Union, often referred to as the Council of Ministers, or the Council, represents the Member States and is the main decision-making and co-ordinating body of the EU. Its key responsibilities are to adopt legislation and approve the EU's budget (jointly with the EP), co-ordinate the broad economic policies and actions of Member States, define and implement the Union's Common Foreign and Security Policy (CFSP) (set by the European Council), conclude international agreements, and ensure co-operation between national courts and police forces.

Meetings within the Council of Europe are attended by the minister, from each of the EU's Member States, responsible for the specific subject being discussed. The rules on voting, including the (unequal) distribution of votes between Member States, are defined within Europe's Treaties. The Council of the European Union becomes the European Council when it meets at Heads of State level. Since the Lisbon Treaty's adoption the European Council has become a separate institution with a 'permanent' president, currently Herman Van Rompuy. The president's term of office is two and a half years, renewable once.

The European Commission is an independent body tasked with representing and upholding the interests of Europe as a whole. The Commission is the EU's executive body and 'Guardian of the Treaties', tasked with proposing and initiating legislation and ensuring that the laws and regulations adopted by the Council and the Parliament are implemented in the Member States. Each Member State has a commissioner, and the President of the Commission is appointed by the Council and approved by Parliament.

Europe's primary institutions are supported by a multitude of other institutions, specialised bodies and agencies some of which are listed below.■

Institution/body/agency	Acronym	Primary responsibility for the EU
Euratom Supply Agency	ESA	The regular & equitable supply of nuclear fuel
European Central Bank	ECB	Monetary policy
European Council	-	Political direction and prioritisation
European Court of Auditors	-	Independent auditing/Improving financial management
European Court of Justice	-	Upholding European law
European Defence Agency	EDA	Defence capabilities
European Economic and Social Committee	EESC	Strengthening the EU's democratic legitimacy and effectiveness
European Environment Agency	EEA	Independent information on the environment
European Food Safety Authority	EFSA	Ensuring food safety
European Institute of Innovation & Technology	EIT	Promoting sustainable growth & competitiveness through innovation
European Investment Bank	EIB	Provision of long-term finance to support investment projects
European Ombudsman	-	Investigating complaints of maladministration amongst the EU's institutions/bodies
European Police Office	Europol	Fighting international organised crime
Eurostat	Eurostat	Providing statistical information

Source: the majority of this material has been drawn from the various websites of the European Commission

Greece joined the EC in 1981 and Spain and Portugal in 1986, following successful transition to democracy, marking the EC's second expansion, to 12 Member States.[20]

Greece joined the EC in 1981, Spain and Portugal in 1986

By the mid-1980s, Europe's economic community had been in operation for nearly 30 years, and the number of Member States doubled, but the aim set in 1957 of establishing a genuine single market – one which allows the free movement of goods, services, capital and labour – had not been achieved. Differences in national regulations, a lack of policy harmonisation, and the need for consensus, were hampering the integration progress.

In 1986, despite much 'Europessimism', and under the presidency of Jacques Delors, political agreement was gained to re-launch the Community by making significant amendments to the Treaty of Rome, renewing vigour into the integration process.

The SEA of 1987 enabled much reform and the single market

The Single European Act (SEA) was the first major revision to the to the 1957 treaty, initiating a six-year programme of reforms – centred on open markets and deregulation.[21] Non-tariff barriers and restrictions to factor movements were to be abolished, and the single market was established by the end of 1992. The SEA came into force in July 1987 and marked the end of 'Eurosclerosis'. It also included a streamlining of the European Council decision-making process, the introduction of majority voting, and a strengthening of the role of the European Parliament. Exchange controls between members were abolished in 1990, liberalising capital movements.

The 1990s to monetary union

The Soviet Union fell in 1991, a year after German reunification

During the reform process initiated under the SEA, the political and economic landscape changed significantly. In 1989, the Berlin Wall fell, and a year later Germany was re-unified. In 1991, amid another global recession, the Soviet Union fell starting for its former economies a long transition process to market-based economies.

The Maastricht summit

The early 1990s, marred by much political uncertainty, marked the beginning of a rapid period of monetary and financial integration. In 1991, a new Treaty was agreed at the Maastricht Summit expanding the Community's pillar structure so as to include economic relations, foreign affairs, and home affairs, and officially creating the European Union (EU). The Treaty also set completion of Economic and Monetary Union (EMU) as a formal objective, following the Commission's acceptance of Jacques Delors' report.[22]

The Delors report listed EMU requirements

The Delors report listed the conditions that needed to be fulfilled for EMU: full and irreversible convertibility of currencies, irrevocably fixed exchange rates between currencies, the free movement of capital, and adoption of a single currency. The report also outlined a three-phase plan to achieve EMU. The first phase involved closer co-ordination of economic and monetary matters and completion of the single market. The second was to implement a new European System of Central Banks (ESCB) that would co-exist with national banks and be responsible for the implementation of monetary policy and for ensuring price stability. [23] The third phase was to transfer economic authority to the community's institutions, following which transition could be made to fixed exchange rates and the single currency.

The basic challenges in forming a monetary union

Forming monetary union with modern economies is challenging…

Managing modern, technologically advanced, market economies is challenging. Yet while the central-planning model has been largely discredited following the collapse of the Soviet Union, there remains considerable disagreement, even among the 34 (mostly high per capita income) OECD capitalist economies, about what variant of the capitalist market system works best.

There are major differences – both technical and philosophical – between the US, or 'Anglo Saxon', *laissez faire,* model, the Japanese corporatist model and the European 'social market' model. And the British economic and financial model, as in so many matters, has characteristics both of the US and the European systems – US-style (relatively) unfettered markets being in combination with Continental European-style social protection.

Even within Continental Europe there are significant differences:

- The German model emphasises community of interest, the social market, the supply side, sound money and expresses an intrinsic dislike of 'Keynesian' demand management policies;

- The French-Spanish approach has a penchant for corporatism, state intervention up to the point of overt protectionism, industrial strategy and something of a distrust of unconstrained markets; and
- The Italian version is dominated by family capitalism, and is marked by a high level of unofficial or black economy activity.[24]

Not surprisingly, combining such divergent economic systems into a monetary union, and then managing matters within the union so that it holds together, represents a considerable technocratic and political challenge. The potential implications of such issues for the sustainability of a monetary union were well recognised by economists, though perhaps not so fully by politicians, from well before the onset of discussions about forming a euro area.[25] Accordingly, there was widespread acceptance that, before the currency union could be effected, the participating economies would need to converge in respect of at least their main macroeconomic variables.

> *"The rationale of the European Union (EU)'s fiscal rules can be found in the fiscal policy failures in Europe during the 1970s and 1980s (Buti, 2001): high and persistent budget deficits feeding a rising stock of public debt; a tendency to run a pro-cyclical policy which, instead of smoothing the business cycle, has contributed to accentuate its swings; and finally, a high share of public sector in the economy going hand in hand with a rising tax burden which hampered efficiency and job creation."* (Buti and Giudice, 2002)

Convergence criteria

The Maastricht Treaty set the convergence criteria for EMU

The set of economic convergence criteria for the countries wishing to join the Economic and Monetary Union (EMU) and adopt the single currency were set out in the various articles of the Maastricht Treaty.[26] Countries would need to ensure, by 1998:

- An average rate of inflation, over the 12 months preceding examination, no greater than 1.5 percentage points above the three best-performing Member States;
- A long-term interest rate average, over 12 months preceding examination, no greater than 2 percentage points above the three best-performing Member States;[27]
- A public debt level no greater than 60% of GDP, or, in the case of a higher ratio, on a decreasing trend and approaching the reference value at a satisfactory pace;
- A public sector deficit of less than 3% of GDP;[28] and
- A national currency that had been in the ERM II for two consecutive years, and fluctuated within 'normal margins'.[29]

A 'no-bail out' clause was also included, specifying that the European Central Bank would not perform a bail-out on any member of the EMU that went beyond the levels for debt or deficit (Article 104b, Treaty on European Union, 1992[30]). The Treaty did not however preclude a legal basis under which financial assistance could be offered:

> *"Where a Member State is in difficulties or is seriously threatened with severe difficulties caused by exceptional occurrences beyond its control, the Council may, acting unanimously on a proposal from the Commission, grant, under certain conditions, Community financial assistance to the Member State concerned. Where the severe difficulties are caused by natural disasters, the Council shall act by qualified majority..."* (Article 103a, the Treaty on European Union, 1992)

Ratifying the Maastricht Treaty was not easy...

The Maastricht Treaty was signed in February 1992 by the members of the EC. Ratification was not however straightforward. In some countries the original Treaty was met with resistance. Denmark rejected it in the referendum of June 1992 over concerns of a loss of sovereignty. France only narrowly approved it in September 1992, the same month in which, following major currency speculator pressure due in part to the uncertainty over the Danish and French referendums, the UK proved unable to maintain its currency within the prescribed boundaries of the ERM. The UK withdrew on 'Black Wednesday' after spending over £6bn of its reserves in defence of the exchange rate. A day later Italy withdrew. The following year, after France experienced similar difficulties, a new band of +/- 15% was established.

…and 1993 marked the formal beginning of the single market

The amended version of the Maastricht Treaty, inclusive of a legal opt-out clause on monetary union for the UK and Denmark, was ratified by all Member States. It came into force in November 1993, marking the formal beginning of Europe's single market and the free movement of goods, services, labour, and capital.[31] In the judgement of Helmut Kohl, German Chancellor:

> *"The European Union Treaty... within a few years will lead to the creation of what the founding fathers of modern Europe dreamed of after the war, the United States of Europe."* (Helmut Kohl, German Chancellor, 1992)[32]

Austria, Finland and Sweden joined the EU in 1995

In 1995, Austria, Finland and Sweden joined the EU, bringing the number of Member States to 15, and expanding the EU over most of Western Europe. Negotiations on the EU's expansion eastwards began in the mid 1990s with countries of the Baltics and the former Soviet Bloc,[34] most of which joined in 2004 along with Cyprus and Malta. Bulgaria and Romania joined in 2007.

The Stability and Growth Pact was brought in in 1997

In 1997 the Stability and Growth Pact (SGP) was brought in. Its aim was to ensure that the budgetary (fiscal and structural) discipline of the Maastricht process was maintained and enforced among the euro area members once the euro was launched.[35] It provided detailed arrangements for the surveillance of the budgetary positions of Member States, and laid down procedures for what had to be done should a state run up an excessive budget deficit.

Convergence

During the run up to monetary union in 1999, the twelve countries wishing to join demonstrated much political will in enforcing what was at times, and in a number of areas, a demanding and painful convergence. Though good progress was made, particularly on inflation and public sector deficits which had afflicted many of Europe's economies over preceding decades, some countries did not meet the convergence criteria. But in 1999 all except Greece were permitted entry into Monetary Union.

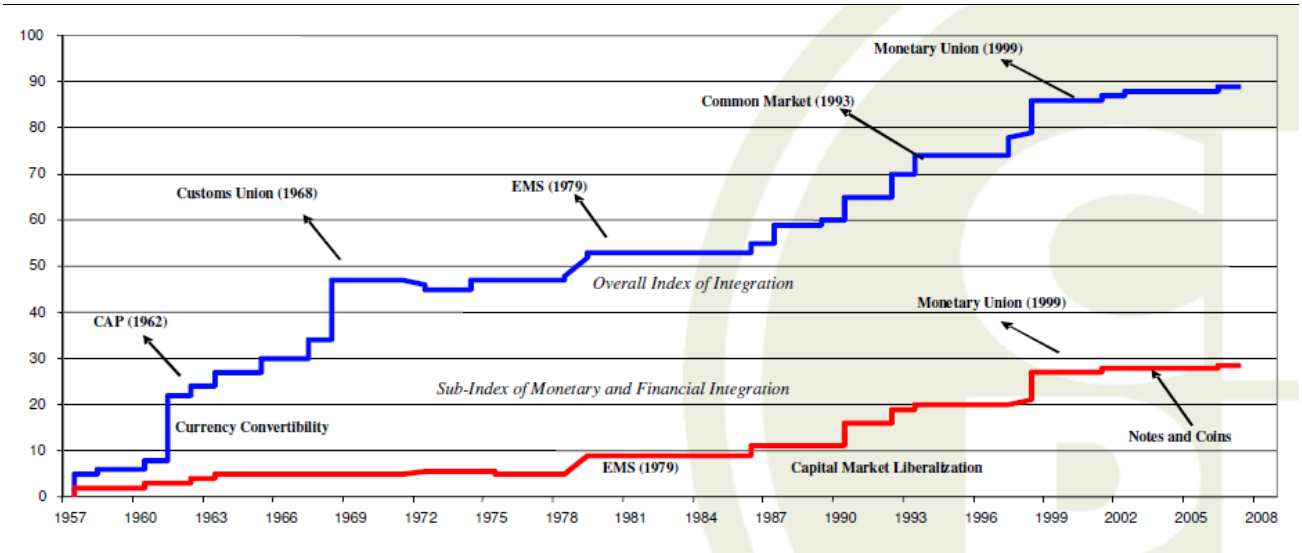
Inflation. By the end of 1998, all the potential candidates, with the exception of Greece, had met the convergence criteria. [36]

Long-term interest rates converged sharply before euro entry. By the time the euro area was formed in 1999, countries across the euro area had similar rates of borrowing to that of Germany.

Public debt. Before euro entry, five of the twelve prospective Members had public debt in excess of 60% of GDP; indeed in Italy and Belgium the figure was well in excess of 100%, and in Greece was above 90%. Italy and Belgium were, however, allowed to join in 1999, it being deemed that public debt was declining "at a satisfactory pace".

Public deficits. These declined substantially as convergence gathered pace.[37] In 1995, the euro area (as it was to become), collectively had a public sector deficit of 7.5% of GDP. By 1998, this had fallen by over 6 percentage points to 1.4% of GDP and, in all except Greece, deficits were brought below (or close to) 3% of GDP in 1998.[38]

Figure 2. Index of institutional integration for the EU6



Source: Mongelli (2010)[33] (endnote contains explanatory notes from CEPR)

Exchange rates. Italy did not satisfy the entrance criteria for exchange rates; it had not been in the ERM II for two years.

On 1 January 1999, following what was deemed to be sufficient convergence, bilateral exchange rates of the eleven Member States were irrevocably fixed, and the euro area was formed.[39] The newly-operational European Central Bank (ECB) was given responsibility for monetary policy, with fiscal and structural policy remaining the responsibility of member governments.

The euro replaced the national currencies of the Member States in two stages. For the first three years the euro remained a virtual currency – used for non-cash and accounting purposes only – with national currencies used alongside under the ERM II. On 1 January 2002, euro notes and coins came into circulation, ending the existence of the countries' national currencies. The UK and Denmark chose to enact the opt-out clause, and to retain their national currencies.

> *"The introduction of the euro is not only an important decision for the European Union; it is an important turning point in European history ... The single European currency has made European integration irreversible." (Helmut Kohl, 2002)*[40]

Concluding comments

The vision for Europe's integration grew out of a desire for an irreversible peace from a continent that had been ravaged by two world wars. Europe's integration to date has been a long and complex process, involving the giving up of much national sovereignty, the formation and amendment of numerous treaties, and much political commitment. [41]

Europe's integration was designed to be permanent and not to be undone. There is no formal exit route from the euro.

Closer economic, political and social integration has been beneficial to Europe. It has increased competition, lowered prices, improved services, brought greater prosperity and improved social progression to the region. Over the period 1960 to 2002, trade openness, measured by the ratio of intra-regional trade to regional GDP for the founding euro area countries, increased from about 12% of GDP to 26%, and the real dollar-denominated bilateral trade among euro area countries increased by around 1,200-1,400% over the same period.[42]

Although the EU is not a single federal state and lacks full political unity, progressively closer economic integration and shared constitutional frameworks have markedly increased the interdependence between Member States. This continues to provide a 'functional' impetus towards, rather than away from, greater political, social and indeed economic integration.

As the integration process deepens, 'economies of scale' can be more comprehensively developed, in a greater number of areas, notably security, energy, transport, climate change, foreign representation and foreign aid. The top tiers of the region's defence and aerospace industries are already largely consolidated. Common policy enables the region to speak and act as one unified, and more powerful, force.

EMU marks Europe's most advanced stage of integration,[43] and what is arguably the EU's greatest achievement. Europe's challenges are not over, however, and today Europe is once again having to improve its institutions, and strengthen a number of its existing ones. The Lisbon Treaty, which came into force at the end of 2009, has amended the structure of the EU's institutions, and seeks to help the EU to function and respond more effectively and coherently to the new challenges being faced in the 21st century.[44] (For more information on the EU's Treaties, see Box: *The ties that bind: The Treaty base of the EU*).■

Europe today

Today the EU has 27 Member States and, in GDP terms, is the world's largest economic area. The euro area comprises 17 Member States and accounts for over 75% of the EU's GDP. The process of enlargement continues.

The EU's 27 Member States have a combined population of around 500 million, the world's third-largest population after China and India. The EU accounts for just over 28% of global GDP, a slightly larger share than that of the US (25%).[45] All Member States are bound to co-ordinate economic policy in line with the objectives of the EU.

The euro area has expanded to incorporate 17 of the EU Member States, has a population of around 330 million (a population more similar to the US) and accounts for over 75% of the EU's GDP. The euro has grown to become the world's second-most important international currency after the US dollar, and by some measures – e.g. the value of cash in circulation – has even overtaken it.

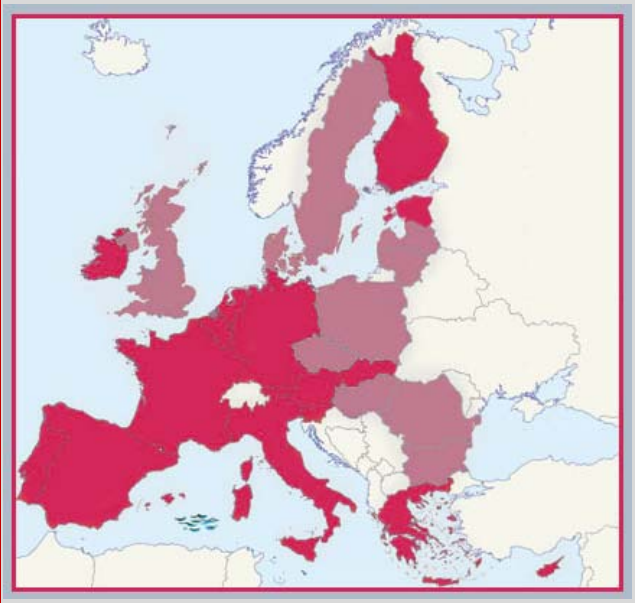
The EU continues the process of enlargement; there are currently five official candidate countries for accession to the EU – Montenegro, Croatia, Iceland, the former Yugoslav Republic of Macedonia, and Turkey.

Montenegro applied for accession at the end of 2008, and having satisfied the economic and political conditions required to become an official candidate (the Copenhagen Criteria[46]), the EU granted its official candidacy at the end of 2010. Accession negotiations of Croatia's 2003 membership application have reached the final phase, and Iceland's negotiations opened in July 2010 following its application in 2009. The former Yugoslav Republic of Macedonia applied in 2004, and in 2010 the European Commission renewed its 2009 recommendations for the commencement of accession negotiations. Turkey applied for membership in 1987, signed a Customs Union agreement with the EU in 1995, and was officially recognised as a candidate for EU membership in 1999. Turkey's membership has however become controversial, and the negotiations, which began in 2005, have been slow to advance. Serbia and Albania also applied for accession to the EU in 2009, but have yet to be granted official candidacy status. Bosnia and Herzegovina and Kosovo have not yet applied for EU membership.

The euro area also continues to expand, with Estonia the most recent EU Member State to join. Most of the remaining ten Member States are committed to joining the euro once the convergence criteria have been met. Lithuania has been a member of the ERM II since 2004, and Latvia since 2005. The Czech Republic, Hungary, Poland, Bulgaria and Romania have yet to join the mechanism. (For more see Chapter V: *Enlargement and Emerging Europe*.)

Sweden has also not joined ERM II, but has no plans to adopt the euro. The remaining two, the United Kingdom and Denmark, have chosen to continue to remain outside of the euro area.[47] Interestingly, two sovereign city states – Monaco and Vatican City – and the small Republic of San Marino – that are neither members of the EU nor the euro area, have, through special agreements, adopted the euro.■

Figure A. The 27 Member States of the EU



EU countries using the euro

EU countries not using the euro

Source: European Commission website, accessed January 2011

Figure B. Date of accession to the EU and euro area

	EEC/EC/EU	euro area	(Former) currency	
Belgium	1957	1999	Belgian frank	(BEF)
France	1957	1999	French frank	(FRF)
Germany	1957	1999	German mark	(DM)
Italy	1957	1999	Italian lira	(ITL)
Luxembourg	1957	1999	Luxembourg frank	(LUF)
the Netherlands	1957	1999	Dutch guilder	(NLG)
Denmark	1973	N/A	Danish krone	(DKK)
Ireland	1973	1999	Irish pound/punt	(IEP)
United Kingdom	1973	N/A	Pound sterling	(GBP)
Greece	1981	2001	Greek drachma	(GRD)
Portugal	1986	1999	Portugese escudo	(PTE)
Spain	1986	1999	Spanish peseta	(ESP)
Austria	1995	1999	Austrian schilling	(ATS)
Finland	1995	1999	Finnish markka	(FIM)
Sweden	1995	N/A	Swedish krona	(SEK)
Czech Republic	2004	N/A	Czech koruna	(CZK)
Cyprus	2004	2008	Cyprus pound	(CYP)
Estonia	2004	2011	Kroon	(EEK)
Hungary	2004	N/A	Forint	(HUF)
Latvia	2004	N/A	Lats	(LVL)
Lithuania	2004	N/A	Litas	(LTL)
Malta	2004	2008	Maltese lira	(MTL)
Poland	2004	N/A	Zloty	(PLN)
Slovakia	2004	2009	Slovak koruna	(SKK)
Slovenia	2004	2007	Tolar	(SIT)
Bulgaria	2007	N/A	Lev	(BGN)
Romania	2007	N/A	Romanian leu	(ROL)

From monetary union to crisis

It was known when the euro area was established that sustaining a monetary union requires that its constituent economies not diverge in respect of their major economic variables. However:

- Public sector deficits, and thereby public debt levels, were not sustainable in some countries.
- Private sector deficits too, and thereby private debt levels, were not sustainable in some countries.
- Competitiveness, and thereby current account deficits and foreign debts, were not sustainable in some countries.

When the crisis hit, the unsustainable positions within the euro area were exposed.

Introduction

In terms of the main macroeconomic variables, the euro area as a whole performed quite well up to 2007. However, many of the constituent economies were not able to complete the process of convergence that had begun in the years up to 1999; and indeed some had diverged in respect of important economic variables.[48]

When the global economic and financial crisis hit in 2008, it rocked the very core of the advanced Western economies and, by the end of 2009, the euro area had entered the first stage of its public debt crisis.[49]

Real-side evolution 1999-2007

The euro area as a whole performed quite well

On the face of things, the newly-formed union performed well from 1999 to 2007. Average real GDP growth for the euro area, though slower than the 2.8% of the US, was a reasonable 2.2% per year. Employment grew by 1.4% on average, slightly higher than in the US. Investment grew at an average of 3%, a rate similar to that of the US. Private consumption grew at a reasonable 2% on average, slower than in the US.

Moreover, most of the constituent economies too proceeded reasonably satisfactorily. And the periphery economies, Greece, Ireland and Spain, grew notably fast. Employment growth was particularly brisk in Ireland and Spain. Portugal, however, was the major exception: GDP and employment growth were weak (Figure 1).

Most economies seemed to proceed satisfactorily

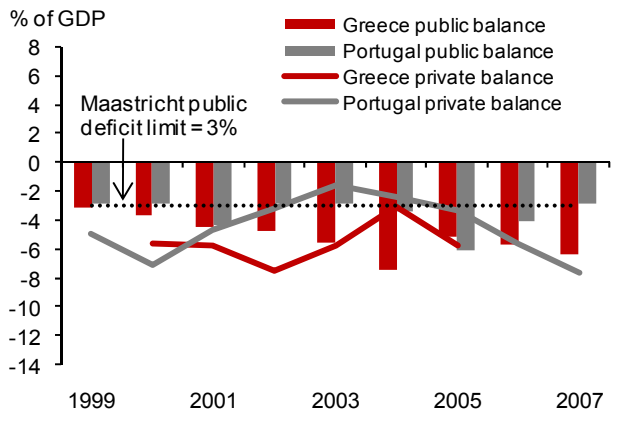
The broad structure of demand growth also appeared reasonable. Private consumption growth was buoyant in Greece, Ireland and Spain and less so in the core, particularly Germany. Growth in public consumption was broadly in line with GDP growth in most economies. Investment, including private sector investment, grew strongly in the periphery economies, again with the exception of Portugal. Growth in export and import volumes was also respectable in most economies.

Figure 1. Main macro variables, average 1999-2007

%	Real GDP growth	Employment growth	Real private consumption growth	Real public consumption growth	Real gross fixed capital formation growth	Export volume growth	Import volume growth
Greece	4.1	1.3	3.8	4.1	6.3	6.4	6.0
Ireland	6.5	3.7	5.9	6.1	6.7	8.4	8.2
Portugal	1.8	0.7	2.3	2.2	0.1	4.9	4.1
Spain	3.7	4.3	3.9	4.9	6.1	5.3	8.3
Italy	1.5	1.5	1.2	1.9	2.6	2.9	3.8
France	2.2	1.0	2.7	1.6	4.1	3.8	5.7
Germany	1.6	0.6	0.9	0.8	1.3	8.0	6.1
Euro area	2.2	1.4	2.0	2.0	3.0	-	-
US	2.8	1.2	3.4	2.1	3.1	4.6	6.2

Source: OECD Economic Outlook no.88 and OECD.Stat

Figure 2. Public and private balances, Greece and Portugal



Source: Eurostat
Note: private balance data not available in some years

Public and private sector deficits

However, the financial side was building up trouble

While the evolution of the real side of these economies was broadly satisfactory, the evolution of the financial side was, over this same eight-year period, building up trouble for the public and/or private sector balances[50] of a number of economies.

Greece and Portugal had public sector deficit problems...

Greece and Portugal, however, had large public deficits, averaging 5.2% and 3.6% of GDP respectively. The Greek public deficit figures (it is now known) exceeded the 3% limit every year of the period, and considerably so in many. The largest infringement was a deficit of 7.5% of GDP in 2004, the year in which Athens hosted the Olympic Games. Portugal exceeded the deficit limit four times, the largest being a deficit of 6.1% in 2005.

…and private sector deficit problems

The private sectors in both Greece and Portugal were also frequently in deficit. In the early years after 1999 these deficits became smaller, but later the private sectors of both countries moved increasingly in the direction of deficit. Greece ran a deficit of 5.6% of GDP, and Portugal 4.5% on average over the period. Private sector deficits in Greece reached 6% of GDP in 2005,[51] and almost 8% in Portugal by 2007 (Figure 2).

Ireland and Spain had private sector deficit problems

In Ireland and Spain, the high-borrowing private sector moved increasingly into deficit, averaging[52] 7.2% and 6.5% of GDP respectively over the period, [53] and reaching 10% and 13% respectively by 2007.

Public sectors in both countries, by contrast – indeed, in consequence − were often in surplus, particularly in Ireland, which ran a surplus of 1.6% of GDP on average over the period, while Spain's remained broadly balanced. The Maastricht deficit limit of 3% of GDP was thus not an issue for either economy (Figure 3).

In core economies public deficits were more contained...

In the core economies, by contrast, public deficits were common but more contained. While Germany, France and Italy each exceeded the Maastricht limit on several occasions over the period, average public sector deficits ran at 2.1%, 2.6% and 2.7% of GDP respectively. The deficits peaked at 4% of GDP in Germany in 2003, 4.1% in France in 2003, and 4.3% in Italy in 2005.

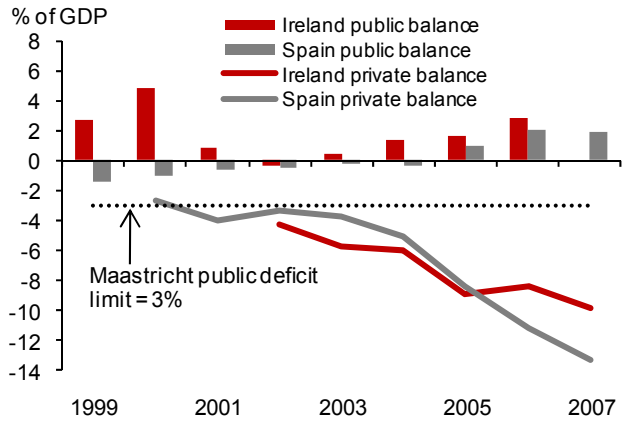
…and private sectors were generally in surplus

The core economies' private sectors, by contrast were generally in surplus, especially in Germany, where the surplus was nearly 7% of GDP in 2007. Average private sector surpluses were 4.3%, 2.3% and 1.7% of GDP in Germany, France and Italy respectively over the period (Figure 4).

Notwithstanding the relatively good performance of the euro area in aggregate over the period, public sector deficits reached unsustainable levels in Greece, and to some extent in Portugal, well before 2007. The 3% public sector deficit limit, set in the Stability and Growth Pact, was breached regularly by the economies of the periphery and the core, but went largely unpunished.

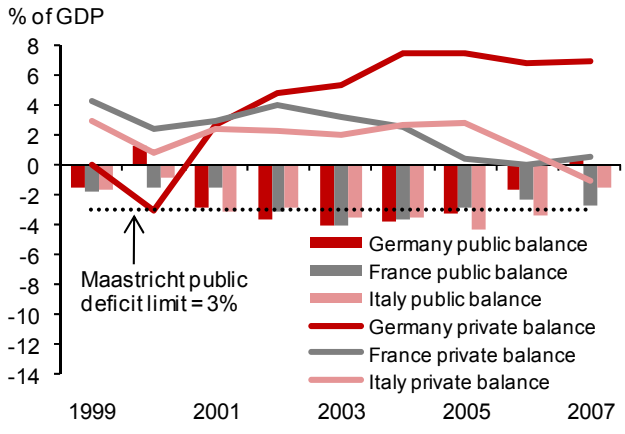
Moreover, policy at the micro and macro levels was unable to curb the build-up of large, unsustainable private sector deficits, in Spain and Ireland in particular, but also to some extent in Portugal.

Figure 3. Public and private balances, Ireland and Spain



Source: Eurostat
Note: private balance data not available for Greece in some years.

Figure 4. Public and private balances, core economies



Source: Eurostat

Intra-European competitiveness

In establishing the "irrevocable exchange rates" of 1 January 1999, considerable effort was made to ensure that no Member State entered the monetary union with either a serious competitive advantage or a serious competitive disadvantage vis-à-vis its euro-area partner economies.

Smaller economies received a one-off boost

In the event, Germany entered the union at a rate that made it less competitive than the smaller countries, which were thereby given a major one-off boost to their competitiveness[54]. The German authorities accepted this, however, as it was considered important, politically speaking, that the early post-union experience of a large number of the (smaller) economies be positive. This competitive advantage progressively evaporated, however.

Unit labour costs grew fastest in the periphery…

Unit labour costs grew faster in the periphery economies and in Italy than in the euro area as a whole, and particularly Germany. By 2007, unit labour costs of the economies of the periphery had risen substantially relative to the euro area as a whole – by a cumulative 15% in Ireland, 12% in Spain and Greece, 9% in Portugal, and 7% in Italy. The principal counterpart was Germany, whose relative unit labour costs had fallen by around 12%. France's unit labour costs grew at around the same rate as those of the euro area as a whole (Figure 5).

…as did consumer prices…

Consumer prices, similarly, grew faster in the periphery economies than in the euro area as a whole, and particularly in Germany. Like unit labour costs, by 2007 the aggregate (consumer) price level[55] in the periphery economies had risen well above the euro-area average – by a cumulative 10% in Greece, 9% in Ireland, 8% in Spain, and 6% in Portugal. The principal counterparts were France and Germany, whose relative consumer prices fell compared with the euro-area average, and hence particularly when compared with the periphery (Figure 6).

…increasing current account deficits

Current account balances broadly reflected these developments. The periphery economies moved increasingly into deficit, particularly after 2003. By 2007, these deficits had become large in Greece (14% of GDP), Spain (10%), Portugal (9%) and Ireland (5%) (Figure 7).

Germany, however, ran increasing surpluses

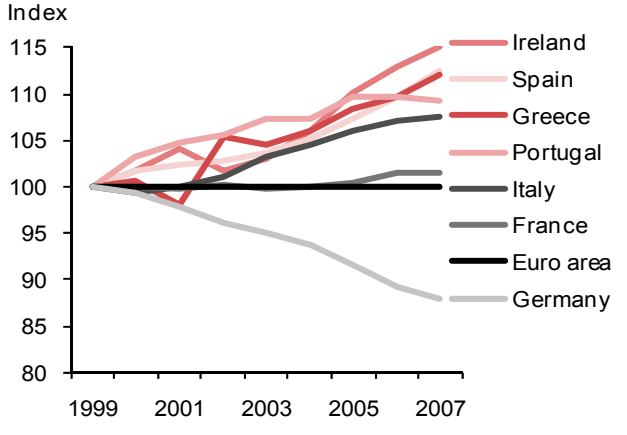
This contrasts with the trends in the larger, core economies. Italy and France moved more modestly, from surplus or balance to deficits of 2% and 1% of GDP respectively. Germany ran increasing current account surpluses over the period, reaching almost 8% of GDP by 2007.

The current account of the euro area as a whole changed little, remaining in broad balance throughout. (For more see Box: *Current account balances*.)

The euro area remained broadly balanced

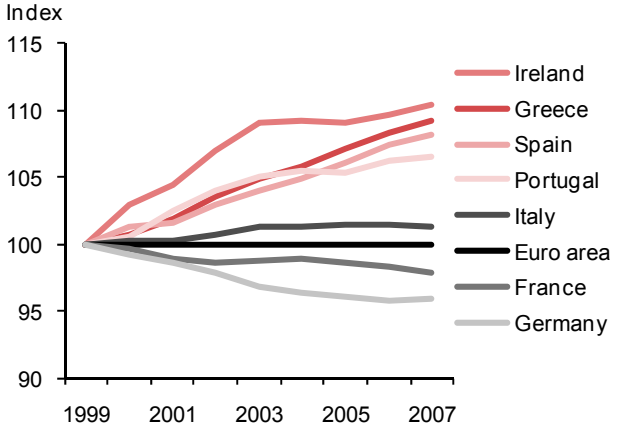
However, not all of the movements in an economy's current account of its balance of payments are attributable to changes in its international competitiveness. Imports in particular can be affected significantly by changes in the level, and composition, of domestic expenditure, particularly over short periods of just a few years. Nevertheless, evidence that declining international competitiveness became important in the periphery is given by what happened to export market shares – the (trade-weighted) share of an economy's exports in the imports of its trading partners.

Figure 5. Relative unit labour costs, 1999-2007



Source: European Commission, and Nomura Global Economics

Figure 6. Relative prices, 1999-2007



Source: Eurostat, and Nomura Global Economics

Current account balances

Current account balances can be symptomatic of an illness – when prevention is better than cure – but are not an illness in their own right.

Over the post-euro period 1999 to 2007, Germany neither gained nor lost a significant amount of (global) export market share, suggesting that there is little evidence that Germany's international competitiveness was seriously out of line, one way or the other. However, a number of other euro-area countries lost market share globally, much of this vis-à-vis Germany.

The quantitatively important counterparts to the German current account surplus were the current account deficits of the euro area's larger economies: France, Italy, and Spain. However, the deficits of France and Italy, expressed as a proportion of their GDPs, were fairly small. These imbalances therefore were not particularly troubling, provided they did not go on too long and thereby accumulate unsustainably (see Figure A).

However, by 2007 Spain's current account deficit had become large relative to its GDP. This was also the case for the periphery economies of Greece, Portugal and, to some extent, Ireland, although the small relative size of their economies meant they were not nearly as important in driving euro-area balances. The accumulated large current account deficits in Spain and in the other countries of the periphery can, in part at least, be attributed to the falling of their competitiveness relative to the euro area, and therefore in particular relative to Germany.

Restoring relative competitiveness positions is difficult, because that would require many years of below-German growth in unit labour costs. Such a task implies particularly large costs, including in terms of maintaining large deflationary output gaps, and hence would be very difficult for the periphery economies. Germany *was* able to turn its competitive disadvantage around quickly, in large part because it was aided by rapid unit labour cost growth in the periphery. The periphery economies cannot expect the same from Germany in this reverse scenario.

However, it does not follow from this that all current accounts are problematic and "bad", or that the ideal current account balance is zero. It is natural that some societies or portions of societies will wish to save some of their income, and equally rational that others will want to borrow and spend more than their income. This happens within countries; between different age groups; and between regions and sectors – and hence in the European monetary union, between the Member States.

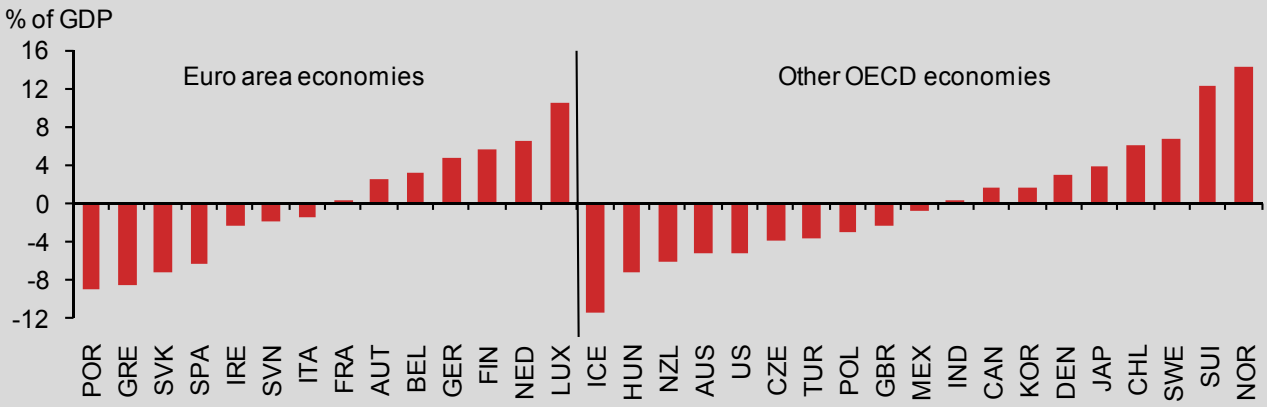
Current account deficits result in a major problem only when borrowing exceeds the (future) capacity of the borrower to pay it back. This by implication means that it matters a great deal what the borrowing is used to finance. If the money is spent on consumption, then it does nothing for the ability to pay back the loan, but if, by contrast, it is spent on investment, it will, provided it is a "wise", output-increasing, investment.

This issue therefore involves elements not only of microprudential regulation (for example, so that consumers do not overstretch themselves individually), but also of macroprudential regulation (so that the country as a whole does not overstretch its capacity to repay).

As regards the macroprudential element, it is appropriate to be sceptical about the effectiveness of policy proposals to make Germans consume more and save less, just as it is right be sceptical about how quickly it is possible to get the Chinese to do the same. Much depends on national culture, which is ingrained and can take many years to change.

All this suggests that a more effective option would be for the policy of borrowing nations to operate on the growth of domestic credit, so as to contain excessive consumption.■

Figure A: Average current account balances, OECD economies, 2002-2007



Source: OECD (2010) Economic Survey of the Euro area 2010, and OECD Economic Outlook no. 88

Comparison of the global export performance of individual euro-area economies over the post-euro period 1999-2007 with the period 1994-1998 suggests that it was declining competitiveness that was primarily responsible for the evolution of current accounts. Spain is a graphic example (Figure 8). (For others see Picture Book: *Export market share growth pre-and post-euro.*)

The periphery economies lost competitiveness…

Spain had been experiencing progressive, if decelerating, growth of export market share from 1994 to 1998, at just under 4% per year. The cumulated increase in export market share over the pre-euro period was thereby 19%. Thereafter, however, export performance weakened as Spain's relative costs rose. Spain's export market share fell on average by around 1% per year, for a total fall in market share of 6% over the post-euro period.

Greece had been experiencing modest, if volatile, growth of export market share from 1994 to 2000,[56] averaging just under 3% per year. The cumulated increase in market share was the same as Spain's, at 19%. During the post-euro 2001-07 period, however, export market share fell by almost 3% per year on average, amounting to a loss in market share of 20%.

Ireland's market share had been growing particularly strongly before 1999, at almost 9% per year. The cumulated increase in export market share was a substantial 45%. Between 1999 and 2007, however, export performance weakened. The average growth of export market share fell to just over 2% per year. The cumulated increase in export market share fell to 20%. Notwithstanding, Ireland was the only economy of the periphery to continue to grow export market share over the post-euro period – due largely to major inflows of capital.

Portugal began to lose export market share before its entry into the euro area, implying an international competitiveness problem of longer standing. On average, however, these falls were modest, at around 0.4% per year, for a total fall in export market share of 2%. From 1999 to 2007, export performance weakened as export market share fell by around 2% per year on average; the cumulated fall in export market share was a further 16%.

…as did Italy

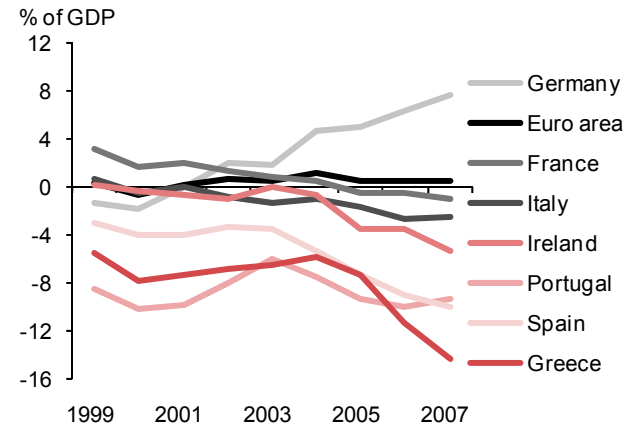
Italy gained export market share in 1994 and 1995, but from 1996 market share declined. Over the pre-euro period as a whole, Italy's export market share fell by a modest 1.5% per year on average, for a cumulated fall of 7%. During the post-euro period this evident export weakness increased, and market share fell by over 4% per year on average. The total loss in export market share was 34% from 1999 to 2007, and is consistent with the country's measured decline in cost and price competitiveness.

France's export market share remained broadly constant before 1999. Between 1999 and 2007, however, export performance weakened: market share fell by almost 3% per year on average, amounting to a post-euro loss in market share of 23%. This is surprising given France's essentially unchanged cost competitiveness relative to the euro area, and suggests the presence of structural issues.

In Germany, however, competitiveness increased

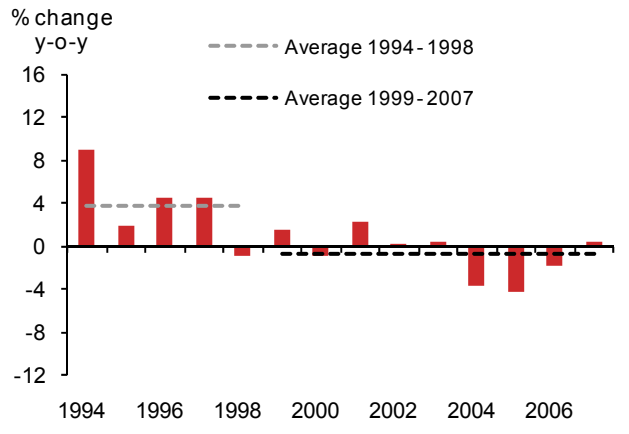
Germany's export market share changed little prior to 1999, with a negligible cumulated fall of just 1%. From 1999 to 2007, however, export performance strengthened, and market share grew by around 1% per year on average; the total gain over the period was 10%. This is consistent with Germany's measured increase in cost and price competitiveness.

Figure 7. Current account balances, 1999-2007



Source: OECD Economic Outlook no. 88

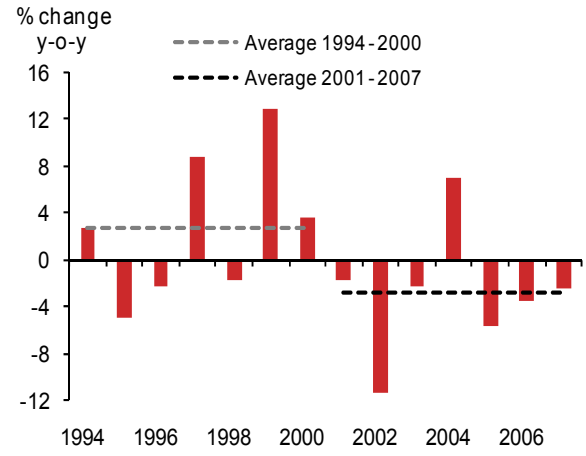
Figure 8. Export market share growth, Spain



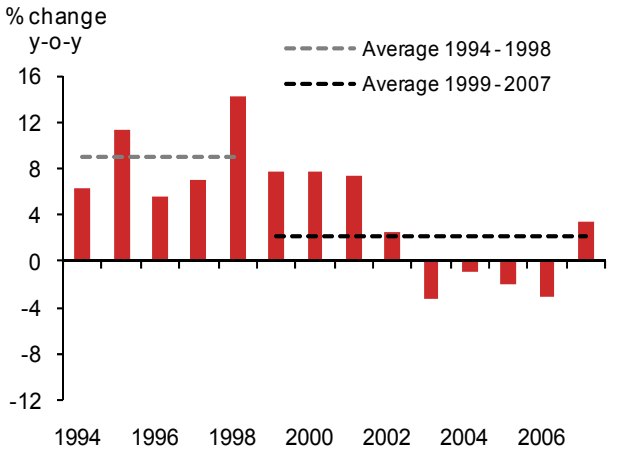
Source: OECD Economic Outlook no. 88

Picture Book: Export market share growth pre and post euro

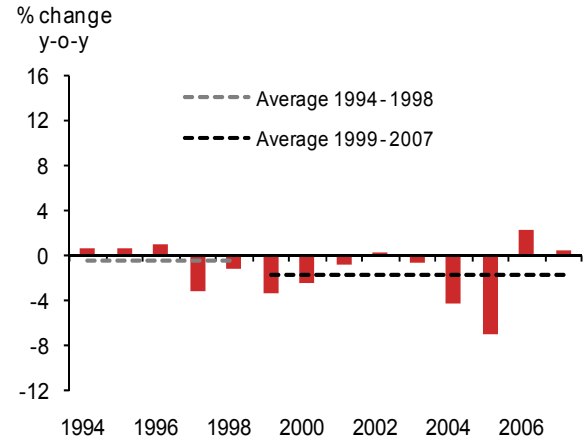
Greece



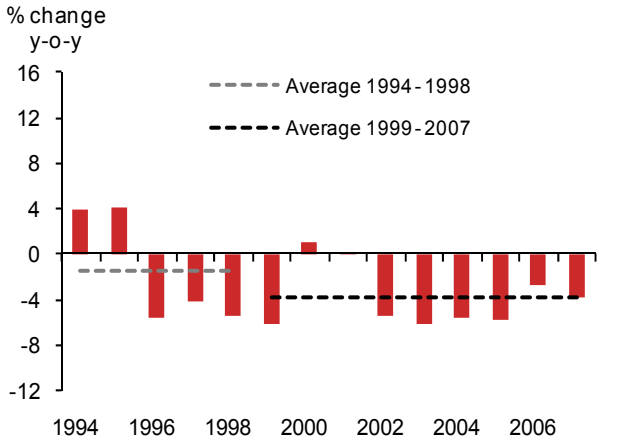
Ireland



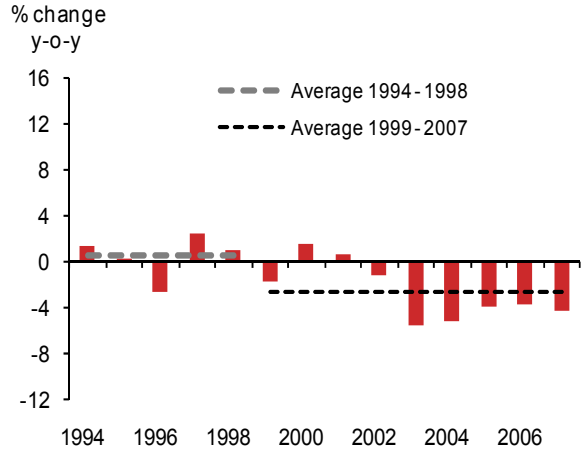
Portugal



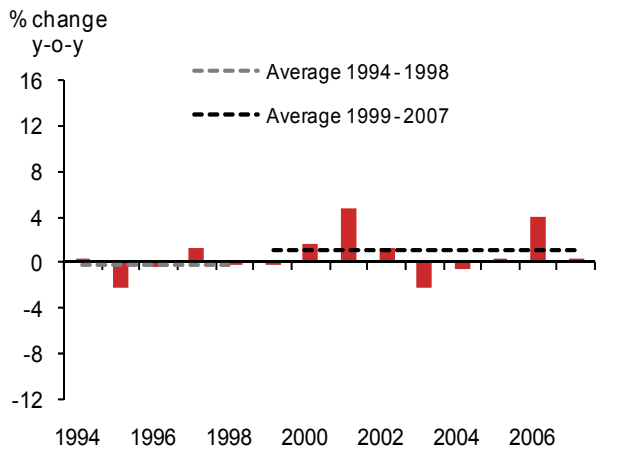
Italy



France



Germany



Source: OECD Economic Outlook 88
Note: Averages are calculated as the mean of annual growth rate in export market share for the given period.

Public, private, and external debt

The consequences of these trends on debt levels – public, private, and external (net foreign assets) – were substantial in the economies of the periphery in particular. (See the Picture Book: *Public, private, and external debt, 1999-2007.*)

In Greece, high public debt rose and foreign debts grew

Greece. Public debt was high in 1999, at 94% of GDP, and was above 100% when it joined the euro area in 2001. By 2007, public debt stood at 105%. Private debt[57] grew from 57% of GDP in 2001 to 93% in 2007, but remained well below the euro area average throughout the period. As a result of the jointly-growing public and private deficits and debt, net foreign liabilities almost trebled, from (an already large) 33%, to over 95% of GDP (Figure 9).

In Ireland, private debt started high and doubled

Ireland. Public debt in Ireland by contrast, started the period well below the Maastricht threshold of 60%, at just over 48% of GDP, and it fell further, to just 25% by 2007. Private debt levels started the period at 102% of GDP, above the euro area average of 97%, and doubled to 200%. Net foreign liabilities remained relatively contained up to 2007, but grew to reach around 20% of GDP (Figure 10).

In Spain, private debt doubled and foreign debts grew

Spain. Public debt was initially above the Maastricht threshold (at 62% of GDP), but fell steadily to just 36%. Meanwhile, private debt more than doubled, from 90% of GDP – below the euro area average – to 188%. Net foreign liabilities almost trebled, from 28% of GDP to over 78%, largely as a result of growing private sector deficits and debt.

In Portugal, public private, and foreign debt increased

Portugal. Public debt increased moderately, from a low level of 51% of GDP, to 63%, slightly above the Maastricht threshold. Private debt also increased from 109% of GDP, above the euro area average, to 163%. Net foreign liabilities also almost trebled, from (an already-large) 32% to 88% of GDP, as a result of jointly-growing public and private deficits and debt.

In Italy, public debt started high but fell

Italy. The period opened with public debt well above the threshold level, at 114% of GDP, and ended with it lower, at 104%. Private debt increased from 71% of GDP in 1999 to 101% in 2007, thereby remaining under the euro area average throughout. Net foreign liabilities grew somewhat, to reach 22% of GDP.

In France, debt remained contained

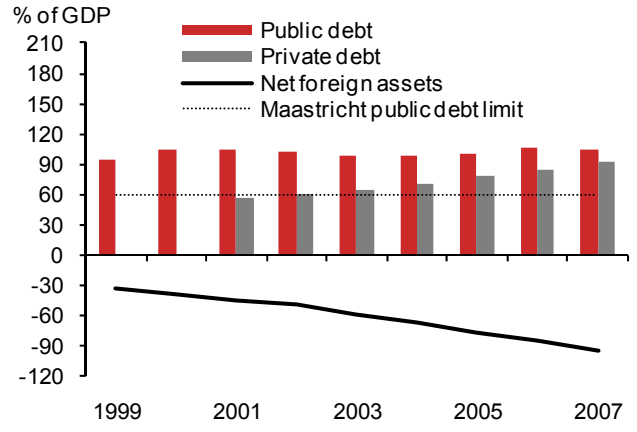
France. The public debt level, initially one percentage point below the Maastricht limit, rose slightly above it, to 64% of GDP. Private debt grew from 82% to 105% of GDP, but remained below the euro area average throughout . Net foreign assets remained close to zero.

In Germany private debt fell and foreign assets grew

Germany. Public debt, just over the Maastricht limit in 1999, rose slightly to 65% of GDP in 2007. Private debt fell from 116% to 105% of GDP, starting the period well above the euro area average, and ending it well below. Net foreign assets rose continually, from near zero to almost 30% of GDP.

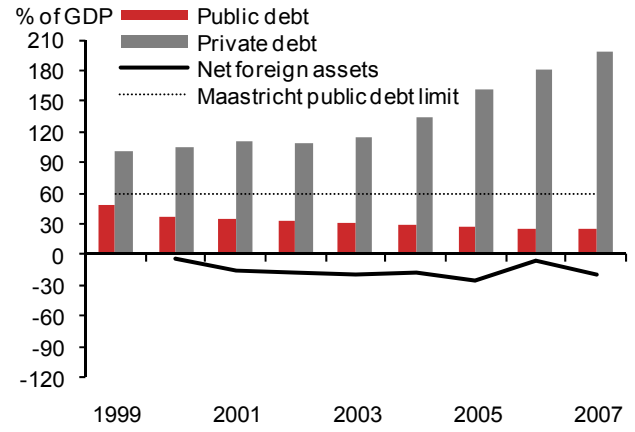
The euro area. Public debt fell from 72% of euro area GDP to 66%. Meanwhile, private debt grew from 97% of GDP to 134%. Net foreign liabilities increased slightly from 6% to 14% of GDP.

Figure 9. Greece: public, private, and external debt, 1999-2007



Source: Eurostat, Datastream, and IMF
Note: private debt data not available in 1999 and 2000.

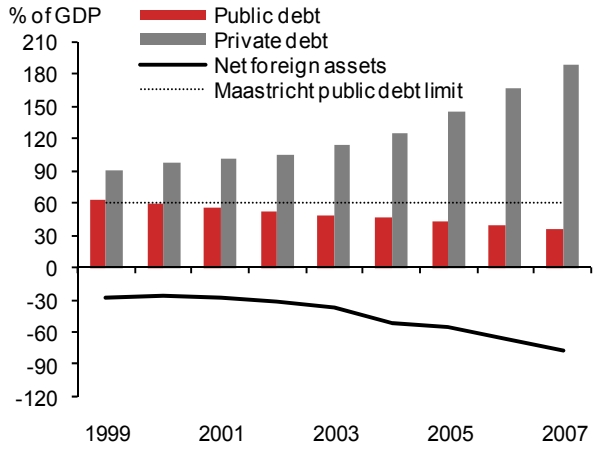
Figure 10. Ireland: public, private, external debt, 1999-2007



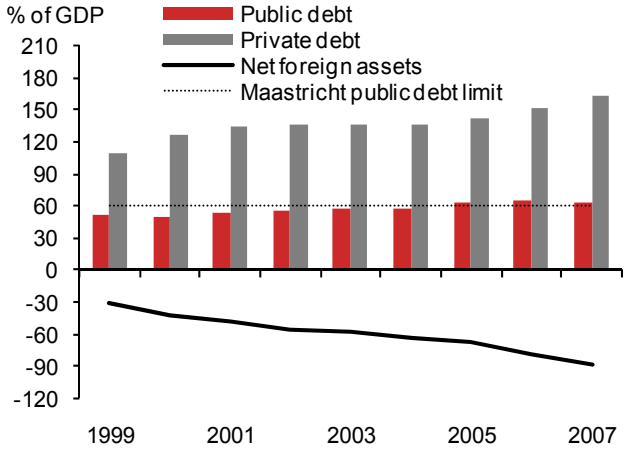
Source: Eurostat, Datastream, and IMF

Picture Book: Public, private, and external debt, 1999 to 2007

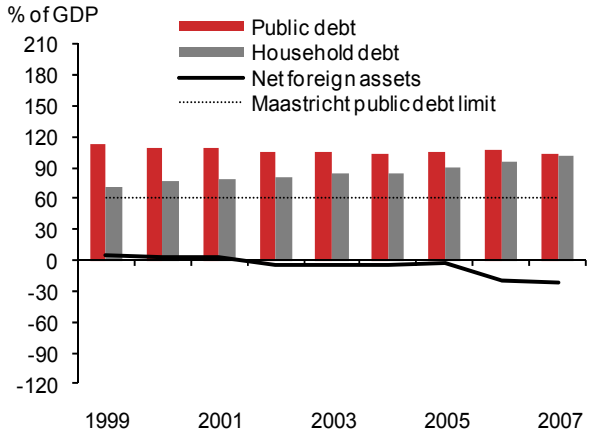
Spain



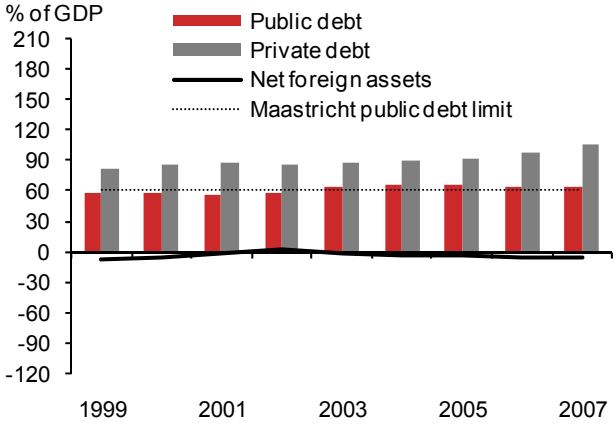
Portugal



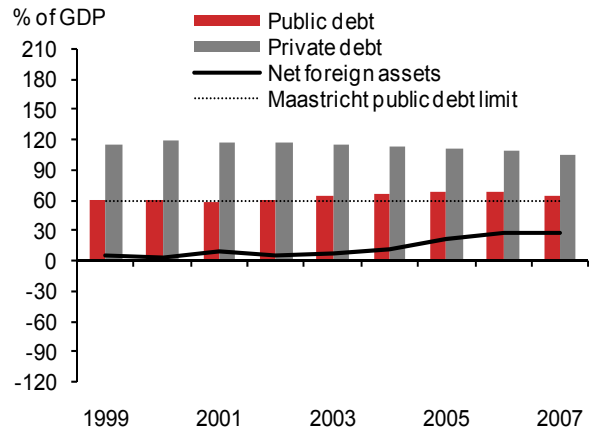
Italy



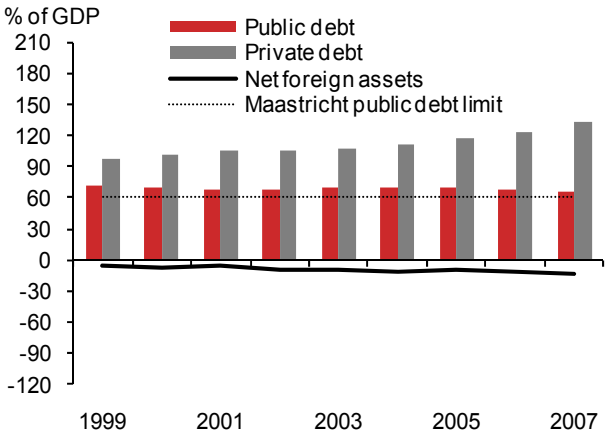
France



Germany



Euro area



Source: Eurostat, Datastream, and IMF

Note: Private debt is measured as claims on the private sector by banks. Net foreign assets are measured as net international investment positions.

Euro area economies – set for crisis

Before the crisis, economies were positioned differently

By the end of 2007, nine years into monetary union, and as the world was about to enter a global economic and financial crisis, the economies of the euro area were positioned quite differently. The positions of some were potentially troubling. The key macroeconomic debt variables (stocks) for each of the economies[58] are shown in the Picture Book*: Economies' positions before the global crisis*, and a more complete picture is summarised in the table below.

Greece had high public debt – in excess of 100% of GDP **–** and a large public sector deficit. Its current account deficit and net foreign liabilities were also large. And substantial competitiveness had been lost since 1999, relative to the euro area as a whole. Private debt by contrast was the lowest of both core and periphery economies.

Ireland had high private debt – far above the euro area average. The economy was also substantially less competitive than in 1999. Its current account deficit and net foreign liabilities were also moderately large. However, public debt was amongst the lowest in the euro area, and the public sector was also running a balanced budget.

Spain had high private debt – similar to levels in Ireland. Its current account deficit and net foreign liabilities were also large. And the economy was also substantially less competitive than in 1999. However, public debt was low and the public sector balance was in surplus.

Portugal had high private debt – but below levels in Ireland and Spain. Its current account deficit and net foreign liabilities were also large. And the economy was significantly less competitive than in 1999. Public debt levels were average, but above the Maastricht limit, and the public sector deficit was approaching 3% of GDP.

Italy had high public debt – similar to levels in Greece. Some competitiveness had also been lost since 1999. However, the current account deficit and net foreign liabilities were relatively small compared with the periphery. And private debt was also low.

France was in a more solid position. Public debt was average, though slightly above the Maastricht threshold. Private debt was well below average. The current account deficit was small, and net foreign liabilities were close to zero.

Germany was in a strong position. Like France**,** public debt levels were average and private debt levels were well below average. In contrast with the other core and periphery economies, Germany had a large current account surplus and large net foreign assets. The economy was also substantially more competitive than in 1999.

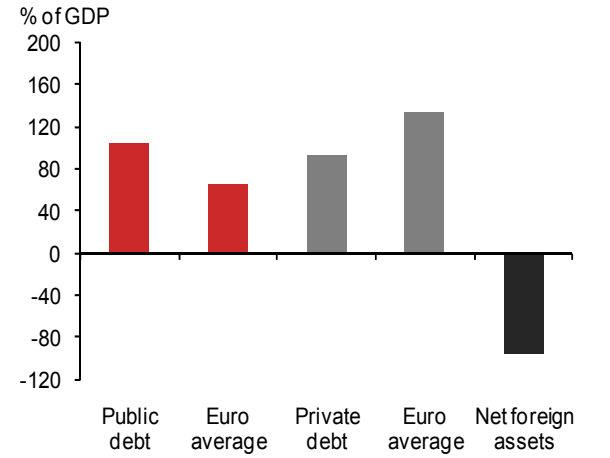
Figure 11. Economies' relative positions before the global economic and financial crisis, 2007

	Public sector		Private sector		External sector		Competitiveness indicators		
Units	% of GDP						Index		% change
	Balance	Debt	Balance	Debt	Balance	Debt	Unit labour costs	Inflation	Export market
Euro area	-0.6	66	-0.1	134	-	-	100	100	-
Greece	-6.4	105	na	93	-14.4	-95	112.1	109.2	-39
Ireland	0	25	-9.9	200	-5.3	-20	115.1	110.4	-25
Spain	1.9	36	-13.4	188	-10.0	-78	112.4	108.3	-25
Portugal	-2.8	63	-7.7	163	-9.4	-88	109.3	106.6	-14
Italy	-1.5	104	-1.1	101	-2.4	-21	107.5	101.3	-27
France	-2.7	64	0.5	105	-1.0	-7	101.5	97.9	-26
Germany	0.3	65	6.9	105	7.7	27	87.9	95.9	11

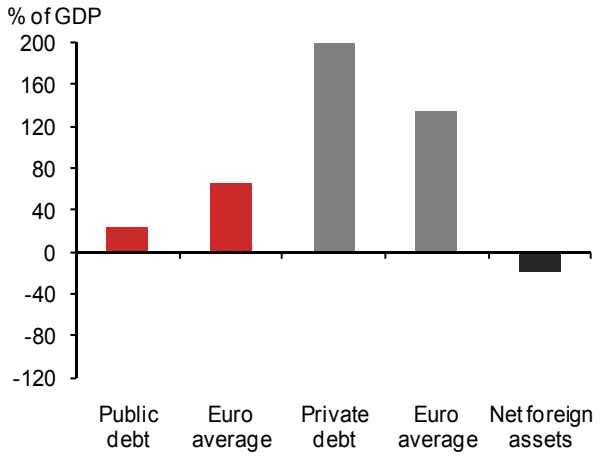
Source: Eurostat , IMF, Datastream, and Nomura Global Economics
Notes: Colours are indicative of relative positions; the darker the shading, the more parlous the position. The (appropriate) comparator is the euro area where shown, and the other economies in the table where the euro area is not shown. Indexes are calculated relative to the change in the euro area between 1999 and 2007. Export market share is presented as the cumulated percentage change between 1999 and 2007 minus that between 1994 and 1998.

Picture Book: Economies' positions before the global crisis

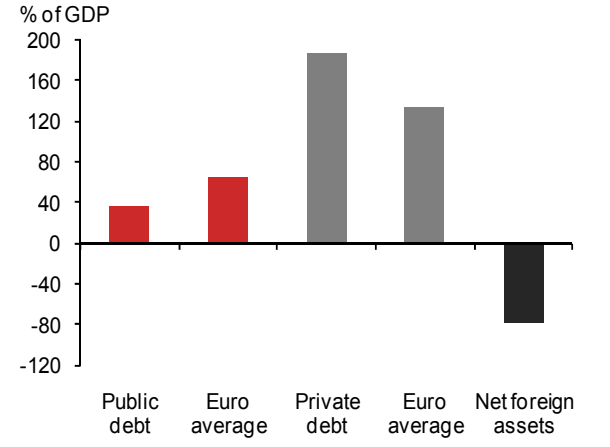
Greece



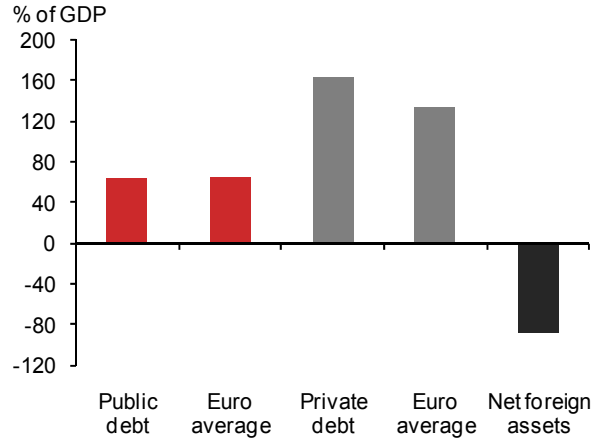
Ireland



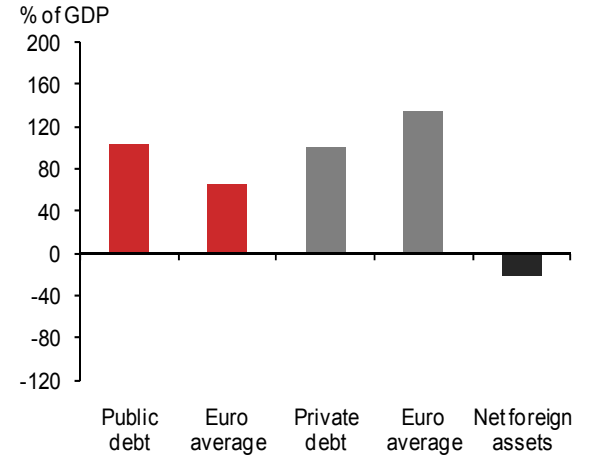
Spain



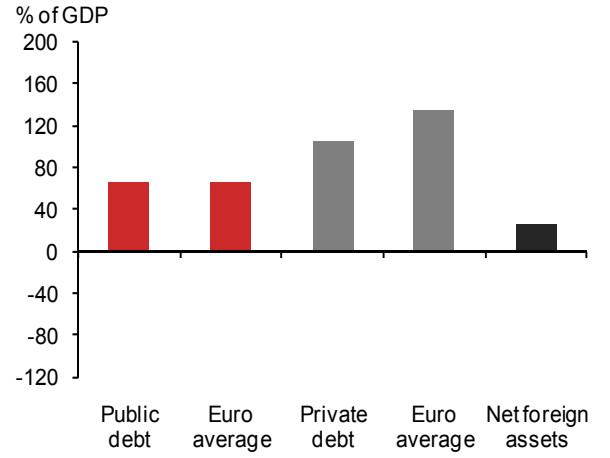
Portugal



Italy



Germany



Source: Eurostat, Datastream, and IMF

The global economic and financial crisis

The causes and consequences of the 2008 global financial and economic crisis[59] will be analysed for decades to come – just as the Great Depression remains, to this day, a subject of continuing scholarly research and debate.

Repercussions were most acute in the US and Europe

In essence, however, the causes, and at least some of the more immediate consequences, of the 2008 crisis are already clear. At its core, the previous excessive expansion of credit led, as such credit expansions almost invariably do, to an asset price bubble which, when it burst, produced huge losses in paper wealth. The course of events is reminiscent of the stylisation of earlier crises by Minsky/Kindleberger (for more information see: *Anatomy of crisis: the Minsky/Kindleberger typology*). These primary consequences were most acute in the US, continental Europe and the UK, but the repercussions were widespread.

Private sector response

The private sector borrowed less

The private sector sought to rebuild at least some of the wealth that it had thought it had had, and on which it had based a range of expenditure decisions: households and corporations immediately started to borrow less and save more, thereby moving the private sector's overall financial balance in the direction of surplus (Figure 12).

In Europe, the largest and earliest such movements took place in the economies at the periphery, notably Ireland and Spain – economies which previously had been running the largest private deficits. By the end of 2009:

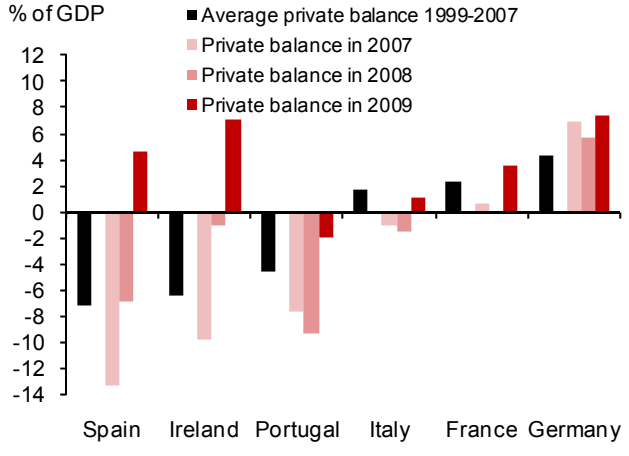
- Ireland's near 10% private sector deficit became a 7% surplus;
- Spain's 13% private sector deficit became a 5% surplus;
- Portugal's 8% private sector deficit became a 2% deficit;
- A similar story is likely to be the case in Greece;[60]
- In core euro-area economies, private sectors also moved in the direction of surplus, but less sharply than in the economies of the periphery.

Notwithstanding the private sectors of the various economies moving towards surplus, claims on the private sector by banks had increased by the end of 2009. The largest increases were in the economies in which private debt was highest in 2007 (Figure 13):

- In Ireland, the increase was from 200% to 236% of GDP;
- In Spain from 188% to 211% of GDP;
- In Portugal from 163% to 187% of GDP.

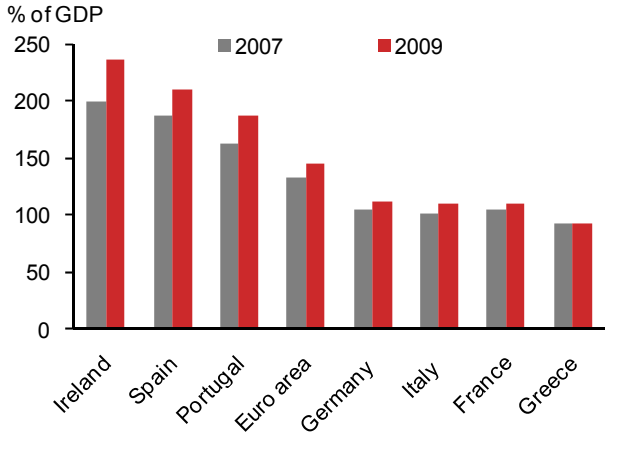
In the core euro economies and Greece, private debt levels and increases since 2007 were below the euro area average.

Figure 12. Private sector balances



Source: Eurostat

Figure 13. Private sector debt, 2007 and 2009



Source: Datastream, and IMF

Anatomy of crisis: the Minsky/Kindleberger typology

"Viewed from the right height, all crises look (more or less) the same, at least as regards their essential characteristics".[61]

Every financial/economic crisis has its own individual features. However, most, probably all, financial/economic crises share a number of common features. That is no less true of the recent global crisis. To see this, consider the following typology. It is our rendition of part of Chapter 2 of Charles Kindleberger's *Manias, Panics and Crashes*[62] which itself put into a more modern idiom the typology of Hyman Minsky. This typology was the product of Minsky's study of a wide range of financial crises and, as Kindleberger notes, was a lineal descendant of the writings of a host of classical economists, including John Stuart Mill, Alfred Marshall, Knut Wicksell and Irving Fisher.

Anatomy of crisis: the Minsky/Kindleberger typology

1. **Events start with a "displacement"**, some exogenous shock outside the macroeconomic system, e.g. a war, a bumper crop or failure, the widespread adoption of a new invention with pervasive effects, some political event or surprising success, or a precipitous lowering of interest rates.

2. **Expansion of bank credit** enlarges the total money supply and feeds the boom. This may involve the formation of new banks, the development of new credit instruments, and the expansion of personal credit outside of banks.

3. **Demand pressure and prices increase**, giving rise to new profit opportunities and attracting still further firms and investors. Positive feedback develops, as new investment leads to increases in income that stimulate further investment and further income increases.

4. **"Euphoria" sets in**. Speculation for price increases is added to investment for production and sale, often resulting in "overtrading" (pure speculation for a price rise), an overestimate of prospective returns or excessive gearing.

5. **Bubbles or manias develop**. The number of firms and households engaging in these practices grows large, bringing in segments of the population that do not normally participate in such ventures. The object of speculation may be: primary products, particularly imported; domestic and foreign securities of various kinds; contracts to buy or sell securities of various kinds; land; houses; office buildings; shopping centres; condominiums; and foreign exchange. An ever larger group of people seeks to become rich without a real understanding of the processes involved.

6. **Overtrading spreads** from one country to another, through arbitrage for internationally traded commodities and assets, capital flows, foreign exchange, or purely psychological transmission effects.

7. **Interest rates, velocity of circulation and prices all continue to mount**. A few insiders take their profits and sell out. At the top of the market there is hesitation, as new recruits to speculation are balanced by insiders who withdraw. Prices begin to level off.

8. **Financial distress**. Awareness starts to grow in a considerable part of the spending community that a rush for liquidity – to get out of assets and into money – may develop, leading some speculative borrowers unable to pay off their loans. As distress persists, speculators come to realise that the market cannot grow further. It is time to withdraw, the race out of real or long-term financial assets and into money turns into a stampede.

9. **Crisis**. The trigger may be the failure of a bank or firm stretched too tight, the revelation of a swindle or defalcation, or a fall in the price of the primary object of speculation. Prices decline. Bankruptcies increase. Liquidation is sometimes orderly, but may degenerate into panic. Banks cease lending on the collateral assets whose prices are falling.

10. **The panic feeds on itself until one of three things happens**:

    i. Prices fall so low that people are tempted back into less liquid assets;

    ii. Trade is cut off by setting limits on declines, shutting down exchanges, or otherwise closing trading; or

    iii. A lender of last resort succeeds in convincing the market that money will be made available in sufficient volume to meet the demand for cash.■

Central bank response

Liquidity was injected on an unprecedented scale

From the latter half of 2007, policymakers around the world provided support to national banking systems. Liquidity was injected into the banking systems on an unprecedented scale, particularly by the US Federal Reserve (Fed) and the European Central Bank (ECB). In August 2007 the Fed injected $38 billion into the US banking system, and the ECB an amount over 10 times larger (Figure 14).

Aggregate demand and GDP

Demand weakened, particularly for consumer durables

As a result of the private sector throughout the western economies moving in the direction of surplus, aggregate demand weakened, particularly in the US, Europe and Japan. Much of this fall in demand was for consumer durables, and so was transmitted rapidly and substantially to the consumer-durables-exporting Asian economies.

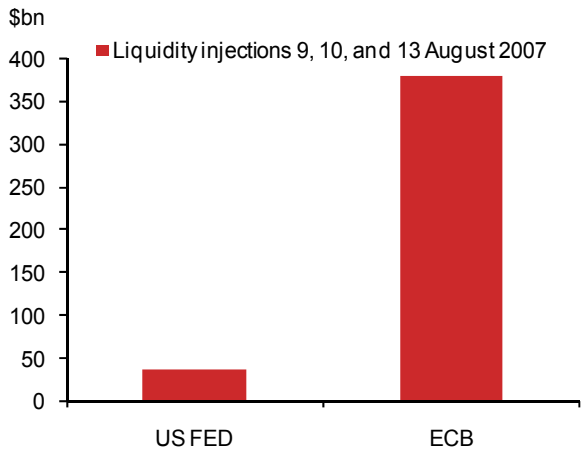
The policy response, in the US, Europe, and Asia alike, was substantial – a fiscal expansion of the order of 3-4% of GDP. In the western economies, with their developed social systems, much of this expansion took place through the operation of the automatic stabilisers, although most also imparted significant discretionary stimulus. In the Asian economies, which generally lack such well-developed social safety nets, a greater part was discretionary (Figure 15).

The output response in the two regions was quite different, however. The task for policy in the Asian economies was merely to replace weak export demand with stronger domestic demand, which was already buoyant and had suffered little if any direct shock. By contrast, policy in the Western economies, in supporting domestic demand, had to push against the substantial and continual headwind of the private sector increasing its saving, in an effort to move in the direction of surplus. Thus whereas:

- US GDP fell to more than 5% below where it would have been had it continued to grow at its earlier trend rate; and
- Euro area GDP fell to almost 7% below trend;
- China and India, by contrast, suffered no reduction in GDP relative to trend. Indeed, GDP growth accelerated in both; and
- A number of other Asian economies, while seeing output fall below trend, were affected much less than were the US and the euro area.

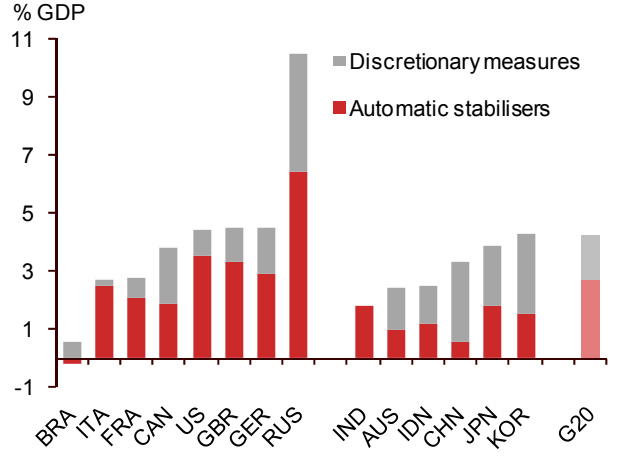
The Picture Book: *Output loss, relative to trend, by end-2009* shows pre-crisis trend GDP against its actual path up to 2009. The relative output loss is determined by the fall in actual GDP, pre-crisis trend growth, and the deviation from trend that occurred before the crisis.

Figure 14. Liquidity injections to financial sector, August 2007



Source: Baldwin (2010)

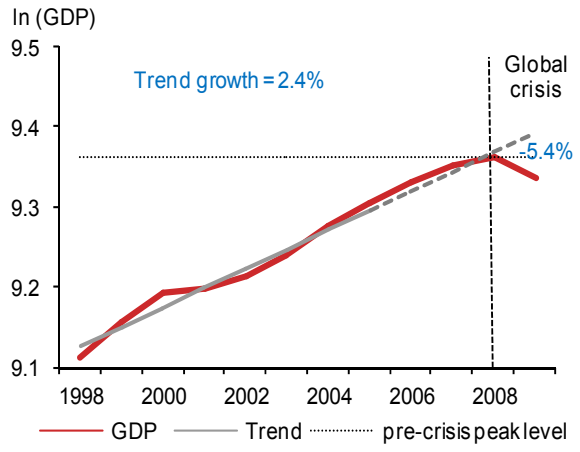
Figure 15. Fiscal stimulus in selected G20 economies, 2009



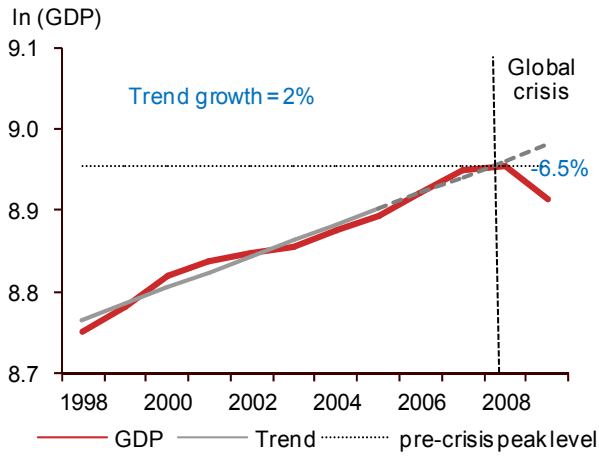
Source: IMF (April 2009), and Nomura Global Economics

Picture Book: Output loss, relative to trend, by end-2009

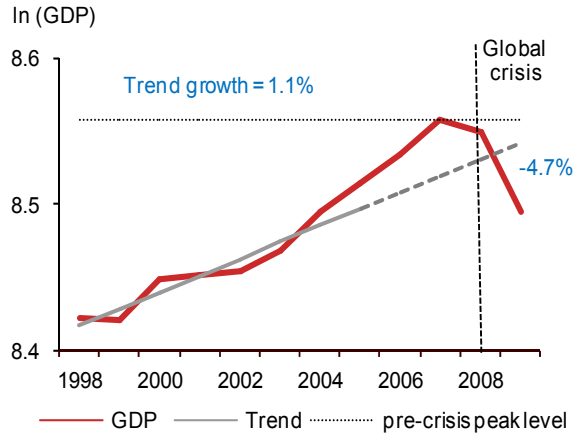
US



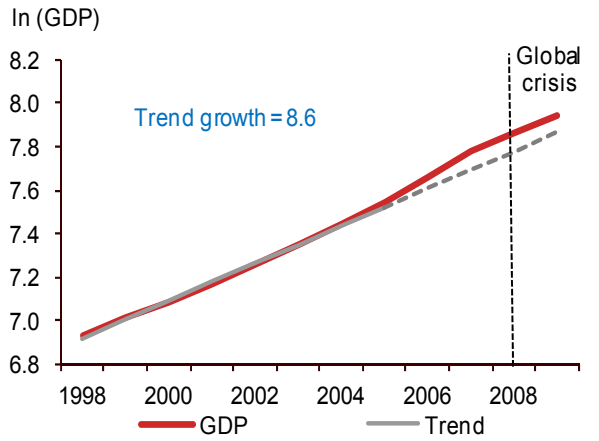
Euro area



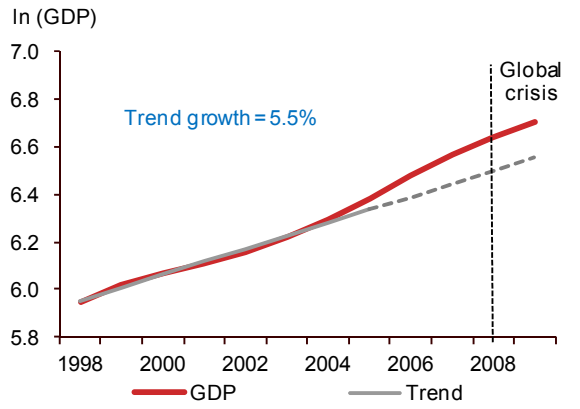
Japan



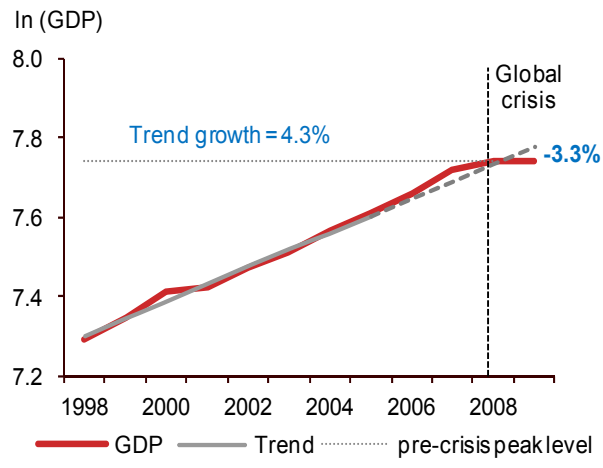
China



India



Asia ex Japan, China and India



Source: IMF World Economic Outlook 2010, Eurostat, and Nomura Global Economics
Note: The pre-crisis trend is estimated linearly up to three years prior to the crisis (i.e. to 2005), and extrapolated thereafter.

Within the euro area there were major differences in GDP loss between Member States. This can be measured as:

- the fall from peak to trough; or
- the gap between actual GDP, and the level that would have obtained had GDP grown along its pre-crisis trend.[63]

GDP falls differed widely by Member State…

Falls in GDP from peak. By end-2009, the largest (actual) fall had been in Ireland, where GDP fell by almost 10%. Italy and Germany also saw large absolute falls, of 6.3% and 5% respectively. Below-average falls in GDP were registered in Spain (3.6%), Portugal (2.7%), France (2.2%), and Greece (2%) (Figure 16).

…and were particularly large in Ireland

The gap from trend. It was the economies of the periphery that saw GDP fall furthest relative to trend. The largest loss in GDP by this measure was also in Ireland. Pre-crisis trend growth in Ireland had been rapid, at around 6.5% per year, but GDP had already fallen below trend before the crisis, so that by end-2009 GDP had fallen to almost 25% below trend.

GDP also fell substantially relative to trend in the other three economies of the periphery. In Spain and Greece, though not in slow-growth Portugal, pre-crisis trend growth had been brisk, but GDP had already fallen below trend before the start of the crisis, so that by end-2009 it had fallen to 8-10% below trend.

Of the core economies of the euro area, only in Italy did GDP fall by anything like as much as in the periphery. Italy's GDP was also falling below trend before the crisis struck, so that by end-2009 it had fallen to 10% below trend.

France, like the euro area as a whole, experienced a more moderate, though still important, fall in GDP relative to trend, to around 6% below.

Germany, whose GDP had if anything been above trend prior to the crisis, thereafter fell to a relatively modest 4% below trend.

(See the Picture Book: *Relative output loss in euro-area economies.*)

Unemployment

Unemployment increased…

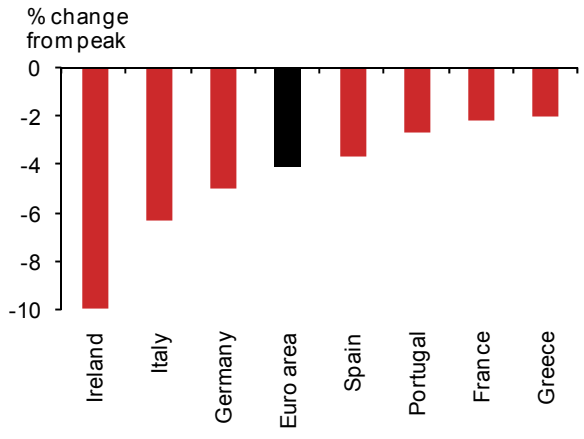
Before the crisis, unemployment rates had been fairly similar in both the core and the periphery economies. Ireland was the notable exception, with rates well below average.

…particularly in Spain and Ireland

By 2009, however, unemployment rates had risen, considerably so in Spain and Ireland. In Spain, unemployment increased by about 10 percentage points, from 8% to 18%, and in Ireland by 7 percentage points, from 5% to 12%.

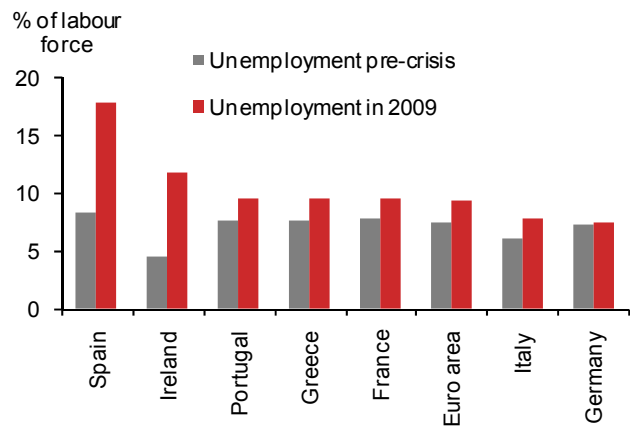
In Germany, by contrast, unemployment scarcely increased; but in the euro area as a whole unemployment increased by 2 percentage points, to nearly 9.5%, similar to the increases in Portugal, Greece and France (Figure 17).

Figure 16. Change in GDP from peak, by end-2009



Source: Eurostat, and Nomura Global Economics
Note: Calculated from annual data.

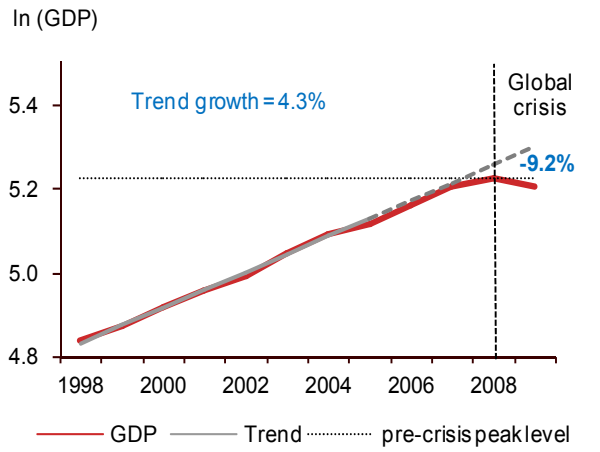
Figure 17. Unemployment, pre and post crisis



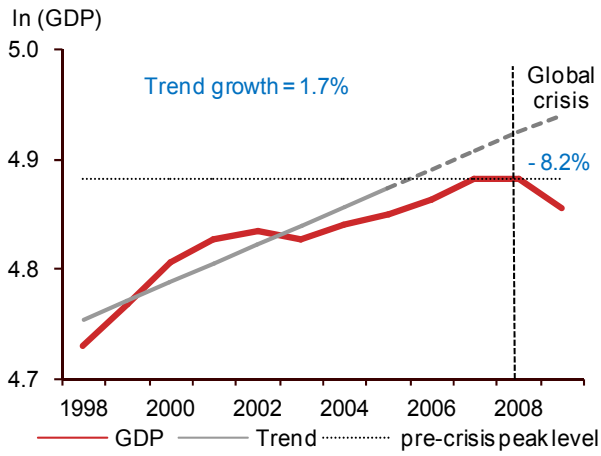
Source: Eurostat

Picture Book: Relative output loss in euro-area economies

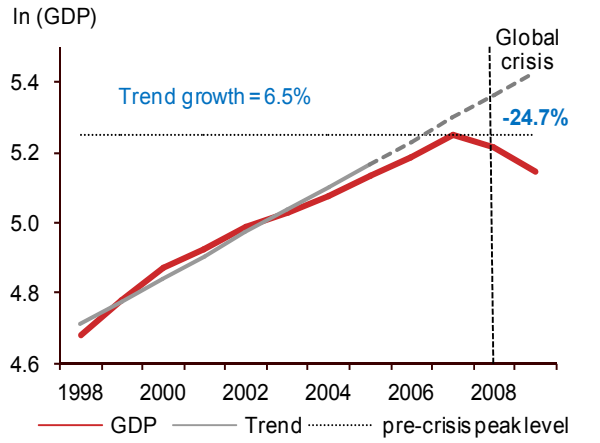
Greece



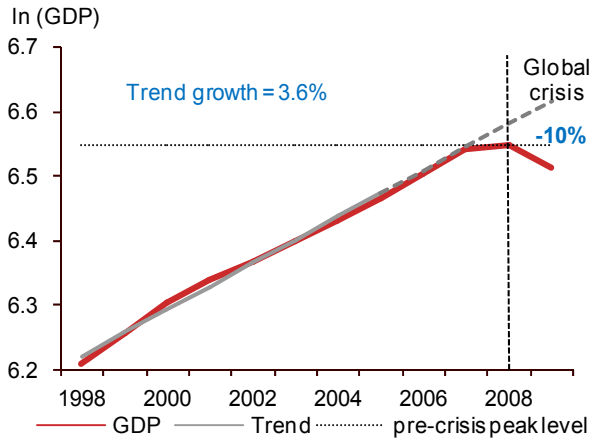
Portugal



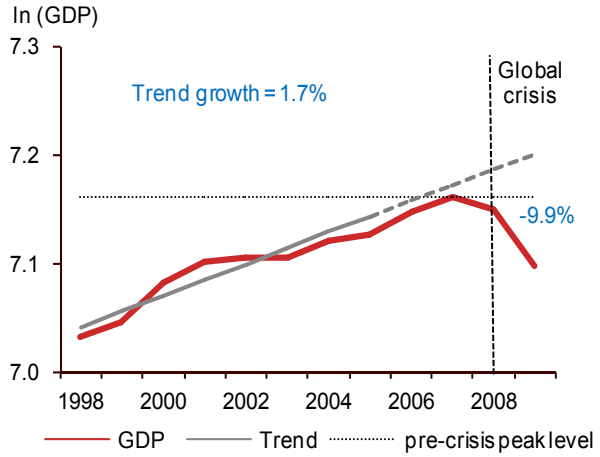
Ireland



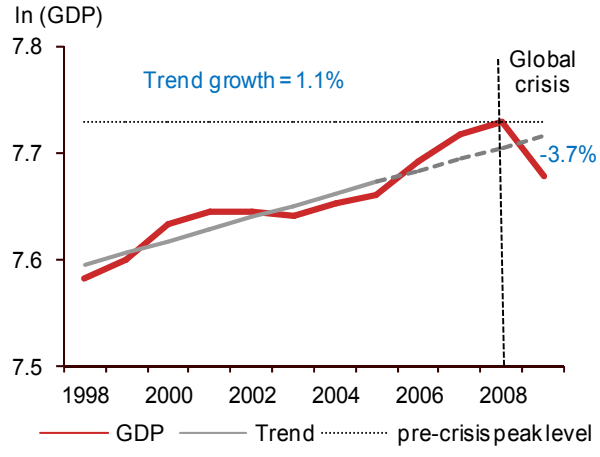
Spain



Italy



Germany



Source: Eurostat, and Nomura Global Economics
Note: The pre-crisis trend is estimated up to three years prior to the crisis (i.e. to 2005), and extrapolated thereafter. In 2009, the gap between expected GDP and extrapolated GDP is noted in blue.

The crisis intensifies

Liquidity problems in banking systems slid progressively towards becoming solvency problems. Several governments intervened to prop up their respective banking systems through:

- Recapitalisation;
- Guarantees; and
- Nationalisation.

Ireland initiated a blanket bank guarantee scheme

The banks. In the euro area, Ireland intervened heavily to support its banking sector.[64] In September 2008, it initiated a blanket Bank Guarantee scheme covering liabilities to the tune of approximately €400bn (over twice the size of its GDP). Support for six institutions of systemic importance (including Allied Irish) was also given.

In December 2008, three banks (including Allied Irish) were recapitalised. But by January 2009, Anglo Irish had been nationalised. Later in 2009 the Irish government also set up the National Asset Management Agency (NAMA) to buy the assets of distressed banks, a high-risk strategy given the difficulty in ascertaining correct valuations (particularly property-related assets).

Spain moved to consolidate its banks, and injected capital into a number of its smaller banks, but, unlike Ireland, did not issue a blanket guarantee. (Further detail on the Spanish banking sector is presented in Chapter IV: *Policy challenges: the crisis and longer term*).

Public sector deficits grew substantially by end-2009…

Public deficits and debt. Across the euro area, public sector balances moved in the direction of deficit. By end-2009, public deficits had become large, particularly in the economies of the periphery. Ireland and Spain, which had previously been running average size public sector surpluses, saw particularly large swings (Figure 18).

By the end of 2009, public deficits had reached 15.4% of GDP in Greece, 14.4% in Ireland, 11.1% in Spain, and 9.3% in Portugal.

The core economies had also moved in the direction of deficit, but by end-2009 deficits were smaller: 7.5% in France, 5.2% in Italy, and 3% in Germany.

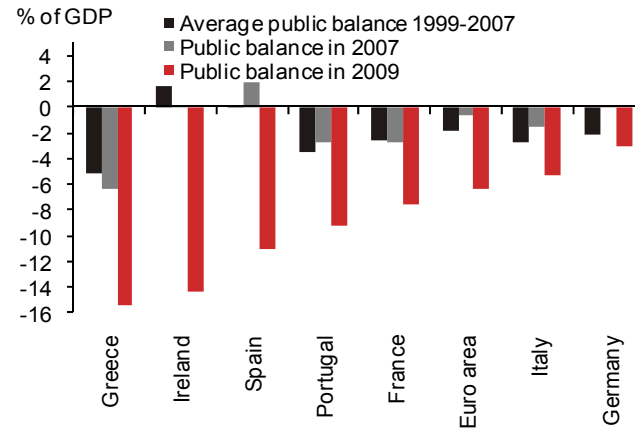
…as did public sector debt

By end-2009 public debt as a proportion of GDP had also increased across the euro area, the largest increases occurring in hitherto low-debt Spain and Ireland. However, levels in 2009 were still below the euro-area average in both economies. Public debt positions, in Ireland in particular, were set to rise considerably in the following years, as a result of its various interventions and guarantees to the banking sector.

In high-public-debt Greece and Italy, public-debt levels increased further, to 127% of GDP and 116% respectively. In Portugal, France, and Germany, public-debt levels, and increases since 2007, were around the euro-area average. End-2009 levels were 78% of GDP in France, 77% in Portugal, and 73% in Germany (Figure 19).

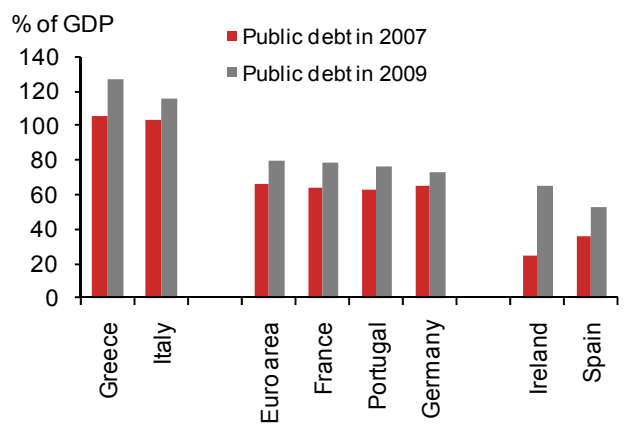
Relative inflation. The weakening aggregate demand also led to changes in the inflation rates of many economies in the euro area. While the euro-area price level remained broadly constant

Figure 18. Public sector balances



Source: Eurostat

Figure 19. Public sector debt, 2007 and 2009



Source: Eurostat

(as it did in the case of the core economies and Spain), in Ireland and Portugal the aggregate price level fell from mid-2008, thereby assisting their cost and price competitiveness.

These economies thus experienced the beginnings of some reversal of their earlier price-level divergence. That said, at such a rate of convergence it would take at least three to five years to complete the reversal. In Greece, however, the aggregate price level continued to rise, thereby further increasing the economy's price-level divergence with the euro area as a whole.

Current account trends reversed

Current account trends reversed after 2007 (Figure 20). Whereas in 2007 the periphery economies had had large current account deficits, by 2009 these had become smaller. Greece's current account deficit fell from 14% to 11%, Spain's from 10% to 5%, and Ireland's from 5% to 3%. Portugal's current account deficit increased between 2007 and 2009, from 9% to 10%, but had fallen from its peak of 12% in 2008. In the core economies of France and Italy, current account deficits remained broadly constant from 2007 to 2009, and Germany's 8% surplus fell to 5% of GDP.

The driver of the current account deficit reversals after 2007 is likely to have been falling expenditure rather than improving competitiveness, given that it takes time for the effects of competitiveness changes to be realised. This is largely borne out by export market share data from 2007 to 2009.

Export market share declines continued in some countries

Export market share declines continued in 2008 and 2009 in Spain, Greece, and Italy. However, in Ireland export market share grew strongly.[65] Declines in export market share also reversed in Portugal and France, evidence of increased competitiveness in these economies. Germany's export market share growth fell slightly.

Net foreign asset positions reversed

Net foreign liabilities increased overall in the periphery economies, with the exception of Greece. Ireland saw particularly large increases in 2008 and 2009. Although there were signs of a reversal in trend in Spain, Greece, and Germany in 2008, by 2009 the divergence between core and periphery had largely resumed. By end-2009, net foreign liabilities were 109% of GDP in Portugal, 98% in Ireland, 92% in Spain, and 86% in Greece.

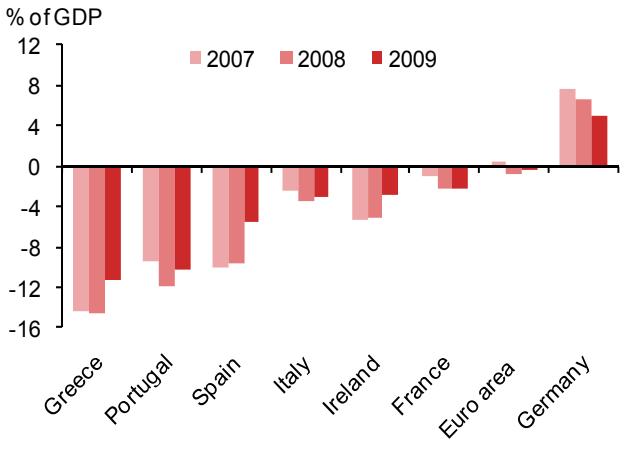
Foreign holdings of public debt became substantial

Foreign holdings of public debt. By end-2009, much public debt was held by non-residents, with the periphery economies having the largest proportion of total public debt held by foreigners. Almost 80% of Greece's public debt was held abroad. For Portugal the figure was 75%, and for Ireland 70%. The proportions were lower in Spain (below 50%) and Italy (43%) (Figure 21).

Where total debt was high, the stock of public debt held abroad was large when expressed as a proportion of GDP. Some periphery economies were particularly heavily indebted to foreigners: Greece owed foreigners an amount equivalent to over 100% of 2009 GDP, Portugal 58%, Italy 50%, and Ireland 46%. Spain, at 25% of GDP, owed significantly less.

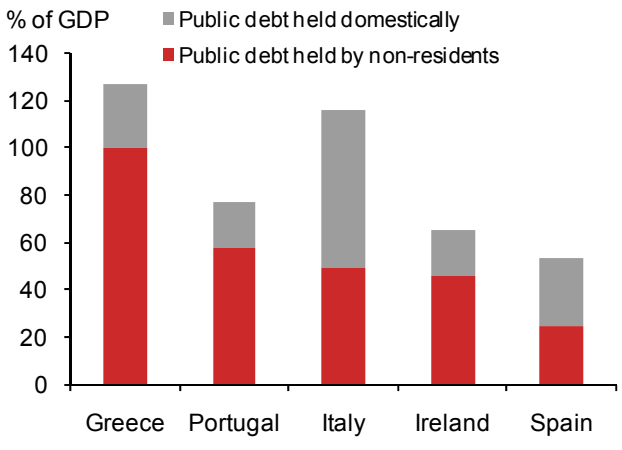
The following chapter presents the analytics of debt and applies them to the cases of Greece, Ireland, Spain, and Portugal. It can be read in sequence or as a "standalone", in which case readers may wish to proceed directly to Chapter IV: *Policy challenges: the crisis and longer term.*■

Figure 20. Current account balances, 2007-2009



Source: OECD Economic Outlook no. 88

Figure 21. Public debt holdings, end-2009



Source: Eurostat, and Cabral (2010)

Chapter III **Bimal Dharmasena**

Anatomy of the crisis

This chapter examines the analytics of debt, applied to Greece, Ireland, Spain, and Portugal. A standalone chapter, it can be read either separately or in sequence. Our main conclusions:

- A public debt problem can originate in the public, private, or external sector.
- The dynamics of the (public) debt problem are determined in large part by the size of the debt and the economy's growth rate/interest rate differential.
- Favourable debt dynamics can turn unfavourable in a matter of a few years.
- Dealing with a public debt problem thus involves more than just fiscal retrenchment.
- The challenge facing the economies of the periphery is enormous and, for most, unprecedented: they can no longer count on the favourable debt dynamics of the past.

Introduction

The Greek statement provoked a dramatic chain of events

The onset of the current crisis in Europe dates from October/November 2009, when Greek Prime Minister Papandreou's newly elected government announced a major – indeed, fundamental – revision to its estimate of the country's 2009 public sector deficit to 12.7%, more than twice the previous figure and four times the initial (December 2008) estimate. (Later the figure was to be revised up yet again, to almost 14%, and then again to over 15% of GDP.)

These announcements provoked a dramatic chain of events. Ever since the convergence of euro area economies' bond yields in the run-up to the formation of the euro in 1999, bond investors, in what must have been one of the most extraordinary mis-pricings in modern financial history, had been pricing all euro-denominated bonds – from German to Greek – as if they carried virtually the same credit risk.

Only in 2008, in the jittery aftermath of the global crisis, did some basic questions begin to nag:

i. Were bonds that were denominated in euros claims on the euro area as a whole, or only on the issuing economy?

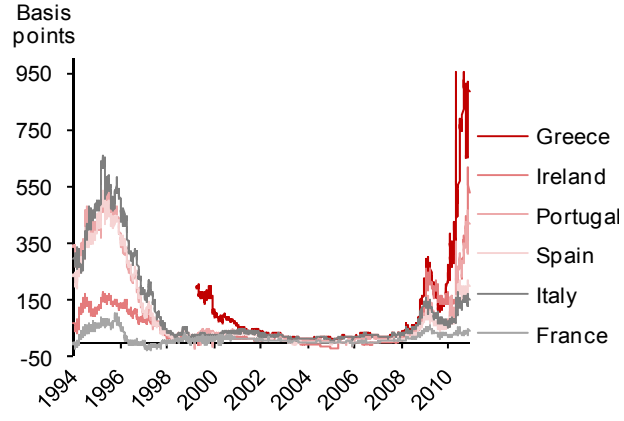
ii. Given that banks were in an (unknown) degree of trouble, might published public sector data be seriously understating potential public sector liabilities? And

iii. In worse-case scenarios, could or would the resulting stock of public debt be so large as to be essentially un-repayable?

Bond investors reappraised risk, raising yields

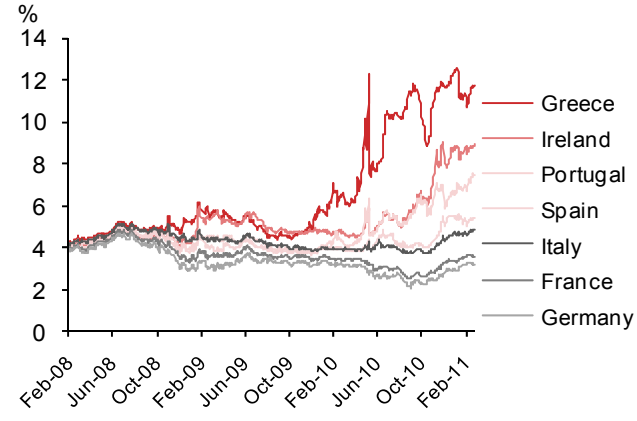
These simmering worries came to a boil when Greece made its (first) revelation. Bond investors, who thought that they had been taking little if any sovereign risk, suddenly realised that they had to reappraise their entire situation. By May 2010, the crisis had erupted in Greece. Spreads over Bunds widened (Figure 1) as bond yields soared, not only in Greece but also in Ireland and Portugal (Figure 2). By November 2010, the crisis had reignited with Ireland. In 2011, after some initial respite, yields seem to be on the rise once more, and have reached new highs in Portugal.

Figure 1. Bond spreads over German Bunds, 1994-2011



Source: Nomura Global Economics

Figure 2. Bond yields, February 2008-February 2011



Source: Nomura Global Economics

Timeline of the sovereign debt crisis

October-November 2009: Prime Minister Papandreou's Panhellenic Socialist Movement (PASOK) wins power. The new government more than doubles the previous estimate of the 2009 budget deficit to 12.7% of GDP.

9 December: In Ireland, a second emergency budget aims to deliver savings of over €4bn.

28-29 January 2010: The spread between interest charged on Greek and German debt widens to 400bp. Spain announces a plan to save €50bn – over 4% of GDP – over three years.

3 March: Greece announces further measures to reduce the deficit by more than 2% of GDP, including higher VAT rates and other indirect taxes, and a cut in the wage bill. The EU, the ECB and the IMF are involved.

April: S&P downgrades Greece's debt from investment grade to junk bond status. Global stock indices drop 2-6%.

11 April: The Eurogroup gives a strong – but still vague – statement affirming the readiness of Member States to take determined and coordinated action.

23 April: Greece requests financial assistance from the euro area Member States and the IMF, given large refinancing needs in May. This comes after Greece's 2009 budget deficit is revised from 12.7% to 13.6% of GDP by Eurostat.

2-3 May: Greece agrees a deal with the EU and IMF, opening the door to €110bn of financing over three years, conditional on an extensive programme of fiscal consolidation and structural reform. The ECB announces that it will accept Greek-guaranteed bonds as collateral regardless of their rating. This increased the likelihood of similar announcements should other countries risk being downgraded to junk status.

10 May: Global policymakers announce a €750bn emergency financial safety net. The package consists of €440bn in guarantees from euro area states (EFSF), plus €60bn in a European debt instrument (EFSM). The IMF is to contribute €250bn. The ECB announces that it will purchase sovereign bonds of euro area periphery countries. Bond yields fall from their highest levels; spreads tighten that week by more than 440bp in Greece, 170bp in Portugal, and 120bp in Ireland.

25-27 May: Italy approves a fiscal tightening of €24bn over three years. Spain approves an additional package of €15bn.

7 June: German Chancellor Merkel's coalition agrees a package to bring Germany's structural deficit within EU limits by 2013. The measures aim to deliver a total of €80bn of savings over three years.

9 June: The Portuguese Parliament approves an austerity package. The head of the Treasury rules out drawing on the financing package, citing a successful bond sale and economic recovery in Q1 2010.

11 June: Prime Minister George Papandreou vows that Greece will not default on its loans. Its austerity measures are intended "… to exclude default and to exclude exit from the eurozone".

14-16 June: Moody's cuts Greece's rating to junk, leaving it with only one investment grade rating (by Fitch). Spain's spreads reach all-time highs for the euro area of more than 220bp.

July: EU policymakers complete and publish their stress test for the EU banking system. Just seven of 91 banks fail. The tests did not consider sovereign debt exposure held on banks' books, around 80% of the total.

September: Ireland begins further measures to bail out Anglo Irish Bank and building society Irish Nationwide at a cost of up to €40bn. As a result, its 2010 budget deficit is estimated at around 32% of GDP.

28-29 October: The European Council agrees the need to set up a permanent crisis resolution mechanism "… to safeguard the financial stability of the euro area". The European Stability Mechanism (ESM) will be based on the EFSF. Rules will be adapted to provide for private-sector participation in future debt resolution, fully consistent with IMF policies.

November: Bond yields begin to rise sharply in the periphery economies. Irish spreads exceed 600bp, their highest since the formation of the euro area. Portuguese spreads break 400bp and Spanish spreads rise above 200bp.

15 November: Eurostat officially lifts all "reservations" regarding Greek fiscal data and in the process revises the 2009 deficit to 15.4% of GDP and debt to 126.8% of GDP. Greek spreads soon hit 930bp.

28 November: Ireland agrees an €85bn package: €20.1bn from the EFSF, €20.1bn from the EFSM, €22.5bn from the IMF, and €22.3bn in bilateral loans and NPRF and NTMA cash reserves. Ireland soon passes its third emergency budget; the four-year plan totalling €15bn (10% of GDP) of savings, aims for €6bn in 2011. A Eurogroup press release highlights some important developments regarding the ESM. There will be a case-by-case (approach to burden sharing; the ESM receives "preferred creditor" status; and all euro area bonds are to include collective-action clauses (CACs) from 2013.

End November: Periphery spreads widen again**,** reaching over 630bp in Ireland, over 430bp in Portugal, and approaching 300bp in Spain. There are also preliminary signs that negative sentiment threatens to spread beyond the periphery**.** Yields in Italy and Belgium increase; spreads reach 200bp in Italy, and approach 140bp in Belgium.

16 December: Strong declaration by Heads of State, when formalising their intention to establish the ESM, and amend the Lisbon Treaty accordingly, that they are "… ready to do whatever is required" to protect the euro.■

Source: Reuters and Nomura Global Economics.

The origins and dynamics of the debt problem

Many, perhaps most, debt problems of macroeconomic proportion originate in the public sector. The various Latin American debt crises of the 1980s, for example, were caused primarily by public sector excess, the reason that the IMF's monitoring system had long directed particular attention to the reporting of public sector accounts.

Public debt problems can originate in different sectors

However, public debt problems can also originate in the private sector, as in the Asian crisis of 1998, which was largely caused by private (banking sector) excess. And other crises had their origins in the external sector, one example being the UK's withdrawal in 1992 from the European Exchange Rate Mechanism (ERM), which it had joined at an uncompetitive exchange rate.

The origins of the debt problems in Europe's periphery are broadly as follows:

- **Greece** – basically a public sector problem, but also a private deficit issue and an international competitiveness problem;
- **Spain** and **Ireland** – basically a private sector issue (facilitated by the banking sector), but also an international competitiveness problem;
- **Portugal** – an international competitiveness cum structural growth problem of long standing, but also with private and public deficit issues.

In practice, however, even when a problem originates more or less unequivocally in one sector, it is transmitted to others, because the three sectoral balances – public, private and external – are linked, by identity (see Box: *Sectoral balances and public debt dynamics*). Thus, a swing in the direction of deficit in the public sector necessarily results in a swing towards deficit on the current account (external sector) or towards surplus in the private sector – or both.

Once in motion, the dynamics of public debt can be devilish

The mechanisms which effect these changes are numerous however. Regardless of how they originate, large problems nearly always end up on the books of the public sector. Then, once in motion, the dynamics of public debt can pose devilish problems. For example, in the case of Greece, with its large public debt problem:

- Reducing public debt requires that the economy move into significant primary surplus, which necessitates a substantial fiscal tightening;
- Such a fiscal tightening – large increases in taxation and/or reductions in public expenditure – can however be socially, and hence politically, difficult to bear;
- Moreover, when fiscal policy is being tightened, domestic demand, and thereby GDP, are likely to be weak – and all the more so if the private sector is deleveraging;
- With official interest rates near zero, there are few options for conventional monetary policy to support domestic demand – and none for a single country in monetary union;
- Strong exports could help offset weak domestic demand, but achieving this by slowing (relative) unit labour cost growth to increase competitiveness is a slow process;
- Moreover, slow wage growth tends to slow the growth of aggregate demand and hence output, which in turn hinders the reduction of the public debt;
- To the extent that investors come to doubt that the country will overcome these issues, they mark up its bond yields, thereby compounding the public debt problem;
- Rising interest rates, in combination with weak or even declining GDP, causes the debt problem to "snowball", the more so the larger the initial debt.

Equivalent causal chains come into play in economies which start out with either a private sector deficit/debt problem, or an international competitiveness problem. A private sector debt problem, such as a banking crisis, usually ends up, in whole or in part, as a public debt problem, to the extent that the state has to take on the banking system's bad debts and recapitalise it. The same is true of a competitiveness problem, because declining expenditure on domestically produced output, usually in combination with supportive fiscal policy, almost inevitably leads to a widening public sector deficit and thereby growing public sector debt.

Sectoral balances and public debt dynamics

The three deficits – public, private and external (the current account) – are linked by identity and can individually and collectively cause a public debt problem.

National saving (i.e. the current account/external sector), is the sum of public and private saving (private saving being the sum of household and corporate saving). The identity can be expressed as:

$$\Delta CA \equiv \Delta S_G + \Delta(S_H + S_C) \qquad (1)$$

where CA refers to the current account balance, S_G is total public saving, S_H is total household saving and S_C is total corporate saving. Δ denotes a change in the variable and $\equiv$ is the identity symbol.

The origins of a country's debt problems can differ: they can be due basically to falling competitiveness; rising private sector deficits (household and/or corporate); or increasing public sector deficits.

Accordingly, equation (1) can be rewritten:

$$\Delta S_G \equiv \Delta CA - \Delta(S_H + S_C) \qquad (2)$$

$$\Delta(S_H + S_C) \equiv \Delta CA - \Delta S_G \qquad (3)$$

Starting from the assumption of an economy in balance – that is at full employment and with a sustainable current account position – then:

From equation 1: Movement towards a current account deficit, *ceteris paribus*, will have as its counterpart a swing towards deficit in the public sector, a movement towards deficit in the private sector, or both;

From equation 2: A swing towards a public sector deficit, *ceteris paribus* (i.e. not itself caused by a change in the current account or private saving), will have as its counterpart a swing towards deficit on the current account, a swing towards surplus in the private sector, or both; and

From equation 3: A swing towards a private sector deficit, *ceteris paribus*, will have as its counterpart a swing towards surplus in the public sector, a swing towards deficit on the current account, or both.

The mechanisms that effect such changes are numerous. Often, however, and regardless of the sector of origin, problems can end up on the public sector books. The dynamics of a large public debt can pose devilish problems.

The dynamics of the public debt/GDP ratio are a function of three components:

- The primary balance – the government budget before payment of debt interest.
- The snowball – the difference between the nominal interest rate paid on debt and the nominal growth rate of the economy – "scaled" by the outstanding stock of debt.
- The stock-flow adjustment – adjustments that ensure consistency between net borrowing (a flow) and the variation in the stock of gross debt. This catch-all term includes, *inter alia*, realised losses/gains from intervention in the banking sector and valuation effects (especially important when debt is denominated in a foreign currency). These effects are highly uncertain *ex-ante*, but can be quantitatively important *ex-post*.

The change in the ratio of public debt/GDP from one year to the next can be written as:

$$\Delta(D_t/Y_t) = -(PB_t/Y_t) + [(D_{t-1}/Y_{t-1}) \times (i_t - y_t)/(1+ y_t)] + (SF_t/Y_t)$$

Primary balance Snowball Stock-flow adjustment

where D is the outstanding amount of debt, Y is nominal GDP, y the growth rate of nominal GDP, PB the primary balance of the government, SF the stock-flow adjustment, and i the implicit interest rate on the outstanding stock of debt.

Unfavourable debt dynamics can thus arise from:

1. A deficit in the primary balance of the government budget; and/or
2. A nominal interest rate paid on debt that is greater than the nominal growth rate of GDP, all the more so when it is in combination with high existing debt; and/or
3. Losses from interventions in the banking sector and/or devaluation with large foreign-denominated debt.■

The scale of the fiscal challenge

Deficits, the snowball, and stock-flows scale the challenge

The scale of the challenge faced by an economy that needs to bring down its public sector debt is determined by three components: (for more information see Box: *Sectoral balances and public debt dynamics*).

- **The primary balance**. In the economies of the periphery, primary deficits, including on a cyclically adjusted [66] basis, were large in 2009, implying the need for much fiscal retrenchment.
- **The "snowball"**. In the periphery an unfavourable snowball is more likely over the longer term as the cost of servicing rising national debt increases above economies' long-run growth rates.
- **The stock-flow adjustments**. Interventions in the periphery, particularly in the banking sector, have increased (and are likely to continue to) the cost to governments.

Greece has an immense fiscal challenge

In **Greece**, the fiscal challenge is immense. With its 2009 cyclically adjusted primary deficit approaching 10% of GDP and a debt ratio of 127%, Greece had the most unfavourable position among the economies of the periphery in 2009.[67]

Assuming a (plausible) interest rate/growth rate differential of 1 percentage point (pp) implies a total tightening of between 16pp and 18pp of GDP[68] to achieve a debt/GDP ratio of 60% in 2030.[69] A larger interest rate/growth rate differential would require an even larger fiscal tightening.

Figure 3 illustrates the challenge. It shows, for different degrees of fiscal tightening, and a range of interest rate/growth rate differentials, the terminal debt/GDP ratio that would result in 2030. Terminal debt/GDP ratios of above 90% are shown in red.

The high proportion of red cells shows that for Greece, bringing down the debt ratio to even 90% of GDP – probably the minimum level to which public debt ratios should be reduced – requires a massive fiscal tightening and, even then, possibly an interest/growth differential that is not too unfavourable.

Ireland too faces a huge fiscal challenge

In **Ireland** too, the fiscal challenge is huge. With its cyclically adjusted primary deficit approaching 10% of GDP, a debt/GDP ratio of 66% and assuming a (plausible) interest rate/growth rate differential of 1pp, a tightening of between 14pp and 16pp of GDP is required to achieve a debt/GDP ratio of 60% in 2030. To the extent that there are further additions to public debt as a result of interventions in the banking sector, the challenge for Ireland will prove to be even greater than depicted in Figure 4.

Thus, while Ireland has a slightly smaller proportion of red cells than Greece, it nevertheless faces a huge challenge.

In **Spain** too, the fiscal challenge is significant. With its cyclically adjusted primary deficit approaching 8% of GDP, and despite a debt/GDP ratio of only 53%, assuming a (plausible)

Figure 3. Greece: an immense fiscal challenge

Total tightening 2009-2020 (% of GDP)	Cyclically-adjusted primary balance in 2009 (% of GDP)	Cyclically-adjusted primary balance 2020-2030 (% of GDP)	Interest-growth rate differential						
			-2%	-1%	0%	1%	2%	3%	4%
20	-9.8	10.2	<0	<0	<0	10	34	65	104
18	-9.8	8.2	<0	5	22	43	70	104	146
16	-9.8	6.2	18	34	53	77	106	143	188
14	-9.8	4.2	45	62	84	110	142	182	230
12	-9.8	2.2	72	91	115	143	178	221	272
10	-9.8	0.2	99	120	146	177	214	259	314
8	-9.8	-1.8	126	149	177	210	250	298	356

Source: Nomura Global Economics calculations

Figure 4. Ireland: a huge fiscal challenge

Total tightening 2009-2020 (% of GDP)	Cyclically-adjusted primary balance in 2009 (% of GDP)	Cyclically-adjusted primary balance 2020-2030 (% of GDP)	Interest-growth rate differential						
			-2%	-1%	0%	1%	2%	3%	4%
20	-9.7	10.3	<0	<0	<0	<0	3	26	55
18	-9.7	8.3	<0	<0	2	18	39	65	97
16	-9.7	6.3	6	18	33	52	75	104	139
14	-9.7	4.3	33	47	64	85	111	143	181
12	-9.7	2.3	60	75	95	118	147	182	224
10	-9.7	0.3	87	104	126	152	183	220	266
8	-9.7	-1.7	113	133	157	185	219	259	308

Source: Nomura Global Economics calculations

interest rate/growth rate differential of 1pp, a total tightening of between 10pp and 12pp of GDP is required to achieve a debt/GDP ratio of 60% in 2030.

Spain and Portugal face significant challenges

Thus, even though Spain has far fewer red cells than either Greece or Ireland, its challenge is substantial.

Portugal too faces a significant challenge. With a cyclically adjusted primary deficit over 5% of GDP, the smallest of the periphery economies, a debt/GDP ratio of 76% and assuming a (plausible) interest rate/growth rate differential of 1pp, a fiscal tightening of between 8pp and 10pp of GDP is required to achieve a debt/GDP ratio of 60% in 2030.

Hence Portugal has fewer red cells than Greece, Ireland, and Spain. Nevertheless, its challenge is significant.

The required fiscal retrenchment, over a range of plausible interest rate/growth rate differentials will be tough. The higher the differential, the more demanding the task becomes. This highlights the importance of both brisk long-term economic growth and low long-term bond yields in achieving debt sustainability. A positive long-term differential requires a primary surplus simply to stabilise the debt. To bring the debt ratio down requires that even larger primary surpluses be achieved and maintained, the more so where the starting level of debt is large.

Insufficient attention was paid to public and private debt risk

With the benefit of hindsight, it is evident that the authorities – in the periphery economies and indeed the euro area as a whole – paid insufficient attention to the risks inherent in the dynamics of public debt. The potential dangers presented by an excessive run-up in private sector debt, and hence the potential for sharp increases in public sector debt, also went unchecked.

The act of joining the euro area gave the economies of the periphery a "one-off" gift of lower bond yields, which thereby reduced the cost of servicing their national debt. What, at the very least, the countries with high public debt – most particularly Greece – ought to have done was to use this gift as an opportunity to pay down some of its disturbingly high public debt, by running a primary surplus. This could have been achieved while broadly maintaining the level of government expenditure on the provision of goods and services.

Others – notably Ireland and Spain – did not make this mistake. They both often ran primary surpluses and debt fell. Their mistake was to fail to control the growth of indebtedness in the private (banking) sector – as indeed was the case in the UK and US. This, once it becomes a systemic issue, becomes a problem for public debt. In a short space of time, Ireland in particular has seen its public debt rise markedly, having previously looked fiscally healthy.

Regardless of how the debt problem arose, all economies in the periphery have had no option but to continue to engage in a massive fiscal tightening, on what for most is an unprecedented scale. Greece has made by far the most progress to date, with its huge fiscal tightening, totalling 6% of GDP in 2010. Much still remains to be done in all however: a fiscal tightening of 11-13% of GDP in Ireland; 8-11% in Spain and Greece, and 7-9% in Portugal are likely to be required going forward.

Figure 5. Spain: the fiscal challenge is substantial

Total tightening 2009-2020 (% of GDP)	Cyclically-adjusted primary balance in 2009 (% of GDP)	Cyclically-adjusted primary balance 2020-2030 (% of GDP)	Interest-growth rate differential						
			-2%	-1%	0%	1%	2%	3%	4%
20	-7.5	12.5	<0	<0	<0	<0	<0	<0	<0
18	-7.5	10.5	<0	<0	<0	<0	<0	<0	<0
16	-7.5	8.5	<0	<0	<0	<0	<0	<0	7
14	-7.5	6.5	<0	<0	<0	<0	12	28	49
12	-7.5	4.5	2	10	20	32	48	67	91
10	-7.5	2.5	29	39	51	66	84	106	133
8	-7.5	0.5	56	67	82	99	120	145	175

Source: Nomura Global Economics calculations

Figure 6. Portugal: the fiscal challenge is significant

Total tightening 2009-2020 (% of GDP)	Cyclically-adjusted primary balance in 2009 (% of GDP)	Cyclically-adjusted primary balance 2020-2030 (% of GDP)	Interest-growth rate differential						
			-2%	-1%	0%	1%	2%	3%	4%
20	-5.4	14.6	<0	<0	<0	<0	<0	<0	<0
18	-5.4	12.6	<0	<0	<0	<0	<0	<0	<0
16	-5.4	10.6	<0	<0	<0	<0	<0	<0	<0
14	-5.4	8.6	<0	<0	<0	<0	<0	7	28
12	-5.4	6.6	<0	<0	0	10	26	46	70
10	-5.4	4.6	7	16	28	43	62	84	112
8	-5.4	2.6	34	45	59	76	98	123	155

Source: Nomura Global Economics calculations

The long-term fiscal challenge in historical context

Large fiscal adjustments have been made before

Economies have, in the past, managed double-digit fiscal adjustments – achieving, and sustaining to varying degrees, primary surpluses of up to 7% of GDP. European economies feature prominently in the list[70], and in the economies of the periphery, total fiscal adjustments range from 5pp to 20pp of GDP[71] (Figure 7). Many of the largest fiscal retrenchments occurred during, or just prior to, the pre-euro convergence period[72] of the 1990s, and demonstrate the importance of political motivation and will in seeing through such a socially difficult task.

Ireland has conducted the largest (and equal-longest) fiscal consolidation,[73] totalling 20pp of GDP over the 11-year period between 1978 and 1989, averaging a fiscal tightening of almost 2% per year. Ireland reached a cyclically adjusted primary surplus of 4.4% of GDP by the end of the consolidation period and, importantly, the average surplus over the following five years was broadly maintained, at 3.6% of GDP.

Greece has also conducted a double-digit adjustment, totalling 12pp of GDP over the 6-year period between 1989 and 1995, also at an average of around 2% a year. Greece reached a cyclically adjusted surplus of almost 5% of GDP by the end of the consolidation period, and the average surplus over the following five years was broadly maintained, averaging over 4%.

Portugal and **Spain** have never undertaken consolidations on such a scale. **Portugal** undertook a fiscal tightening of 8% of GDP between 1981 and 1985, an average of 2% per year, reaching a cyclically adjusted primary surplus of 2.6% of GDP. Over the following five years however, the average surplus was close to zero. **Spain's** largest tightening was 5% of GDP, between 1995 and 2006 (a period that spanned monetary union), where it reached a cyclically adjusted surplus of 3%.

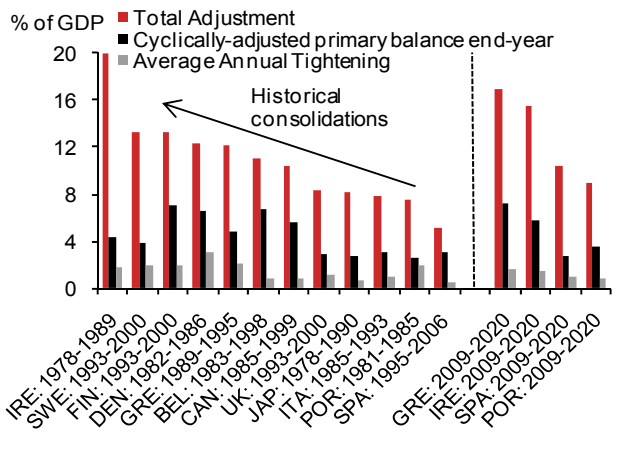
This suggests that the economies of the periphery can significantly improve their public debt situations, provided that they face a not-too-demanding interest rate/GDP growth rate differential[74] and are able to overcome problems of the political economy. To get debt all the way down to 60% of GDP however (or even just to 90% in the case of Greece)[75] would require most to go further than they have ever gone before (Figure 7).

However, some supportive features are unavailable today

Moreover, the consolidation experience of other comparable economies illuminates how challenging the task facing the euro area's periphery economies today is. Past consolidations – such as those in the Scandinavian and Nordic economies in the early 1990s – were effected in the context of an international backdrop that had a number of supportive features, including strong global economic growth and buoyant world trade, offsetting monetary policy actions and depreciation of the currency, thereby boosting net exports and hence GDP.

Today, such offsets are not available for the euro area periphery. The implication is that synchronous fiscal tightening across the euro area, particularly from 2011, will cause economic growth to be weak (Figure 8). Hence, notwithstanding efforts to cut (cyclically adjusted) primary deficits, public debt is set to rise further before falling. By 2012, public debt is forecast to increase to 158% of GDP in Greece; 114% in Ireland; 91% in Portugal; and 74% in Spain.[76]

Figure 7. Fiscal consolidations: past and required



Source: IMF(2010) and Nomura Global Economics calculations

Figure 8. GDP growth in the euro area, 2010-2012

Real GDP growth (% y-o-y)	2010	2011	2012
Greece	-4.5	-3.4	0.9
Ireland	-0.6	0.1	1.7
Spain	-0.1	0.6	1.1
Italy	1.1	1.0	1.4
Portugal	1.4	-1.3	0.6
France	1.5	1.6	2.0
Euro area	1.7	1.8	2.2
Germany	3.5	3.0	2.5

Source: Nomura Global Economics estimates

Evolving public debt dynamics – summary

The sorry tale told in this chapter is basically one of four fairly distinct phases.

1999-2007

1999-2007 was a period of favourable dynamics for most

The debt dynamics of the periphery economies changed fundamentally when they entered monetary union. The fall in their bond yields (and over time in their average cost of borrowing) was substantial, and in most cases the growth rate of GDP rapid, thereby progressively producing a beneficial snowball – a positive difference between the rate of growth of GDP and the average cost of borrowing – so favourable that, unless countered by large deficits, it caused the debt/GDP ratio to fall substantially.

2007-2009

But this changed quickly with the onset of the crisis

With the onset of the global crisis, however, the debt dynamics of the periphery economies quickly turned ugly. GDP growth collapsed, causing the interest rate/growth rate differential to change sign.[77] This resulted in a malign snowball that, in conjunction with rapidly accruing deficits, caused debt/GDP ratios to rise sharply. Although it was perhaps not evident at the time, policy decisions taken in this short period of crisis, particularly with regards to intervention in the financial sector, were to prove critical for the evolution of debt dynamics in the years to follow.

2009-2012

Debt is set to rise while the dynamics are tackled

The global crisis having turned, many Western economies and the economies of the periphery of the euro area in particular, were faced with the twin challenges of reducing deficits – necessitating a substantial fiscal tightening – while achieving a return to a reasonably satisfactory rate of GDP growth. With increased GDP growth, the snowball would become progressively less unfavourable. Unfortunately, the act of tightening fiscal policy makes it less likely that growth will return quickly to trend.

Up to 2012, the pace of the debt increase will depend largely on the rate at which primary deficits are reduced and the pace of economic growth – and therefore the snowball. Even with a substantial fiscal tightening, the dynamics of debt are set to take debt/GDP ratios far higher. Moreover, substantial additions to the public debt have flowed, and stand to flow, from government action to take various elements of private sector debt on to the public sector balance sheet.

Beyond 2012

A need for large surpluses in the longer term

Once the debt/GDP ratio has been stabilised – which in the case of the economies of the periphery seems unlikely to happen before 2013 or 2014 at the earliest, in our opinion – the task becomes one of bringing debt/GDP ratios down to sustainable levels. Once deficits have been eliminated, the long-term snowball stands to still be somewhat unfavourable, as increased borrowing/rollover costs[78] feed through into a higher cost of servicing the national debt, quite probably in excess of long-run growth rates. Hence, substantial primary surpluses will likely be required well beyond 2012 if debt/GDP ratios are to be reduced to sustainable levels.

The picture books on the following pages draw the story out in single-economy charts that trace the evolution of the public debt/GDP ratio for Greece, Ireland, Spain, and Portugal. They also show how this evolution divides into four principal causal phases and how the evolution of the debt/GDP ratio in each period can be explained according to its constituent parts:

- The primary balance;
- The snowball; and
- Stock-flow adjustments.

What comes over above all else is how rapidly a public debt problem can explode. Debt dynamics are such that once set in motion, the problem can easily feed off itself, creating a self-perpetuating cycle that countries/economies must fear. Debt dynamics can turn fast, and what might appear to be amongst the healthiest of fiscal positions can, in the space of a few years, become a public debt crisis with an exploding debt/GDP ratio – see Ireland. This is a situation that can be very difficult to escape.

Evolution by country: Greece and Ireland

The figures of the Picture Book trace the evolution of the public debt/GDP ratios of Greece and Ireland, which face the largest fiscal challenge. They also show how this evolution divides into the four principal causal phases.

1999-2007

In **Greece**, continued (and at the time, hidden) public sector deficits or large stock-flow adjustments as they now appear, [79] caused the public debt/GDP ratio to increase, notwithstanding the favourable contribution from the snowball, which served only to contain the increase in public debt to 11pp of GDP. All told, in a period conducive to debt reduction, public debt increased from 94% to 105% of GDP.

In **Ireland**, in a period of favourable debt dynamics before the global financial crisis, the snowball and primary surpluses served to reduce debt significantly. Together, the effect was to lower public debt by a substantial 24pp, from 49% to 25% of GDP, the larger contribution coming from primary surpluses. [80] Ireland's over-heating private sector, supported by its profligate banking system and those of other European economies, [81] will have helped to lower public debt in this period; however this was unsustainable.

2007-2009

In **Greece**, a pre-existing primary deficit increased substantially at the same time as the snowball became significantly unfavourable. Deficits were the dominant factor in increasing the public sector debt/GDP ratio from 105% to 127%, the primary deficit increasing from around 2% in 2007 to over 10% of GDP in 2009, adding almost 15pp to public debt. The snowball contributed almost 7pp.

In **Ireland,** a large primary deficit built up, the snowball became highly unfavourable, and stock-flow adjustments were a major factor, together causing debt to increase by over 40pp from 25% to 66% of GDP in just two years. Deficits were the most important contributor, as Ireland's primary surplus of over 1% in 2007 became a deficit of over 12% of GDP in 2009. Ireland's intervention in banking also bore costs, with stock-flow adjustments adding 11.9pp, even more than the addition from the snowball.

2009-2012

By 2012, **Greece** is projected to have eliminated its primary deficit and to have achieved a primary surplus of over 1% of GDP. However, it is likely that both primary deficits and the snowball will continue to add to public debt over the period. The snowball stands to be the main cause of the considerable projected rise in debt, from 127% to 158% of GDP. Stock-flow adjustments also stand to add to the debt – even more so than will public deficits, given the projected move into primary surplus.

By 2012, **Ireland** is projected to have reduced its primary deficit to just over 4% of GDP. [82] Therefore it is likely that primary deficits in particular, but also the snowball, will continue to add to public debt over the period. In this period however, the main cause of rising public debt is likely to be neither of these factors, but rather stock-flow adjustments, which stand to add over 20pp to a debt ratio that is set to sky-rocket from 66% to 114% of GDP.

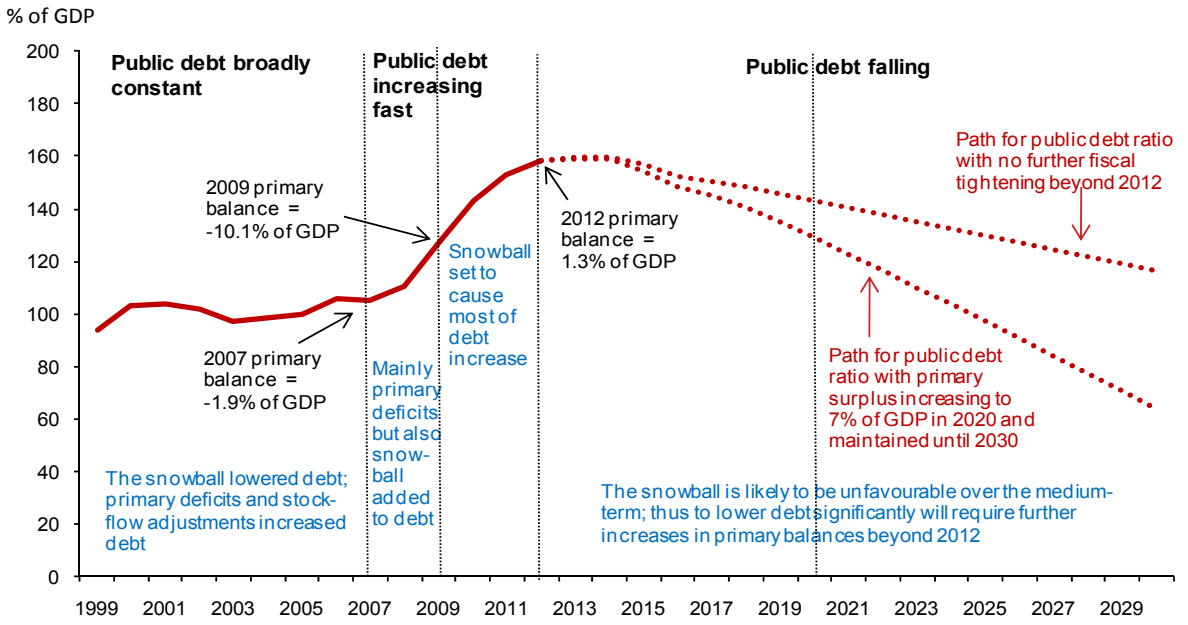
Beyond 2012

In **Greece**, the long-term snowball requires that a large primary surplus of the order of 7% of GDP be achieved and sustained [83], to counter an increasingly positive long-term interest rate/ growth rate differential [84] and lower debt to around 60% of GDP in 2030. Without further consolidation beyond 2012, public debt would stabilise at around 160% of GDP in 2015 and would start falling thereafter, but remain well over 100% of GDP in 2030. Were Greece on the path to achieve a 60% debt ratio by 2030, stabilisation would occur at 159% of GDP in 2014.

In **Ireland**, the long-term snowball requires that a significant primary surplus of the order of 3% of GDP be reached and maintained, once the deficit has been eliminated, in order to lower debt to around 60% of GDP. Without further consolidation beyond 2012, public debt stands to increase towards 150% of GDP. Were Ireland on the path to achieve the 60% target by 2030, stabilisation would occur around 120% of GDP in 2014 or 2015.

Picture Book: Evolving debt dynamics – Greece and Ireland

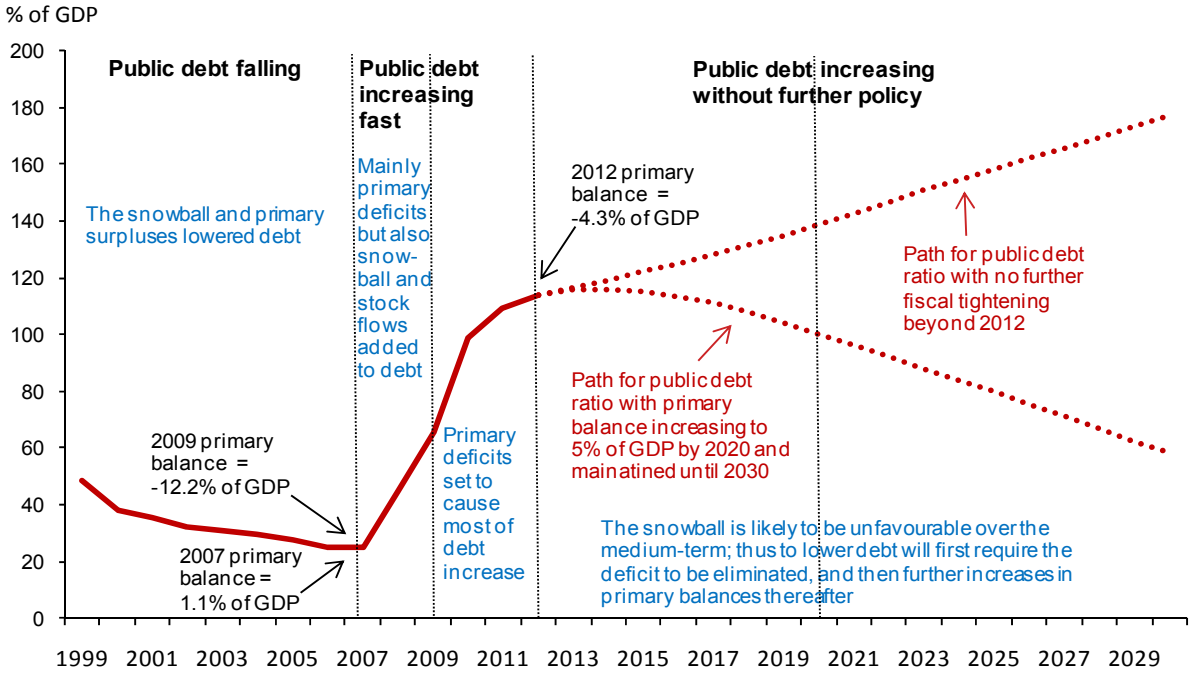
Greece



Time period	Change in public debt (pp of GDP)	Contributions		
		Primary Balances	Snowball	Stock-flow adjustment
1999-2007	+11.0	0.9	-14.6	24.8
2007-2009	+21.8	14.6	6.8	0.4
2009-2012	+31.2	3.1	21.3	6.7

Source: Eurostat, European Commission, and Nomura Global Economics
Note: Red shading indicates contributions that increase debt; pink indicates contributions that reduce public debt

Ireland



Time period	Change in public debt (pp of GDP)	Contributions		
		Primary Balances	Snowball	Stock-flow adjustment
1999-2007	-23.5	-22.2	-14.1	12.8
2007-2009	+40.5	18.1	10.5	11.9
2009-2012	+48.5	19.7	7.4	21.4

Source: Eurostat, European Commission, and Nomura Global Economics

Evolution by country: Portugal and Spain

The figures of the Picture Book trace the evolution of the public debt/GDP ratios of Portugal and Spain, which also face major public-debt challenges. They also show how this evolution is divided into four principal causal phases.

1999-2007

Spain enjoyed a period of favourable debt dynamics before the global financial crisis. The snowball decreased debt significantly, as did a series of primary surpluses. Altogether, the effect was to lower debt substantially from 62% to 36% of GDP, the largest contribution coming from primary surpluses.

Portugal's debt dynamics, in contrast to the other periphery economies, were unfavourable even before the global financial crisis. Not only an unfavourable snowball, but also a string of primary deficits, served to increase the public debt/GDP ratio from 50% to 63% of GDP.

2007-2009

In **Spain,** significant primary deficits built up at the same time as the snowball became unfavourable. Primary deficits were the main cause of the public debt ratio increasing from 36% to 53% of GDP, as the 2007 primary surplus of over 3% became a deficit of over 9% of GDP by the end of 2009. The snowball added almost 4pp to public debt in this period.

In **Portugal** too, rather large primary deficits built up at the same time as the snowball became more unfavourable. Combined, they caused debt to increase from 64% to 77% of GDP, both making a broadly equal contribution. Portugal's broadly balanced primary budget of 2007 had become a deficit approaching 7% of GDP by the end of 2009. The snowball added 6pp to public debt in this period.

2009-2012

By 2012, **Spain** is projected to have reduced its primary deficit to less than 3% of GDP. It is likely, therefore, that primary deficits in particular (but also the snowball) will continue to add to public debt over the period. Primary deficits stand to be the main cause of public debt rising from 53% to around 77% of GDP, adding over 14pp to debt, compared with the less than 5pp increase coming from the snowball.

By 2012, **Portugal** is projected to have eliminated its primary deficit. However, it is likely that both primary deficits and the snowball will continue to add to public debt over the period. Both stand to be fairly equally responsible for public debt rising from 77% to around 90% of GDP.

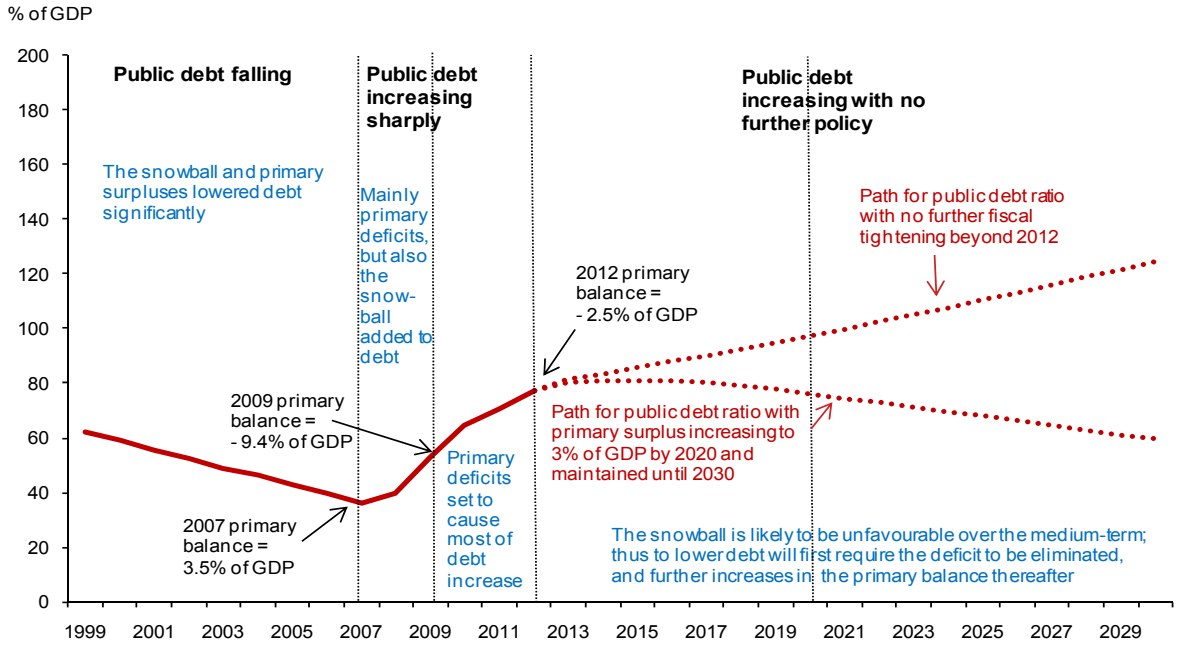
Beyond 2012

In **Spain**, the long-term snowball requires that a significant primary surplus of the order of 3% of GDP be reached and maintained, once the deficit has been eliminated, to counter the snowball and lower debt towards 60% of GDP. Without further consolidation beyond 2012, public debt stands to continue to increase towards 150% of GDP. Were Spain on the path to achieve a 60% target in 2030, stabilisation of public debt would occur in 2014 at around 85% of GDP, with debt starting to fall thereafter.

In **Portugal**, the long-term snowball requires that a significant primary surplus of the order of 4% of GDP be reached and maintained to counter the snowball and lower debt towards 60% of GDP. Without further consolidation beyond 2012, public debt stands to continue to increase to well over 100% of GDP. Were Portugal on the path to achieve a 60% target in 2030, stabilisation of public debt would occur in 2013 at around 95% of GDP, starting to fall thereafter.■

Picture Book: Evolving debt dynamics – Spain and Portugal

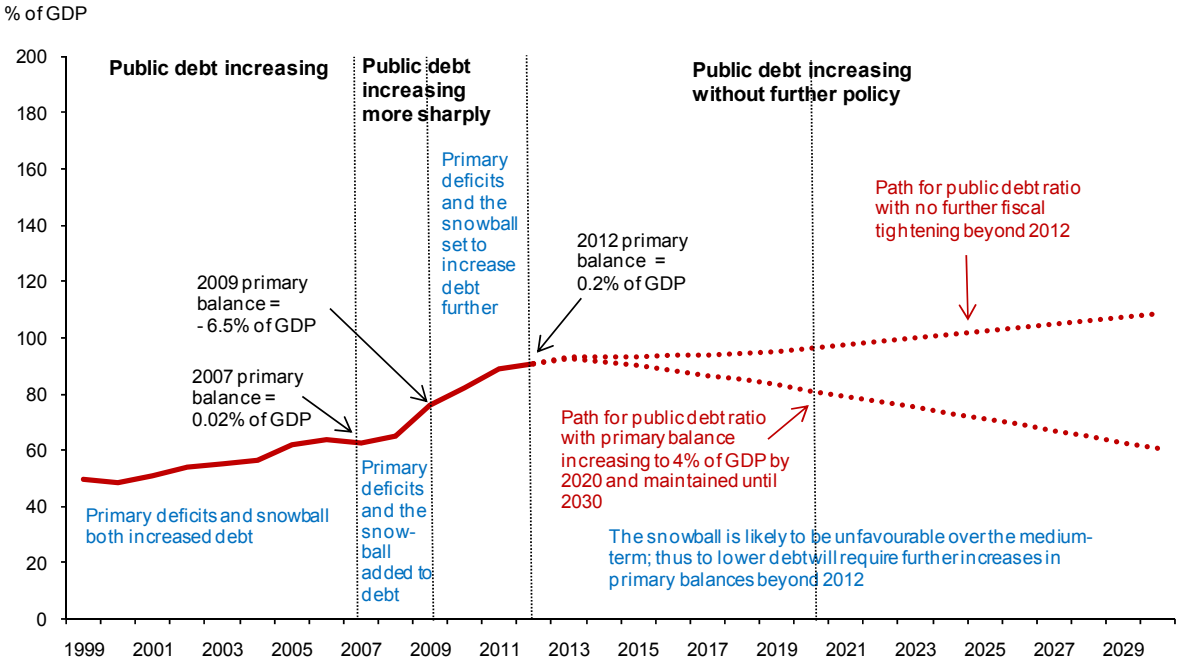
Spain



Time period	Change in public debt (pp of GDP)	Contributions		
		Primary Balances	Snowball	Stock-flow adjustment
1999-2007	-26.2	-20.6	-11.0	5.4
2007-2009	+17.1	11.9	3.5	1.6
2009-2012	+20.8	14.3	4.7	1.8

Source: Eurostat, European Commission, and Nomura Global Economics

Portugal



Time period	Change in public debt (pp of GDP)	Contributions		
		Primary Balances	Snowball	Stock-flow adjustment
1999-2007	+13.2	7.7	2.6	2.9
2007-2009	+13.4	6.6	6.0	0.8
2009-2012	+14.9	5.6	7.1	2.2

Source: Eurostat, European Commission, and Nomura Global Economics

Policy challenges: the crisis and longer term

Europe as a whole, and the euro area in particular, require a broad series of reforms that span macroeconomic, structural and institutional policies. In particular, policy must:

- Deal with the banks
- Deal with the public-debt dynamics of a number of the economies of the periphery.
- Improve economic performance over the longer term.
- Put in place policies to avoid future crises.

Progress is being made in all four areas, though too slowly in the minds of some, particularly as regards the banks. Certainly there is a long way to go: but our judgement is that the euro area will remain basically intact.

Introduction

The years between the signing of the Maastricht Treaty in 1992 and the formation of the euro area in 1999 were used to effect a determined, and at times painful, convergence of the partner economies' major macroeconomic variables.[85] Much was achieved, but full convergence was not. And neither did the euro area begin its life with a set of institutions and policies sufficient to ensure robust financial and economic performance over the long term. Had they been in place, they might have served to create something more closely approximating to an optimal currency area.[86]

The euro area, like other regions, has to continue to reform

The euro area was – and is – not alone in the need for continual reform. In other currency zones too, ranging from the United States to Japan, the United Kingdom to Canada, policies and institutions are continually challenged by new problems, as well as by the potential opportunities, that flow from new global economic players, rapid technological change, the ageing of populations, climate change, and modern financial systems.

The task of policy reform is thus never complete. Yet there is seldom a politically convenient moment. The near-term costs of reform are hard to bear when the economy is performing poorly: and reform itself seems unnecessary when times are good. At the level of the euro area, the task is compounded. A loose federation of individual, and individualistic, governments, the EU typically undertakes major policy reform – and particularly institutional reform – only when impelled by crisis.

It is therefore not surprising that, at its inception, the euro area did not have in place a number of institutions – most importantly perhaps a central fiscal authority – that other currency areas had long possessed. Furthermore, there were questions as to whether some of the policies being pursued – labour market policies in particular – would lead to satisfactory economic performance, or might, on the contrary, prove harmful – see for example Smith (1999).

The requisite policy package is large and demanding

Be that as it may, European officials are now having to make policy deal with the crisis and to support a sustainable evolution over the longer term. The requisite package of policy and institutional reforms is large, complicated, and socially and politically demanding.

Furthermore, because the euro area is currently in something of a crisis, greater attention is being paid to its policies and institutions than those of other economic areas – including those of the United States.

The policy challenges that the euro area faces can be divided into four categories:

- Dealing with problems of its banks, and thereby establishing the true scale of its fiscal problem;
- Overcoming the dynamics of debt;
- Improving the conditions for economic performance; and
- Reforming policies and institutions, both in order to avoid such crises from happening again, and to ensure that if they do nevertheless happen again, they can be dealt with.

Dealing with the banks

Until a government knows the potential scale of its banking sector losses, it does not know the potential scale of the fiscal challenge that it faces. The United States undertook credible stress tests in 2009 and seems, thereafter, to have more or less completed the recapitalisation of its banks. But it has not yet addressed its fiscal issues.

Private sector losses have yet to be fully established

Euro area governments, and the European authorities, by contrast, have focused much of their policy efforts on fiscal reform, but have not established, at least to the satisfaction of investors, the size of private sector debt that may end up on the public books. The banks own considerable sovereign debt – their own and other countries – taking their banking and trading books together (Figure 2). The scale may become clearer with the publication of results from the (third set of) stress tests, whereupon the authorities will need to bring about a process of recapitalisation, perhaps involving the orderly resolution of insolvent banks.[87] This approach was pursued by the US in 1989-90 following the savings and loan crisis, Sweden in 1992-93, and Japan in 2002-03.

The banking problems of Ireland and Spain

The euro area crisis to date divides economies into two groups. In the first, the public sector is overleveraged, but the banking sector is comparatively solvent – Greece and perhaps Portugal. In the second, public sector debt is comparatively low, but the banking sector is perceived by investors to be insolvent – Ireland and perhaps Spain. In these latter cases, banking liabilities tend to be a significant multiple of GDP, so the very solvency of the state can become an issue if it elects to guarantee the banking system (Figure 1).

The huge liabilities of Irish banks relative to GDP illustrate why the economy sought external support from the European Financial Stability Facility (EFSF). Even after forcing equity and junior debt holders to take write-downs, Ireland's authorities were unwilling or unable to bankrupt the banks and force senior debt holders to share the burden. Hence the amount of capital that is needed to be injected into the Irish banks to write down bad assets and to recapitalise the banking system to maintain it as a going concern is more than the country can raise.

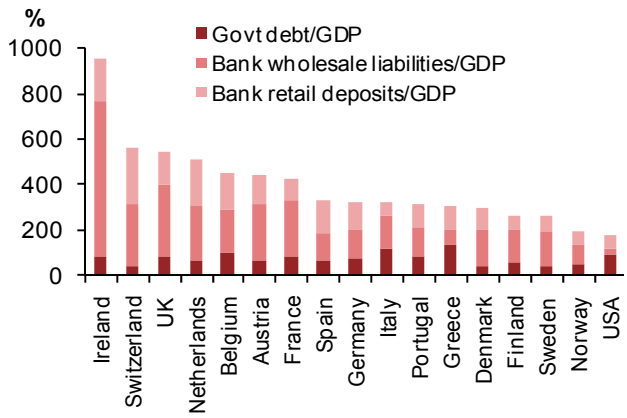
New EC proposals aim to make some or all senior debt issued in the future to include 'bail-in' clauses, which would ensure that debt holders take haircuts before public money is injected. However, legislation is not yet in place.

The key market concern is with Spanish banks

The key concern of the market at present is with the Spanish banks. Following the housing market boom and bust, and with economic growth weak and unemployment high, the market is concerned that credit losses may overwhelm the thin capital bases of the country's numerous savings banks, which account for around half of the system's assets.

The Bank of Spain has already taken several steps to improve the health of the banking sector, including mandating increased provisioning, forcing the merger of several savings banks, and establishing a fund, the Fund for Orderly Bank Restructuring (FROB), which has injected several billion euros of capital into the smaller banks.

Figure 1. Debt/GDP ratios including the banking sector, 2010



Source: DataStream and OECD

Figure 2. Banks' exposure to public debt, end-2009

% of Tier 1 capital	Italy	Greece	Ireland	Portugal	Spain
Germany	48%	12%	8%	7%	21%
France	26%	6%	-	-	-
Italy	157%		-	-	-
Greece	-	226%		-	-
Ireland	-	-	26%	-	-
Portugal	6%	9%	-	69%	-
Spain	-	-	-	-	113%
Belgium	76%	14%	-	9%	11%
Netherlands	14%	-	-	-	-
Cyprus	-	109%	10%	-	-

Source: Blundell-Wignall and Slovik (2010)
Note: Darker shading represents banks' exposure to own-country public debt. Only exposures over 5% have been listed.

Spanish banks: assessing capital needs

Jon Peace

We estimate additional capital requirements for Spanish banks of between €43bn and €80bn – around 4-8% of Spanish GDP – in addition to the 2% of GDP already raised. If the largest banks can raise equity directly in the markets, the government might need to inject only an additional 2% or so of GDP. These requirements are not spread evenly across the system; the savings banks remain a key risk.

The funding pressures being felt by Spanish banks remain driven, in our view, by continued concerns over solvency. This is a result of the high level of private sector debt, the bursting of the housing market bubble and the outlook for low growth. Because of the continued losses in Ireland and the level of recapitalisation that the banks have seen, there were reasonable concerns about the effectiveness of the European-wide stress test held during the summer of 2010 (which the Irish banks passed).

Given the potential losses being faced in Spain and existing capital/profitability levels, we believe there are additional capital requirements. Importantly, however, these additional capital needs are not spread evenly across the system. We estimate potential capital requirements for Spanish banks of between €43bn and €80bn, depending on the severity of the losses. This is equivalent to c.4-8% of Spanish GDP. Coupled with the money already injected, this would raise the total cost to the equivalent of c.10% of GDP. However, if the largest savings banks could raise equity directly in the markets (which, given the recent reforms, is now a possibility), we think the Spanish government may need to inject as little as €24bn (or just 2% of GDP), in addition to the c. €15bn that has already been injected into the system.

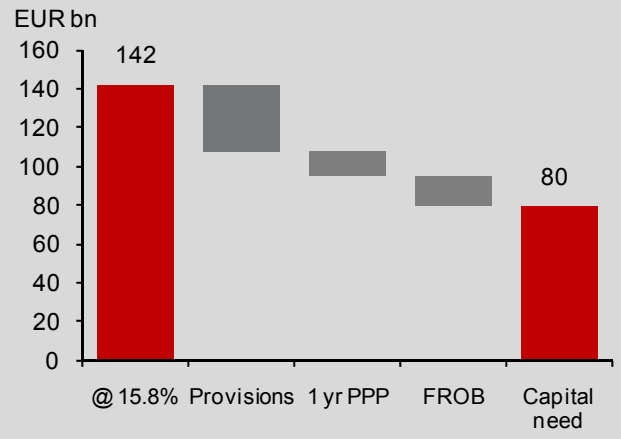
We believe that the savings banks remain a key risk for Spain. Although the stress test in Spain estimated only a relatively small capital requirement, we believe this stress test was useful, because of the detailed bottom-up estimate of credit losses. In our view, the level of losses and the key assumptions to estimate these by the Bank of Spain are reasonably conservative.

Where we have more doubts concerns the estimated size of the cushion to absorb these losses. For some banks, the adverse scenario could be closer to the base case. In this case, we would not view as probable the market's willingness to fund these banks over two years, while they run down capital/profits (the level of operating profit the Bank of Spain estimated that the banks could use to offset losses and lower Tier I to 6%). Instead, a pre-emptive capital raise would be required.

To calculate the high end of our capital range of €80bn, we have excluded BBVA, Santander and La Caixa from the calculation. This leaves risk-weighted assets (RWA) of €900bn. Using the highest losses in Spain from the stress test, estimated at 15.8% of RWA, this would generate a loss of €142bn for the sector. To offset this, we would deduct €34bn of provisions the banks have already made, one year of operating profit (€13bn) and the €15bn provided by the FROB/deposit guarantee fund.

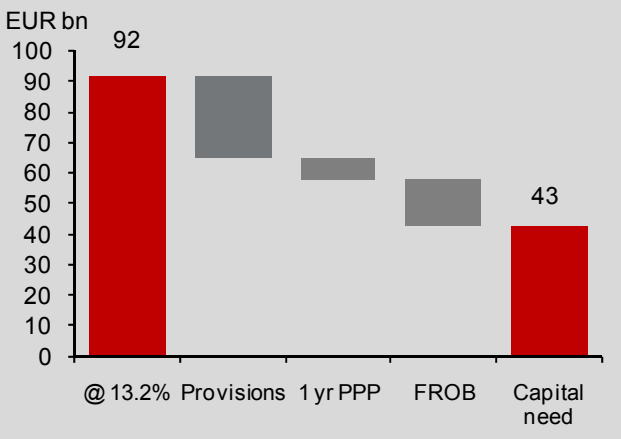
To calculate the low end of our capital range of €43bn, we excluded the other listed banks (Banco de Sabadell SA (SAB), Banco Popular Espanol (POP), and Bankinter SA (BKT), assuming that they can raise capital in the markets), and the savings bank, Bilbao Bizkaia Kutxa (BBK) (high level of capital – Tier I 15%). This leaves RWA of €700bn. Using the average loss ratio for the remaining banks (13.2% of RWA) generates losses of €92bn. To offset this, we deduct €27bn in provisions already made by the remaining banks, €7bn (one year of operating profit) and €15bn from the FROB.■

Figure A. Capital required with high losses – €80bn



Source: Nomura global economics estimates, Bank of Spain
Note: Assuming high loss rate (15.8% of RWA)

Figure B. Capital required with average losses – €43bn



Source: Nomura global economics estimates, Bank of Spain
Note: Assuming average loss rate (13.2% of RWA)

However, the market sees this as insufficient so far, with domestic Spanish banks all but shut out of the funding markets and reliant on ECB support. We think a significant recapitalisation is required to persuade the market of the solvency of Spanish banks and hence to reopen access to the private sector funding markets. Without this, the liabilities could fall to the state (which, like Ireland, might not be credibly able to extend the guarantee) or to private sector debt holders, which could cause a chain of defaults on a scale not seen since the fall of Lehman Brothers.

That said, we believe that the cost of recapitalising the bank system in Spain is manageable at up to €80bn, or under 8% of GDP. (The Bank of Spain has recently estimated the capital requirement at as little as €20bn, although market participants remain sceptical that this would be sufficient.) Our assumptions are based on the highest losses used in the Spanish banks stress test (15.8% of risk-weighted assets (RWAs)) and assume that the international banks (BBVA, Santander, and La Caixa) are able to source their own recapitalisation. The issue is whether Spain might in the short term need to avail itself of the "increased flexibility" promised for the EFSF to effect this capital injection because the FROB is currently unfunded.

Overcoming the dynamics of debt

Debt dynamics need to be addressed

Once the scale of the public debt problem is known, the authorities then have to address the issue in a manner, and on a scale, that investors judge to be credible. In terms of the debt-arithmetic equation[88] in Chapter III, what is needed, in our view, is to:

i. Move to, and thereafter maintain, a primary surplus (i.e. a budget that is in surplus before the payment of debt interest);

ii. Perhaps lower the starting burden of debt;

iii. Achieve the lowest possible cost of borrowing; and

iv. Achieve the fastest possible economic growth.

Moving to and maintaining a primary surplus

The problems are not pressing in the euro area as a whole…

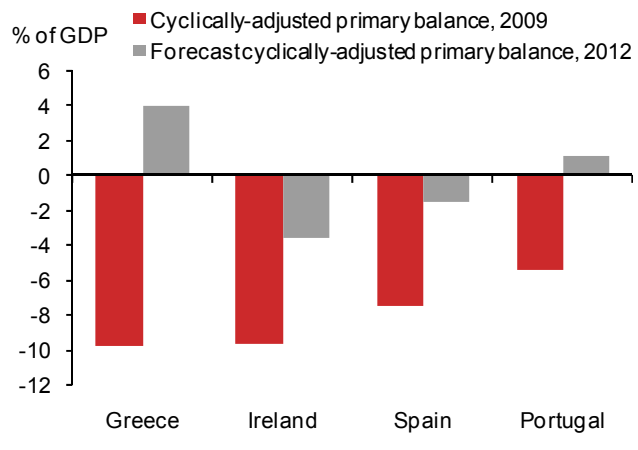
While the euro area as a whole has experienced a marked deterioration in its public finances,[89] it does not have a pressing public debt problem. In 2010 public debt averaged around 84% of GDP and the public deficit approximately 6% of GDP. For the US in 2010, the equivalent figures are 92% and 11%, respectively.

…but are in some of the smaller Member States

A number of the economies of the periphery of the euro area do, however, have serious public debt problems. Dealing with this requires increases in taxation and reductions, absolutely or at least relative to trend, in government expenditure. The projected fiscal consolidations[90] in the economies of the euro area periphery are large and front-loaded: from 2009 to 2012 cyclically-adjusted primary deficits seem likely to reduce markedly in Ireland and Spain, and reach surpluses in Greece and Portugal. The fiscal tightening is substantial in Greece at 14% of GDP, and large in the other economies of the periphery, at between 6% and 7% (Figure 3).

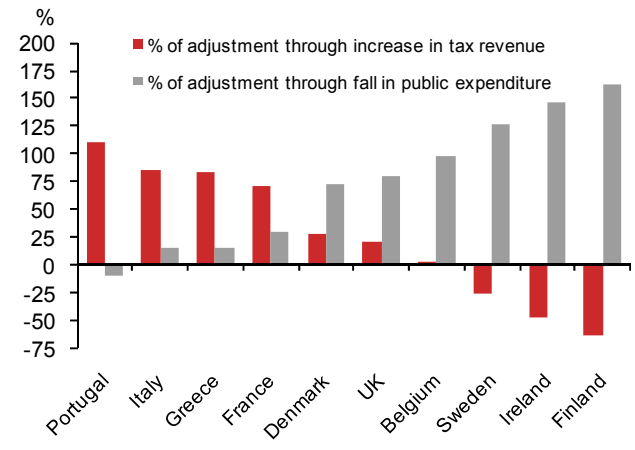
Not only the size, but also the form, of the fiscal retrenchment is important. Although it may make no difference from the standpoint of debt arithmetic, fiscal consolidations that cut

Figure 3. Cyclically-adjusted primary balances, 2009 and 2012



Source: Nomura Global Economics

Figure 4. Past fiscal consolidations: revenue vs. expenditure



Source: Alcidi and Gros (2010)

expenditure, rather than raise taxes, are generally reckoned to produce a better growth outcome over the long term.[91]

Consolidations will likely be challenging

Previous large fiscal consolidations in a number of European economies, including Greece, Portugal, Italy, and France, have tended to concentrate on the revenue side.[92] In others, including Ireland, the United Kingdom, and the Nordic countries, consolidations have tended to focus on the expenditure side (Figure 4). To the extent that fiscal consolidation plans broadly follow this pattern, a number of governments may face the additional challenge of ensuring that longer-term growth is not harmed unduly by the manner of their fiscal consolidation.

The second element of the policy challenge may involve reducing the starting level of public debt.

Lowering the starting burden of debt

So far there have been no 'haircuts' or reschedulings

So far at least in this crisis, the terms of the lender-of-last-resort financing in Europe have not required private sector holders of government debt to accept any reductions in their principal. While a restructuring of Greek public debt in April 2010, or of Irish debt in November 2010, was technically an option, there have been no haircuts to date and little rescheduling of interest payments.[93] This is in marked contrast with practice elsewhere, such as the 1989 Brady Plan resolution of the 1980s Latin American debt crisis[94], under the terms of which private sector investors, mainly US banks, accepted significant haircuts.[95]

Cross-border dependencies are large

That euro area governments have not required holders of government debt to suffer any loss has been due, not least, to the scale of cross-border dependencies.[96] For example, at the end of 2009 French banks were heavily exposed to the sovereign debt of Greece, holding €11.6bn (6% of their Tier 1 capital).[97] German banks were also heavily exposed, holding €18.7bn (12% of their Tier 1 capital) of Greek public debt, €12.9bn (8% of Tier 1 capital) of Irish public debt, €10.9bn (7% of Tier 1 capital) of Portuguese public debt and, most strikingly, €31.9bn (21% of Tier 1 capital) of Spanish public debt (Figure 2).[98]

EU governments have judged that they cannot entertain policies that would pose risks of a systemic bank run inside the euro area, in the manner of that which followed the collapse of Lehman Brothers.[99] Moreover, there is the legal issue that members of the euro area operate under limited national sovereignty, and hence cannot unilaterally default on parts of their debts in the way that Russia did in 1998, or that Argentina did in 2001.

The third element of the policy challenge involves achieving the lowest possible interest rate on future public sector borrowing.

Achieving the lowest possible cost of borrowing

Costs depend on the credibility of the policy package

The ability of Member States to obtain and retain concessional help (finance from other governments or financial institutions at below-market rates) depends in important part on the credibility of their overall policy package. Such credibility typically requires a technically feasible fiscal plan, usually accompanied by a long-term programme of structural reform and visibly solid political commitment.

The various policy packages to date have provided liquidity, and the announcement of the Irish package also brought a measure of debt relief for Greece (on 30% of outstanding debt in 2013). These have served to lower borrowing costs, relative to what they almost certainly would have been otherwise, but orderly conditions in bond markets have not yet been fully restored.

Important announcements have been made on a permanent crisis resolution mechanism to replace the European Financial Stability Mechanism (EFSM) and the European Financial Stability Facility (EFSF) after 2013, by a European Stability Mechanism (ESM). The new facility is to be modelled on the EFSF, and these financing facilities seem likely between them to cap bond yields over the long term at around 6%. This would represent a cost of borrowing that is significantly higher than that obtained before the crisis; but it may be sufficient for investors to judge that the periphery economies' policies are credible, provided that it is also judged that they are likely to return within a reasonable period to something like previous rates of trend growth.

Meanwhile the European Central Bank's Securities Markets Programme (SMP),[100] while technically not a lending facility (ostensibly it was created to address malfunctioning of the securities markets, and restore the monetary policy transmission mechanism through the

purchase of public and private securities) has helped to contain periphery spreads. The ECB currently owns around 15% of Greece's total outstanding debt.

The fourth element of the policy challenge involves achieving the prospect of a return to a reasonable rate of economic growth.

Achieving the fastest possible economic growth

Economic growth is fundamental to achieving long-run sustainability of debt positions. A durable rise in the rate of economic growth that reduces the unemployment rate by 1 percentage point typically boosts budget balances by between ¼ and ¾ of a percentage point of GDP.[101] Economic growth helps to improve public debt dynamics by:

- **Lowering the primary deficit** – by closing the output gap, and thereby eliminating the cyclical component of the primary deficit;
- **Diminishing the snowball** – by creating a more favourable interest rate/growth rate differential; and
- **Minimising stock-flow adjustments** – by helping to avoid a wave of new losses in the banking sector that could be transmitted all across the euro area.

Moreover, by reducing unemployment, economic growth helps with maintaining support for the policy package.

Opportunities on the demand side are limited

On the demand-side, growth-promoting options are limited, particularly for economies in a monetary union. Were currency devaluation possible, that could open the way to increased international competitiveness and a growth-supporting increase in net exports, in the way that the 25%-odd (trade-weighted basis) depreciation of sterling is currently supporting net exports and thereby aggregate demand in the United Kingdom. In many past successful consolidations too, currency depreciation has been important: examples are the Asian economies (following the Asian financial crisis in the late 1990s) and the Nordic countries in the 1990s. The devaluation option is however not open to euro area economies, unless they choose, and are able, to leave the euro area.

Investment can be helpful. While domestic investment is unlikely to be strong until growth picks up, investment from abroad, being less dependent on the level of domestic economic activity, can be strong if the conditions are right. Here the prospects for the various economies of the periphery of Europe differ considerably. For a complex set of reasons, ranging from a low rate of corporation tax to cultural affinity, Ireland is a top destination for foreign direct investment (FDI).[102] Ireland has received more direct investment from the US even than has China; and it has received over 80 times more than has Greece.[103]

For the most part, the return to growth has to take its own timing: and the judgement that investors make about the prospects for growth over the longer term is influenced in large part by the quality of its structural, supply-side policies. Often the existing policies are seriously deficient, and that is clearly the case for the economies of Europe's periphery.

The scope for improving Europe's long-term performance

Supply-side policies are key

Policy in any modern economy is continually faced with the challenge of trying to improve long-term economic performance. In some cases, the requisite reforms can be achieved within the existing policy/institutional framework: others however require institutional reform.

Structural policies serve to raise:

i. **The quantity of the economy's fundamental inputs**, labour and capital, whose supply ultimately constrains the level of output;

ii. **The quality of these inputs,** which can augment the input of 'raw' labour and capital;

iii. **The facility with which the economy adjusts to continual change**, such as new in technologies, new competitors, and evolving patterns of demand; and

iv. **The economy's resilience to shocks**, such as a sudden change in the price of oil, or in the volume of exports.[104]

Performance can be improved in three areas in particular

Some policies straddle more than one category. And there may be trade-offs between them. However, the evidence from OECD economies is that, on balance, the net economic impact of improving structural policies is strongly positive; and that economic performance can be improved in three areas in particular:[105]

- Labour market flexibility;
- Education and skills; and
- Product market competition.

In both the United States and Europe there is scope for improvement in a number of these areas; neither region holds a monopoly on best-practice in all areas of policy. In the periphery economies of Europe, however, there is particular scope; structural settings in a number of them rank low, not only in international, but also in an intra-European comparison (Figures 5, 6, and 7).

Labour market flexibility

More flexible wages. By many measures, the United States has the most flexible wages of all OECD economies, and in this respect it is often taken as the exemplar. Wages in the US respond relatively quickly to changes in the balance of supply and demand for labour, whether across industries, sectors or geographic regions, and in turn labour shifts from declining activities or regions to those where it is stronger. Flexibility of wages also leads economies to recover relatively quickly from shocks, another respect in which the US economy performs well.[106]

In Europe, the single labour market has moved some considerable way in improving labour market flexibility, and there is more movement of labour than is commonly supposed. Many Irish workers moved into the construction sector in Germany during its unification building boom in the first half of the 1990s, for example, and many eastern European workers moved to the United Kingdom during its recent boom.

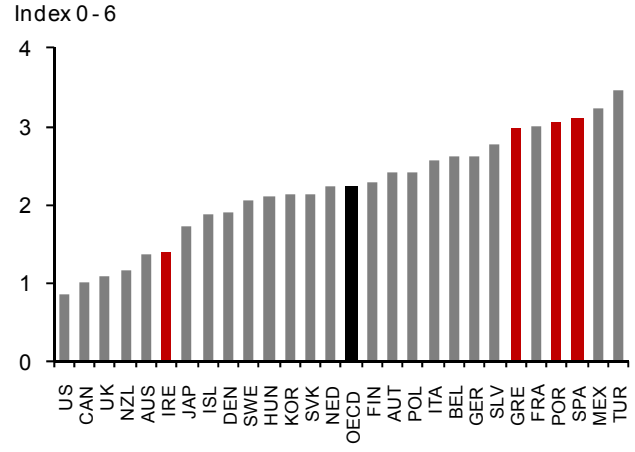
Europe's labour market is not as flexible as in the US

Nevertheless, Europe's labour market is not as flexible as that in the US. Estimates suggest that labour mobility in the US could be six times greater than in Europe on average.[107] To some extent this is a consequence of the cultural disparities across Europe and barriers such as language. But in many cases it is also the consequence of labour and social policies and institutions that, in seeking to protect, do so at the expense of adjustment.

Unless or until Europe's labour market becomes as flexible as that in the US, its limited wage flexibility could benefit by being buttressed by other policies, to limit divergences over time in unit labour costs that contribute, *inter alia*, to unsustainable current account positions.

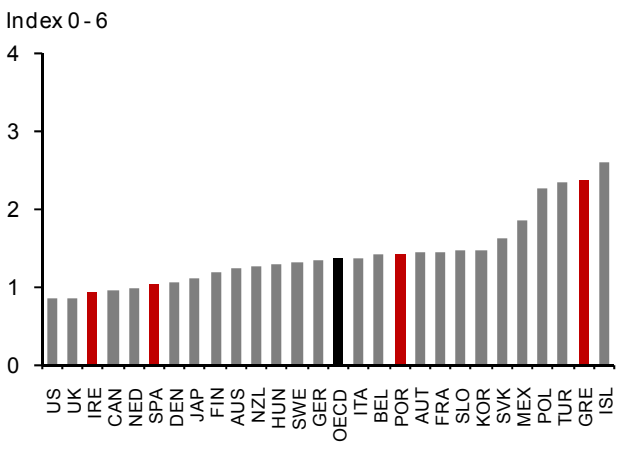
Structural policies that served to boost productivity in the periphery economies towards the euro area norm would help. However, the challenge is considerable. On the assumption that inflation in the euro area as a whole continues to average around 2% per year, it would take around five

Figure 5. Extent of employment protection legislation



Source: OECD.Stat
Note: The index from 0 - 6 indicates the restrictiveness of policy; 0 being the least restrictive, 6 the most restrictive.

Figure 6. Extent of anti-competitive product market regulation



Source: OECD.Stat
Note: The index from 0 - 6 indicates the restrictiveness of policy; 0 being the least restrictive, 6 the most restrictive.

years of zero growth of unit labour costs in Greece, Ireland, Portugal, and Spain for the competitiveness of these economies to return to around their 1999 levels.[108]

Faster growth of the labour force. Economic growth is virtually always a major component of overcoming debt problems. The dividend from faster economic growth can be large: tax revenues are higher and social expenditure is lower, including importantly on unemployment benefits and pensions.

Faster economic growth long term generally requires faster growth of the two primary inputs, capital and labour. Faster growth of the labour force can be promoted through immigration of people of working age. However, there are often social absorption limits to such policies, so that a more feasible option can be to raise labour force participation – the proportion of the population of working age that is fit and able to work. There is considerable scope in most OECD economies, particularly because of ageing populations, for policies to reduce the number of workers who retire early, increase the age of retirement and accommodate the requirements of older workers.

For the OECD area as a whole, it has been estimated[109] that raising the retirement age and reducing the implicit tax on continued work at older ages, towards the recent average across OECD countries, could raise GDP growth by 0.5% to 1%.

Reforms that make labour markets less segmented and inflexible can produce important employment effects.[110] These effects are potentially strong in Europe, and particularly in Portugal, Greece, and Spain. Simulations by the IMF and the European Commission suggest that, in respect of the labour market and service sectors, policies designed to close half the gap with the three best EU performers, carried out over the five years 2011-15, could add as much as 0.5 percentage points to annual GDP growth in the weakest Members.[111]

Legislation and policy. There are other elements too in increasing labour market flexibility. These include employment protection legislation (which, both for regular and temporary employment, generally acts as a disincentive to hiring); collective agreements between unions and employers; the so-called "generosity" of the unemployment-benefit replacement rate; the minimum wage, and the portability of pensions.

Employment protection legislation warrants reform...

Employment protection legislation (EPL) is more prevalent in Europe than elsewhere. Among the peripheral economies, reform in this area offers particular gains for Greece, Portugal, and Spain, which have particularly restrictive employment protection legislation, both for regular and for temporary employment – comparable with Turkey, Mexico, and France. Ireland, however, has far less employment protection, more closely resembling that of the United Kingdom and the United States (Figure 5).

…as do collective agreements…

Collective agreements between unions and firms privilege "insiders" (the employed) at the expense of "outsiders" (the unemployed), and thereby inhibit the growth of employment and output. Collective agreements between unions and firms are particularly prevalent in Greece and Spain. Promoting decentralised wage bargaining and removing indexation mechanisms would allow wages more closely to reflect productivity.[112]

…welfare systems and pension portability…

Unemployment-benefit replacement rates, if high, can diminish the effort put into job search, and reduce the incentive to accept available jobs. Across OECD economies a 5 percentage point reduction in unemployment-benefit replacement rates could increase employment rates by around 2.5 percentage points, resulting in a similar gain in GDP per capita.[113]

Portability of pensions and cross-country recognition of qualifications, if improved, also stand to enhance the functioning of labour markets and support a rebalancing of growth across economies.

Education and skills

…and education and learning systems

Modern economies operate and compete in a global environment marked by rapid technological progress, which affects all sectors of the economy, including not least the services sector. A successful economy requires a labour force with a high level of education and skills; and even higher levels are likely to be required in the future. Policy will need to span the breadth of education and training systems, including importantly, pre-primary,[114] primary, secondary and higher education, and lifelong learning.

In the euro area there is much variation in the levels of general education between Member States. Some perform better than the OECD average, notably Finland, the Netherlands, and Germany. However, many of Europe's periphery economies rank well below the average.

Increasing adult skills. Again broadly speaking, the economies of the euro area periphery, Ireland apart, have a less educated adult population than do most other OECD economies. Most have a high proportion of adults without basic education. In Portugal in particular, 73% of the population aged between 25 and 64 was without upper-secondary education in 2007. This compares with 50% in Spain, 48% in Italy, and 40% in Greece (all still high by OECD standards). Ireland, while markedly lower, at 30%, was nevertheless slightly above the OECD average.

Portugal in particular, but also Greece have below-average numbers of graduates. Ireland however, along with Spain, has an above-average number. All four have below average intermediate skills, Portugal and Spain particularly so.[115]

Improving the educational attainment of youth. In internationally comparable tests of 15/16-year-olds in mathematics, reading, and science, most of the economies of Europe's periphery score poorly relative to the OECD average, with Portugal, Spain, and Greece consistently among the poorest performers. Both the results of the PISA tests in 2009, and those from similar tests in 2006, show the periphery economies as being amongst the lowest performers of all OECD economies.[116] (For more on the PISA tests, see Picture Book: *Human capital indicators; youth and adult*.)

Product market reform

Much of the change to which economies have to adapt – including globalisation, technological change, changes in the pattern of demand and/or sources of supply, ageing of populations, and climate change – occurs fairly steadily over time.

The facility with which an economy responds to such changes is a major determinant of its long-term economic growth. Policy can influence, sometimes markedly, the ease, or otherwise, with which resources flow from one activity to another, whether from declining to growing activities, or from declining to growing regions. Allowing relative prices, including relative wages, to fulfil their fundamental market-economy function of allocating productive resources by transmitting clear, undistorted signals is therefore central to a well-performing economy.

Anti-competitive market regulations hamper growth

Reducing anti-competitive product market regulation (PMR) can therefore raise productivity growth, including importantly through spillovers across sectors.[117] Re-energising Europe's single market could address a range of "missing links" and "bottlenecks".[118] Aligning product market regulation to OECD best practice could raise GDP per capita by up to 2.5% in the typical euro area economy, even without allowing for gains from increased employment.[119] And equally important, it would stand to support convergence across the euro area economies.

Greece has amongst the most restrictive product market regulation in the entire OECD, comparable with Israel, Turkey, and Poland. Ireland and Spain, however, have relatively competitive product markets (Figure 6). Greece also has the highest degree of state control of all OECD economies, followed by Portugal.

Removing restrictions on the entry of efficient firms, and on the exit of inefficient ones, also would stand to improve productivity and aid convergence across economies, especially if this were to include rationalisation of state-owned enterprise.[120] Particular challenges include raising competition in network industries and achieving greater competition in the services sector.[121]

Greece moreover has high barriers to entrepreneurship, as well as to trade and investment, so that policy here has particular scope. The other periphery economies rank better on these measures. (For more on relative labour and product market rigidities, see Picture Book: *Labour and product market sub-indictors, 2008*.)

An OECD/IMF 'heat map' of structural reform gaps, spanning labour, product, and service markets, institutions, human capital, infrastructure, and innovation, shows the wide variation between countries.

Greece in particular stands out, as do Italy, Portugal, and Spain. Of the core economies, Italy and France have particularly inefficient labour markets. Finland, Germany, and Ireland

seemingly perform better overall, though each also has room for improvement in a number of specific areas. Structural settings in the Netherlands are comparable with the best performing OECD countries (Figure 7).

A further issue that Europe addresses less well than a number of other economies, including particularly the United States, is the ability to handle asymmetric shocks – shocks that affect some regions much more than they affect others.

Adjustment/resilience to asymmetric shocks

Some shocks exert their sudden and sometimes potentially long-lasting, effect on particular regions. Just as general structural policies and settings do much to determine the manner and effectiveness with which an economy responds to change, so too do such policies stand in good stead a region that is hit by a sudden, asymmetric shock.

However, some asymmetric shocks can be so sharp or so large that, notwithstanding a region's having good structural policies, the near-term effects are nevertheless particularly severe. In such cases it can be socially and thereby politically important that there be in place policies to soften at least the near-term impact.

In the United States, the federal budget provides both automatic and discretionary countercyclical assistance to state budgets: Washington offsets perhaps one-third of any regional falls in state income via reduced collection of federal taxes and increased payments for unemployment benefit.[122] In 2008, federal transfers amounted to 27% of state revenue across the US.[123] Moreover, state aid[124] is an important part of the recent Federal Recovery Act: over 40% of the funds committed in respect of the current crisis will have been spent on state aid.[125]

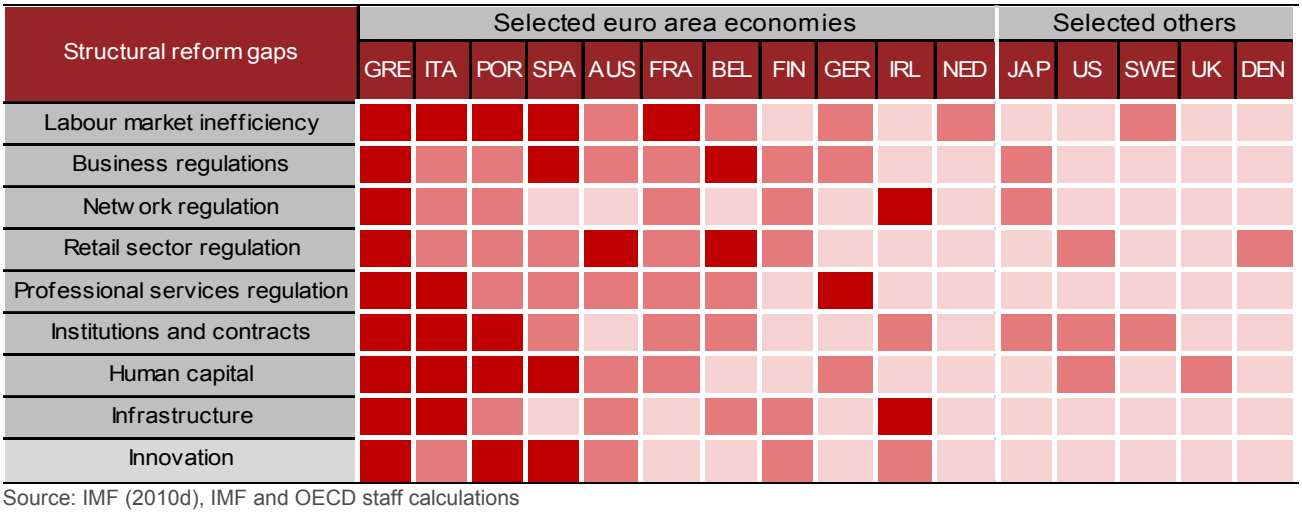
The euro area has no area-wide fiscal institution

The euro area has no area-wide fiscal institution comparable to the US Treasury and nor does it have any other form of fiscal co-insurance to provide temporary transfers to countries with basically strong policies but which experience transitory budget problems. The result is that in Europe the social burden is borne entirely by national governments. This can result – and has on occasion resulted – in a deterioration of the public finances that can produce, and has produced, crises in national government bond markets.

However, recent policy moves in Europe including, in particular, establishment of the temporary financing facilities (EFSM and EFSF) and proposals for a permanent crisis resolution mechanism (the ESM) do in effect constitute a form of mini federal fiscal mechanism, making the euro area in this respect more similar to the United States.

(For more on the policies in Europe that would require institutional change, and those that can be achieved under the existing institutional framework, see Annex: *The Lisbon Treaty*.)

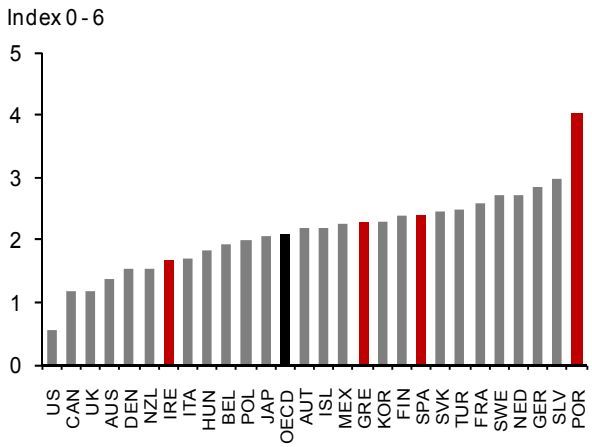
Figure 7: 'Heat map' of structural reform gaps – selected euro area economies and comparators



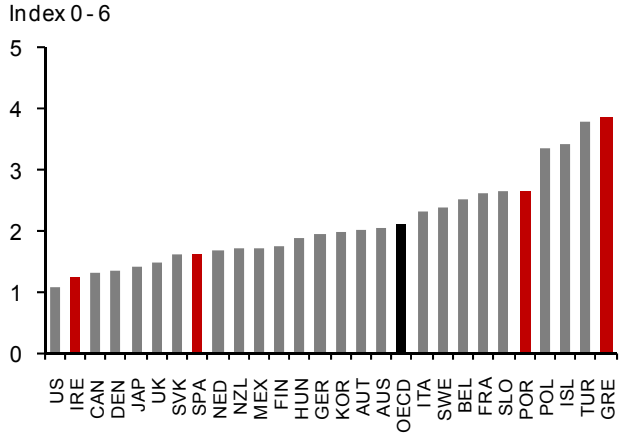
Source: IMF (2010d), IMF and OECD staff calculations
Note: The darker the shading the greater the weakness

Picture Book: Labour and product market sub-indicators, 2008

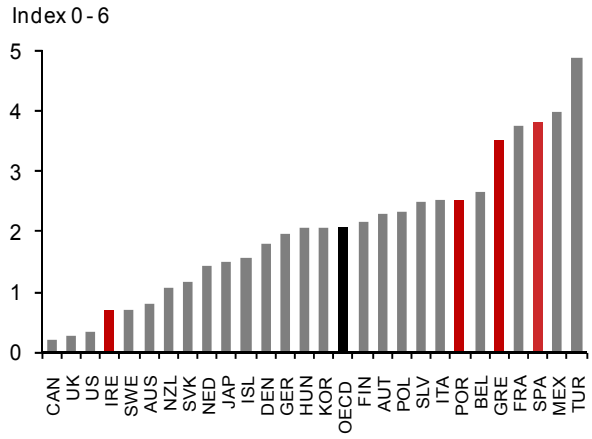
Extent of protection for regular employment



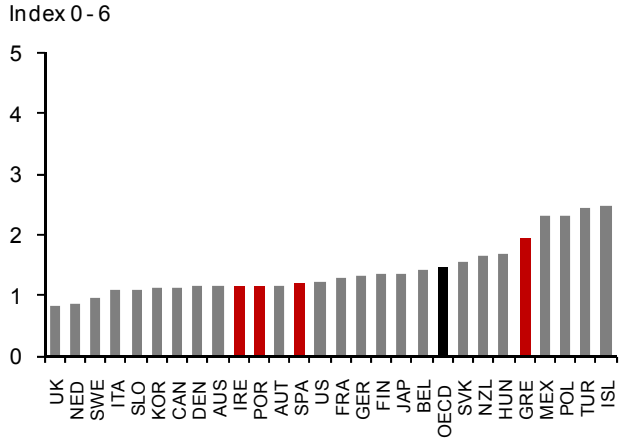
Extent of state control in product markets



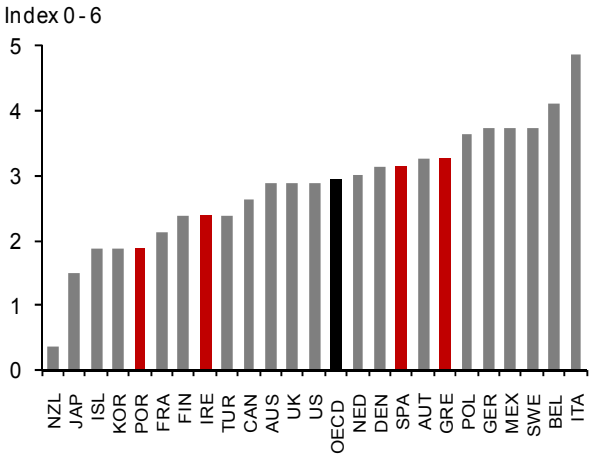
Protection for temporary employment



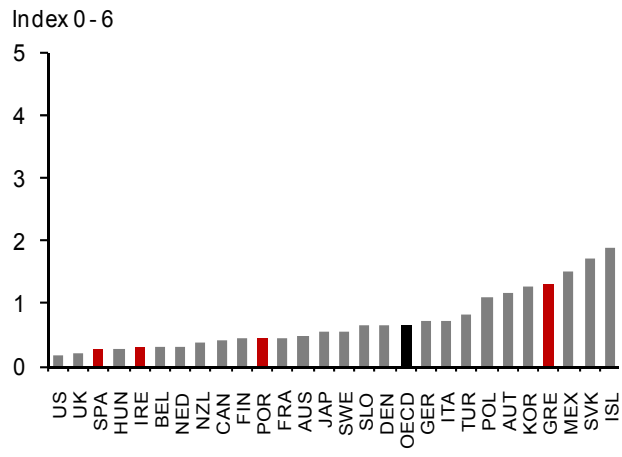
Barriers to entrepreneurship



Protection for collective dismissals



Barriers to trade and investment

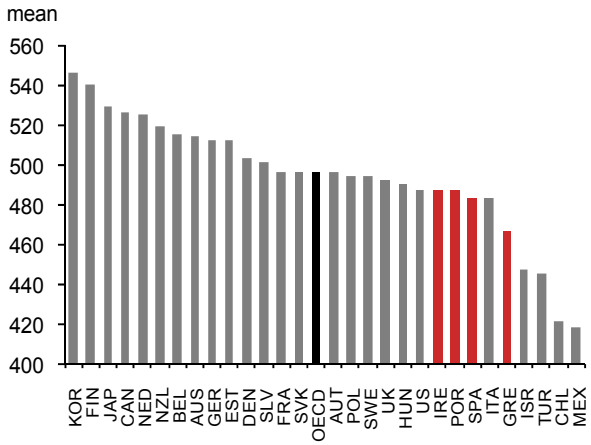


Source: OECD.Stat

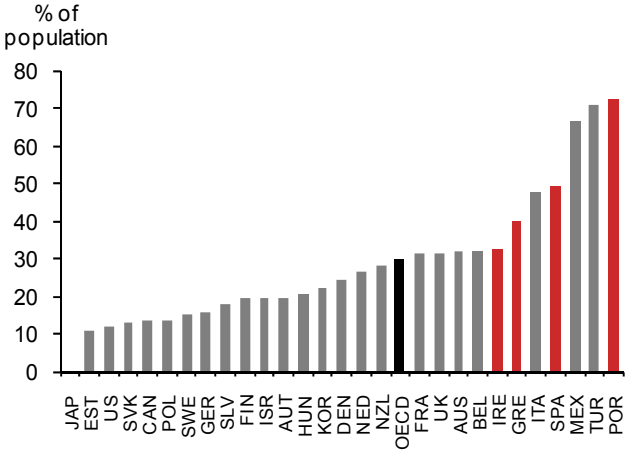
Note: The index from 0 - 6 indicates the restrictiveness of policy; 0 being the least restrictive, 6 the most restrictive

Picture Book: Human capital indicators, youth and adult

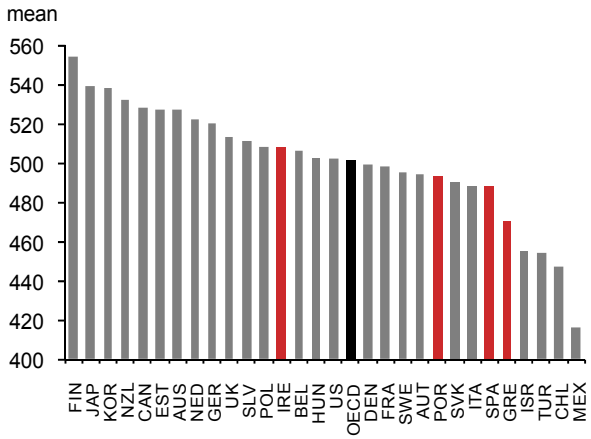
Mathematics, mean scores for 15 year olds, 2009



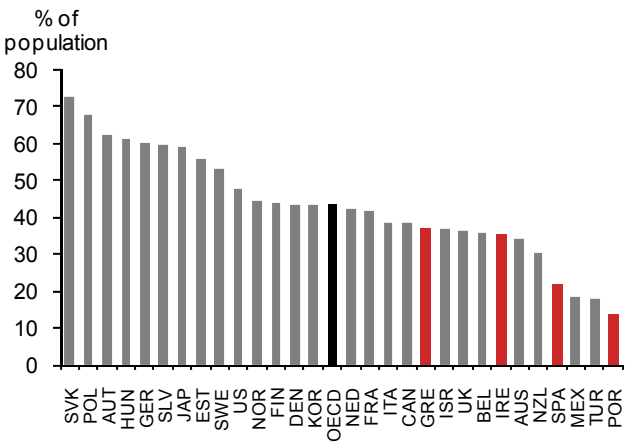
25 to 64 year olds without basic education 2007



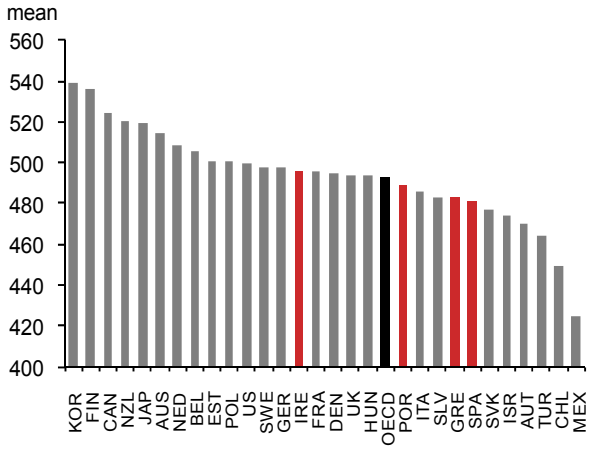
Science, mean scores for 15 year olds, 2009



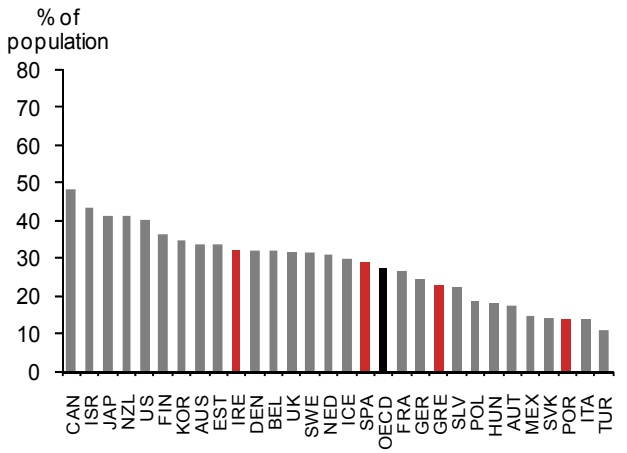
25 to 64 year olds with some non-tertiary education, 2007



Reading, mean scores for 15 year olds, 2009



25 to 64 year olds with tertiary education, 2007



Source: OECD (2010c) and OECD.Stat
Note: Indicators of adult skills are measured as percentage of population aged 25-64 in 2007.

Policies to avoid future crises

The 2008 financial and economic crisis has revealed not only policy, but also institutional, limitations in many, probably most, western financial and economic systems. The crisis had not single, but multiple causes.[126] Some of the requisite policies can be effected within the existing institutional framework; others require institutional reform. A particular issue for the euro area is that many of the needed institutional reforms require agreement (Treaty change) across countries. (For more on the importance of the European Treaty, see Annex: *The Lisbon Treaty)*

In many ways, the euro area needs to evolve, to be more like the United States. This is not to suggest that institutions, policies and policy settings in the US are in all respects ideal. But the US, a successful monetary union of long standing, has (at least to date) weathered the 2008 financial and economic crisis somewhat better than has the euro area.

The United Kingdom too, which can be considered as a medium-sized monetary union, has also been faring relatively well, at least in relation to its prospects immediately following the financial crisis which, given the large proportionate size of its financial sector, had a particularly large impact.

Policy needs to target two main areas

A comparison of the euro area's institutions, policies, and policy settings with those of the United States and the United Kingdom suggests that the euro area countries have much to do. The areas for attention divide broadly into two groups:

i. **Microprudential policy** – to increase the resilience of individual banks to shocks;

ii. **Macroprudential policy** – to prevent the build-up of unsustainable deficit/debt positions, whether in the public or the private sectors.

Therefore, policy will have to involve the regulatory authorities, the monetary authorities, the fiscal authorities and, when institutional reform is required, ministers and heads of state.

Microprudential policy reform

The banks. First steps have been taken. The new Basel 3 regulations are the most comprehensive and universal example of microprudential regulation to date, although several other market structure changes (such as the ban on proprietary trading by investment banks under the US Dodd-Frank Bill) are also aimed at increasing the resilience of individual banks to shocks.

Basel 3 raises capital requirements

The Basel 3 regime raises the minimum common-equity capital requirements for banks from effectively 2% to at least 7% of risk-weighted assets (RWA), with "systemically important" banks expected to maintain even higher capital levels (Switzerland has demanded at least 10% for its large banks).

Basel 3 also introduces new liquidity requirements for banks (sufficient liquid assets need to be held against a potential bank run, and long-term assets must be financed by long-term liabilities), and Basel 3 introduces for the first time in some countries a cap on overall gross leverage.

Cross-border issues too are being addressed

A second issue concerns banking issues that cross state borders. In the US, banking is regulated at both the federal and state level. In Europe, however, a problem with a bank in one Member State is not automatically a policy issue for the region as a whole – a case of banks being "international in life but national in death".[127]

First steps have been taken in Europe to address cross-border issues. In September 2010 the European Parliament approved the framework for the European Supervisory Authorities (ESAs), and includes a European Systemic Risk Board (ESRB), made up of EU central bank governors and chaired by the President of the ECB.[128] The framework came into operation at the start of 2011.

The ESA is also to feature three pan-EU watchdogs – the European Banking Authority (based in London), the European Securities and Markets Authority (based in Hamburg), and the European Insurance and Occupational Pension Authority (based in Frankfurt) – to tighten surveillance of the banking and securities markets and insurance sectors. The watchdogs are to have the power to intervene in financial markets and settle disputes amongst national regulators.

Microprudential regulation can however achieve only so much, even at the truly federal level. Even if banking regulations do a solid job of increasing the resilience of individual banks, any bank, regardless of how well capitalised, is always potentially at risk. Banks borrow short and lend long, and are thereby always intrinsically vulnerable to a run on deposits.

Moreover, if investors and the general public become troubled not only by the situation of a particular bank, but by the financial system more generally, a domino-run on deposits is always a possibility. Typically a run begins with the bank or banks that are in the weakest position: and then, if they fail, it moves on to the next-most vulnerable bank or banks. The failure of successive US investment banks, which culminated in the collapse of Lehman Brothers, is an ever-present reminder of the risk of domino failure.

Microprudential reform alone stands to be insufficient

Hence while microeconomic reform in the euro area is both necessary and desirable, such reform would probably be insufficient – in Europe and indeed in any country – to protect the financial system as a whole were it to be subjected to extreme stress. Guaranteeing the integrity of the system as a whole in extreme circumstances requires macroprudential policies.

Macroprudential policy reform

Private sector ill-discipline. This always risks, if it reaches systemic scale, becoming a public debt problem. This has been an issue for many developed economies: it was excessive private sector credit growth that initiated the 2008 crisis in a number of them, and that then either caused, or added to, public debt problems. Asian economies had a similar experience in their 1998 crisis.

Policymakers worldwide, including in the United States and the United Kingdom, need to meet the challenge, long term, of devising one or more instruments to control, more effectively, private sector credit in the aggregate. Relying on the price mechanism – setting interest rates, the price of credit – has proved inadequate, perhaps because it is a less powerful tool than had been commonly supposed.

What is required would seem to be one or more forms of quantitative control, but these will have to be carefully constructed and sensitively administered, if they are not to constrain economic growth unnecessarily.

Banking reform: Under the Basel 3 framework a countercyclical common-equity capital buffer of up to 2.5% of GDP is proposed when a country's private sector credit/GDP exceeds trend. This would apply both to domestic banks and, *pro rata*, to foreign banks operating in the overheating economy. The purpose is to slow bank lending through higher capital requirements and thereby slow the formation of excess leverage.[129]

Ultimately, however, the integrity of an economy's financial system can be guaranteed only by the state. For that guarantee to be credible, however, the state has to ensure that its finances have, at all times, sufficient 'head room' or 'fiscal space' to permit the state to assume responsibility for any likely level of private sector debt without degrading the capacity of the state to service the resulting public debt. This requires long-term fiscal discipline to limit the size of the public debt.

Debt/GDP ratios of 90%-odd can present immense challenge

Fiscal ill-discipline. This is an issue for many western economies. In their exhaustive historical cross-country study of financial and economic crises, Reinhart and Rogoff (2009) found that, when a country's public debt/GDP ratio reaches around 90%, investors typically start to become troubled, demanding higher yields to compensate for rising default risk. And this is understandable: the debt arithmetic in Chapter III shows how, while a debt/GDP ratio of up to around 60% poses little problem for a typical OECD economy, a ratio of 90%-odd can present immense policy challenges.[130]

In aggregate, the euro area's current public-debt problems are slightly less severe than those of the US. In 2010, and on a common (Maastricht) basis, the general government[131] consolidated gross debt of the euro area 16 averaged just over 84% of GDP, while the equivalent US figure was 6 percentage points higher, at just over 92%. In 2012, the euro area figure is projected by the European Commission, on present policies, to increase by around 4 percentage points, to 88%, while the US is projected to rise by almost 10 percentage points, to just over 102%.[132]

Moreover, an unsustainable debt position can be reached disturbingly quickly. The recent experience of Ireland shows how seemingly ample fiscal space can evaporate in a flash if the public sector assumes liabilities that are large relative to GDP. As recently as 2007 Ireland's public-sector debt/GDP ratio was just 25%, way below the euro area average of 66%. Three years later (2010) it was around 100%.

Macroprudential reform is proceeding in Europe

Recent European policy moves. In Europe, recent moves towards enforcing greater fiscal discipline have been in the direction of instituting greater and stronger commitment towards centralised monitoring, control, and enforcement over the public finances of Member States, by:

- **Strengthening the Stability and Growth Pact** – notably by placing greater emphasis on debt and the addition of more automatic sanctions, implemented at an earlier stage, and decided through reverse majority;[133]
- **Deepening and broadening coordination** – notably through the European Semester,[134] whereby national budgets are assessed by the European Commission at the draft stage; and
- **Fostering stronger institutions** – notably at the national level, through the use or setting-up of public institutions to provide independent analysis and forecasts on domestic fiscal policy matters.

In October 2010, the European Council took further steps towards a more complete macroprudential policy toolkit by endorsing a report of the Van Rompuy Task Force, which proposes a mechanism for macro-prudential surveillance.[135]

The proposal involves a two-stage process. The first involves an annual assessment, by the European Commission, of the macroeconomic imbalances and vulnerabilities of the euro area.

This assessment would be based on a number of macroeconomic and financial indicators, each assigned lower/upper limits to denote risk thresholds. The variables to be monitored could include: current account balances, net foreign assets, measures of competitiveness, credit growth, and changes in house prices.

The second stage involves continued monitoring of the variables, and strict enforcement of the thresholds. The proposal's main elements for enforcement include:[136]

- The Commission would have the power to issue early warnings; and, in the case of serious imbalances, would recommend that a Member State be deemed by the Council to be in an "Excessive Imbalances Position";
- To be overturned, the Commission's recommendations would have to be rejected by a qualified majority, likely under the 'semi-automatic' voting procedure;[137]
- If not overturned, a set of financial, macroeconomic, and structural policy recommendations would be given to the Member State, and progress reports required;
- The Commission would also monitor implementation. In the case of non-compliance, sanctions would be applied.[138]

Unwinding excessive debt positions. If, notwithstanding efforts to the contrary, ill-discipline nevertheless still occurs, and particularly if the public finances have insufficient 'headroom' to permit them credibly to guarantee the integrity of the economy's financial system, there is a need to provide for an orderly unwinding of excessive debt positions.

In Europe, however, the unwillingness of policymakers to allow defaults of periphery economies' private or public debt, primarily because of the potential knock-on effects on banks in other member economies, and the consequently large burden implied on fiscal retrenchment, has led to investor concerns being (so far) much greater than those in respect of the US.

All this points to the need for some sort of permanent crisis resolution mechanism. The European Stabilisation Mechanism (ESM) is a step in that direction, with: its enhanced surveillance, early warnings, enforcement (preventive action), permanent emergency financing mechanism (assistance), and its powers to resolve sovereign debt (debt restructuring), perhaps involving pre-agreed means of burden-sharing, including (if deemed appropriate) private-sector participation in future debt resolution.

Concluding observations

The purpose of this chapter has been to consider the policy framework in which financial/economic crises have to be resolved, so as to put the economy on to a sustainable path for the long term. In a monetary union, this challenge is in some respects similar to, but in other respects differs from, that faced under a floating exchange rate regime.

When any economy, be it in a monetary union or not, finds itself with an unsustainable level of debt – public, private, or both – there is no easy or cheap way out of the problem. Dealing with the situation is costly in economic terms, and painful in social and political terms. All that can be at issue is the specifics of the costs and the pain, and the way in which each is distributed across the economy and society.

In the case of an economy in a floating exchange rate regime, and which then becomes highly indebted (e.g. Argentina and Mexico in the 1970s and 1980s, and Asia in the 1990s) adjustment usually takes place importantly, even primarily, through depreciation of the currency. The principle elements in the process include:

- A fall in the exchange rate, i.e. an increase in domestic currency cost of foreign currency;
- A reduction in the price of exports (denominated in foreign currency);
- An increase in the price of imports (denominated in domestic currency);
- An increase in export volumes, and a decrease in import volumes.

In a perfect adjustment (for an elaboration of what is implied, see Box: *Getting the balance right*), GDP is maintained throughout, but a greater proportion goes abroad, and a correspondingly smaller proportion is available for domestic consumption and investment. Thus national output (GDP) may not fall; but national real income (terms-of-trade-adjusted GDP) does.

In a monetary union, however, the mechanisms, and thereby the manifestations, are different. Devaluation is not a possibility. Hence competitiveness can be increased only by disinflating relative to other members of the monetary union. To some extent, this is likely to happen, in the tight fiscal environment that typically follows debt crises. Thus, while the terms of trade do not deteriorate, national output (GDP) is very likely to fall, and probably by more than under a floating exchange rate regime.

Hence to the extent that structural policies improve wage and price flexibility and, more generally, enable the economy to return to full employment relatively quickly, they reduce the overall GDP loss and the degree of social and political pain.

Whether real income is higher under the one case or the other is an intrinsically empirical question, involving a complex set of calculations which could be undertaken only in a fully specified macro model. Even then results would be uncertain. What is clear is that there is no policy trick to enable a country to escape costlessly from heavy indebtedness.

There are many possible outcomes for the euro area – ranging from full fiscal union to complete breakup. We see the most likely outcome as lying somewhere between these extremes, with the euro area remaining basically intact. That said, any such assessment can only be tentative: the crisis is not yet over, and the ultimate path of policy in strengthening euro area institutions is not yet certain.

Moreover, other outcomes are regarded by some market participants as distinct possibilities, and thereby contribute to market valuations of European bonds, the exchange rate of the euro, and equities. These matters are taken up, from a technical perspective, in the next three chapters.■

Getting the balance right

The euro area needs adjustment of both domestic expenditure and competitiveness between its member economies, so as to reduce the imbalances between deficit and surplus members.

An economy's employment and balance of payments positions are determined jointly: as a general rule, therefore, achieving a desired outcome for the two objectives simultaneously requires the use of two policy instruments. An ingenious way of depicting the issues involved was advanced by the Australian economist T.W. Swan (1955), in what has come to be known as the "Swan diagram".

Figure A reflects the fact that both employment and the current account of the balance of payments depend on the level of domestic spending, and on the economy's (international) relative cost situation. 'Real Expenditure', E, represents the volume of total domestic investment and consumption (private and public). The 'Cost Ratio', R, represents the (international) competitive position of the economy's industries – e.g. the ratio of an index of international prices to an index of the home economy's prices. The higher is R, the more competitive is the economy.

A given level of employment can be sustained with E low if R is sufficiently high – or with E high if R is sufficiently low. This is shown by the family of A curves. Curve A_2 is the one that represents full employment.

A given balance of payments position requires a combination of low E and low R, or high E and high R. This is shown by the family of B curves. Curve B_2 is the one that represents the desired current account position.

While any combination of E and R that lies on the line A_2 gives internal balance, and any combination along B_2 gives external balance, only one combination simultaneously achieves both internal balance and external balance – the point where A_2 and B_2 intersect.

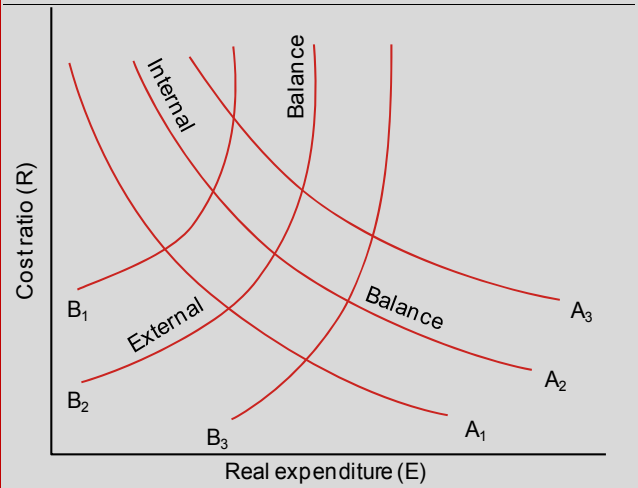
If an economy is out of balance, whether internally, externally or both, policymakers have to decide on how to set the two policy levers. This can be deduced in part by dividing the economy's state into four zones, as delineated by the dotted lines (Figure B).

In Zone II the level of spending is unequivocally too low, and in Zone IV it is unequivocally too high. And in Zone I competitiveness is unequivocally too high, and in Zone III unequivocally too low. Thus in each zone the necessary direction of adjustment of one of the two instruments is apparent, but the other may be either too high or too low, depending on the economy's position in the zone.

To establish the appropriate settings for policy, it is necessary to know not only in which *zone*, but also in which *quadrant*, the economy is in. Before the 2008 crisis, Europe's core economies were in quadrant A (competitiveness too high; and domestic expenditure too low), whereas the periphery economies were in quadrant C (competitiveness too low, and domestic expenditure too high).

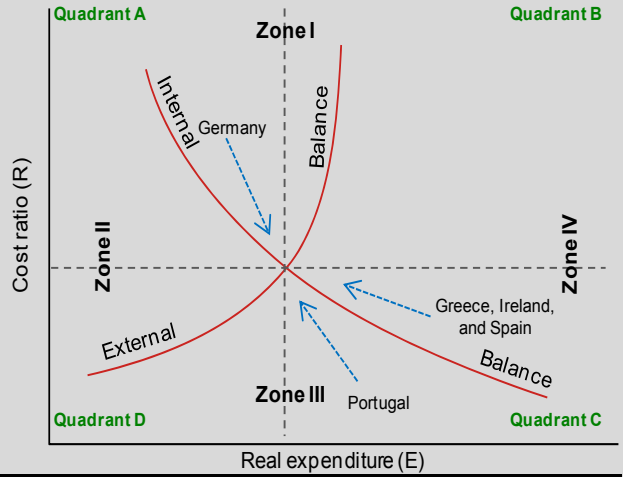
A particular problem for the euro area is that currency depreciation, which serves to increase international competitiveness, and which in debt crises elsewhere has often proved to be a boon by increasing net exports and thereby supporting aggregate demand, cannot take place within monetary union. Increasing competitiveness can therefore be achieved only be achieving a rate of inflation that, in the troubled economies, is below that of the euro area as a whole.■

Figure A. An array of possible policy settings



Source: Nomura

Figure B. Settings for internal and external balance



Source: Nomura

Chapter V

Jim McCormick | Nick Firoozye | Owen Job | Jens Nordvig

The outlook for sovereign bonds and the euro

The past 20 years have seen a number of fundamental changes in the risk properties of the European sovereign bond markets.

- A range of factors determined sovereign spreads and volatility in the years up to 2007, but fiscal positions played only a comparatively minor role.
- The crisis, however, has led to fiscal positions becoming fundamentally important in perceptions of sovereign risk.
- Outcomes for sovereign bond markets and the euro stand to reflect investor perceptions over a wide range of possible future scenarios, from fiscal union to complete break-up.
- We judge that the most likely outcome is that the euro area will remain basically intact, and that there may be steps in the direction of fiscal union.

On such a basis, average periphery spreads could fall to 90bp and EUR/USD could increase from 1.35 to reach 1.45 around 2015.

Introduction

The crisis has changed debt markets and the euro

This chapter considers potential structural changes to euro-area sovereign debt markets and the euro that seem to be resulting from Europe's financial/economic crisis. There are many possible outcomes, ranging from full fiscal union to complete break-up. We see the most likely outcome as lying somewhere between these extremes, with the euro area remaining basically intact, and perhaps – but not necessarily – taking some steps towards closer fiscal union.

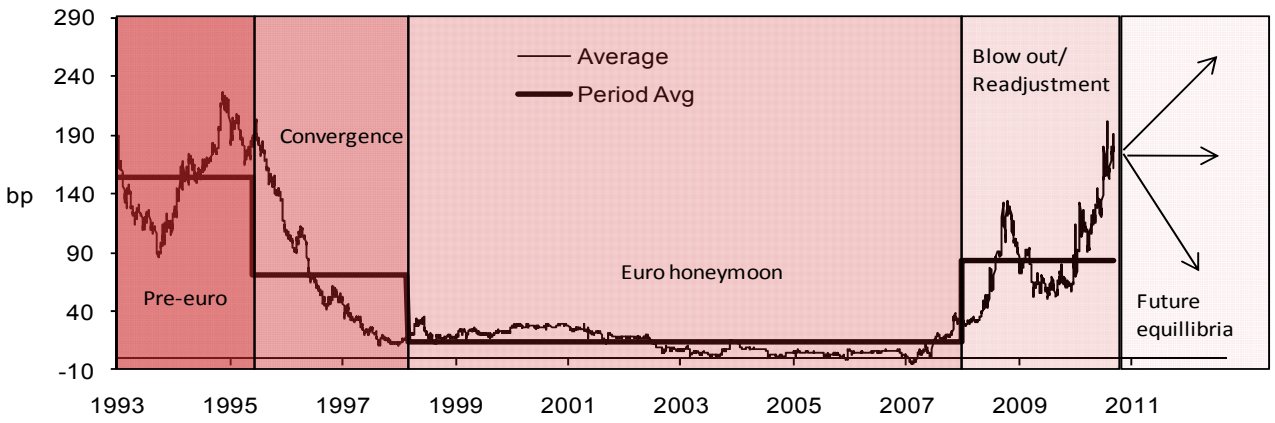
Any such assessment can only be tentative: the "crisis" is not yet over, and the ultimate path of policy in strengthening euro-area institutions is not yet completely certain. But we think a return to the earlier "no spread" pre-crisis period for sovereign bond markets is highly unlikely – at least in most peoples' trading lifetimes.

This chapter therefore attempts to map a world for euro-area sovereign bonds and the euro under a number of different paths, recognising that the probability of each remains highly uncertain. The following chapter considers the significant impact on bond portfolios that stand to result from the emergence of a sovereign spread market.

There has been a structural break with the past

There has been a structural break with the past in a number of respects. The crisis has left countries across the globe in differing states of health with respect to fiscal, household, and bank balance sheets. As a result, business cycles and monetary policy inside and outside Europe are markedly less synchronised than before. At the moment, markets are focusing principally on the euro area and the spread market in euro-area sovereign bonds that has emerged as investors attempt to find an equilibrium for borrowing rates that better reflects fiscal positions.

Figure 1. Sovereign spreads to Bunds



Source: Nomura
Note: For data availability reasons, represented here is the simple average of Austrian, Irish, Belgium, Netherlands, Italy, Spain, and France 10y government bond spreads to 10y Bunds.

Looking ahead, the need for European banks to deleverage their outsized balance sheets could even help to bring about the long-expected emergence of a deeper, more liquid European private sector credit market.

The evolution of sovereign spreads and volatility

The past can be split into four periods…

To examine the fundamental changes that have taken place in European sovereign bond markets over the past 20 years, it is useful at the outset to distinguish four periods:

- pre-euro;
- convergence to euro;
- euro "honeymoon" ; and
- "blow-out"/readjustment.

…each with different characteristics

In the first (pre-euro) period, spreads were large and fluctuated considerably. Spreads then converged in the second (convergence to euro) period to the point where, by the end of that period, they had become minimal. Then, in the fourth ("blow-out") period, spreads re-widened, and again were volatile (Figure 1).

A range of factors was responsible for this behaviour of spreads:

- In the first period, important determinants included differences in inflation rates between economies (which were considerable), the stance of monetary policy, and actual and prospective fiscal positions.
- In the convergence period, by contrast, spreads were influenced particularly by investors' (evolving) assessment of each country's likelihood of joining the euro.
- In the "honeymoon" period, in what is now recognised as one of the greatest mis-pricings in financial history, near-zero spreads were a consequence in large part of (mistaken) investor belief that each country's euro-denominated government bonds were guaranteed by the euro area as a whole.

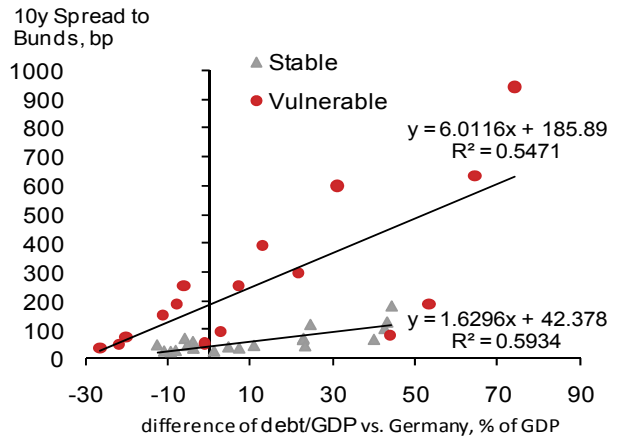
Fiscal positions have become important in determining spreads

In each of these periods, fiscal positions apparently played only a comparatively minor – and on occasion seemingly perverse – role in determining spreads.[139] However, in the most recent "blow-out"/readjustment period, characterised by strong investor concern about public sector debt situations, there has been a significant relationship between spreads and fiscal situations.

Moreover, investor concern about sovereign debt is being expressed not only as between the economies of the core and those of the periphery, but also within each of the two groups.

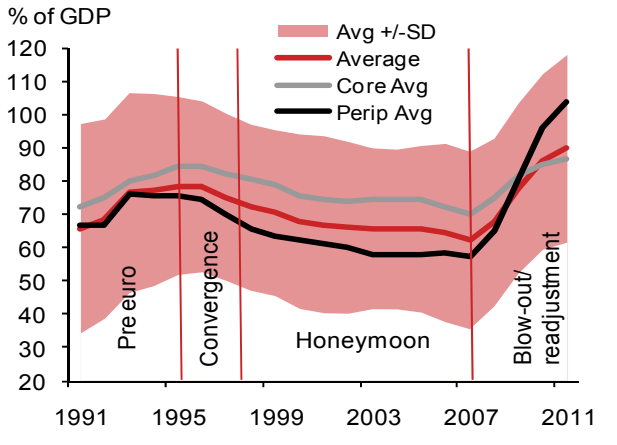
This can be seen from two sets of relationships plotted in Figure 2. The "stable" group is those economies perceived as "core" and "semi-core" – Austria, Belgium, the Netherlands, Italy, and France (Germany, being the benchmark, is not included). The "vulnerable" economies are those

Figure 2. Relationship of debt/GDP and spread to Bunds



Source: Nomura, Bloomberg, Datastream
Notes: "Stable" = Austria, Belgium, Netherlands, Italy, and France; "Vulnerable" = Ireland, Greece, Portugal, and Spain.

Figure 3. Evolution of euro-area debt/GDP ratios



Source: Nomura, Bloomberg
Notes: "Average" includes Austria, Finland, Ireland, Greece, Belgium, the Netherlands, Portugal, Italy, Spain, France, and Germany. "Core"= Austria, Belgium, Netherlands, Italy, and France."Periphery" = Ireland, Greece, Portugal, and Spain.

of Europe's periphery – Ireland, Greece, Portugal, and Spain. Both sets of relationships are quite tight, statistically speaking, the value of the correlation coefficient, R^2, being over 55% in each case.

However, the two relationships are rather different from each other:

- In the "vulnerable" economies group, each 10 percentage point increase in the public debt/GDP ratio has been associated with a 60bp-odd widening of the spread over Bunds.
- In the "stable" economies group, by contrast, the sensitivity is markedly lower: each 10 percentage point increase in the public debt/GDP ratio has been associated with only a 16bp-odd widening of the spread over Bunds.

Thus investors in peripheral-economy bonds have become particularly sensitised to, and hence demand compensation for, risks associated with public debt. However, given the extent to which public debt ratios have risen in the core economies too (Figure 3), investors in the bonds of those economies are also debt-sensitive, albeit less so.

Three possible futures for sovereign bond markets

It is far from clear precisely what policy reforms the euro-area authorities will enact, and when. The outcome for the sovereign bond market therefore stands, for some time yet, to be a perceived-probability-weighted outcome of a wide range of scenarios. We consider three below, although investors may have many more in their minds.

Scenario 1: E-bond issuance and subordination of outstanding market

E-bonds seem a good idea, but face German opposition

One possible outcome is the establishment of a euro bond. In our judgement the proposal addresses a number of issues usefully, and hence makes much sense. However, there is considerable opposition to it in Germany, whose populace apparently do not wish to assume any liability, no matter how remote, for the obligations of any other euro-area government. Whether the German stance on this issue changes in the coming months remains to be seen.

There have been a number of suggested variants for an E-bond, ranging from the original study by the Giovannini Group (2000) [140] for the European Commission (EC), to a number of white papers by the bond traders' association SIFMA[141] , to the 2010 EC proposal by Juncker and Tremonti.[142]

The most sophisticated recent proposals, which capture a number of features of the others, are along the lines of the Bruegel "Blue bond" proposal.[143] Under this proposal there would be two classes of government bond:

- **"Blue bonds"**, which would result from Member States pooling their national debt up to a maximum of 60% of each economy's GDP (the Maastricht limit), under joint and several liability as senior sovereign debt.
- **"Red bonds"**, which would be the remainder of their debt, would be subordinate to E-bonds in the debt structure. (Subordination is rare in government bond markets, although Argentina issued a note which could be used to pay taxes in the event of default, making it technically senior.)

A combined market could be comparable to US Treasuries…

All three factors – E-bonds being senior to sovereign debt; their being guaranteed jointly and severally by all contributing EU states; and their issue being limited to a debt/GDP ratio that was viewed as manageable – would stand to improve the trading spread of E-bonds. A combined E-bond market, were the issuance limit set at around 60% of GDP per economy, would be about $6trn in size, broadly comparable to the $9trn US Treasury market.

Bruegel argues, on the basis of the long-run average of Bund/Treasury swap spreads, that the long-term liquidity benefit for Treasuries to Bunds currently stands at approximately 30bp[144]. An E-bond could be expected to trade closer to, or even in line with, Treasuries, at least from a liquidity perspective. Such a prospect would be an important (although not the only) incentive for the stronger core nations of the euro area to participate in the E-bond scheme.

…raising the euro's desirability as a reserve currency

Another upside to the E-bond programme for the "core" economies could be increased attractiveness of the euro as an alternative reserve currency to the dollar. A reserve currency needs a debt market sufficiently deep and liquid to compete with the US Treasury market: an E-

bond market would provide this.

The combination of the joint and several liability structure of the E-bonds and their seniority to other debt would probably mean that their sensitivity to the average fiscal position of euro-area Member States would be low, possibly lower even than that observed in the "stable" core states over the past three years.

E-bonds would likely trade tighter than current core, with…

The scheme is also designed to encourage strong and credible fiscal policies, by leaving sovereigns exposed to market judgement of their individual finances through "Red bond" yields, and also, should states fail to comply with fiscal restraint, through limitations on "Blue bond" issuance. This could in time provide the "stick" to enforce fiscal discipline that the Stability and Growth Pact (SGP) has so far lacked. And this could in turn have a helpful impact on the net debt/GDP levels of euro-area Member States, thereby perhaps further lowering E-bond yields.

The creation of the E-bond and the resultant subordination of "Red bonds" would increase the sensitivity to each sovereign's fiscal position. However, the implementation of an E-bond structure and a system of subordinated sovereign debt with associated orderly default mechanisms (such as collective action clauses (CACs)), together with tightened supervision of banks and rating agencies to ensure that the financial sector does not become unduly vulnerable to a default on the "Red bonds", could lead to a substantial reduction in the uncertainty premium. This is currently increasing the sensitivity of the "vulnerable" periphery economies' debt yields to their fiscal situations.

...Red bonds tighter than "vulnerable" but wider than "stable"

The combination of a reduction in uncertainty with an increase in subordination would likely imbue "Red bonds" with a higher sensitivity to public debt/GDP ratios than "stable" bonds, but lower than the present "vulnerable" countries. This would probably mean an increase in spreads of "stable" "Red bonds" and a decline in "vulnerable" periphery rates. Periphery debt/GDP levels are at present higher than in the "core" economies by, on average, 15% of GDP (Figure 3).

Taking the higher debt level but a sensitivity that is lower than at present but higher than that of the "stable" countries, we estimate that peripheral "Red bond" spreads would reach equilibrium at around 200bp above Germany. Full convergence to current "stable" sensitivity would imply a spread of 90bp. Convergence to the current expected spread based on the "vulnerable" economy sensitivity over the past three years would imply an average spread of 350bp. This is 350bp tighter than currently. Comparatively, core countries would probably trade at a discount to current levels, but only by a little.

Scenario 2: The euro area remains intact

The euro area will likely remain basically intact

In our judgement, the most likely outcome for the euro area is that it will remain basically intact. However, that is not to say that there will be no major shifts in the structure of the euro area's fiscal or financial market organisation: rather we think the patchwork of support and enforcement mechanisms outlined in the preceding chapters will prove sufficient to hold the euro area together.

Equilibrium spreads would be tighter...

On the basis of these assumptions, all else being equal, spreads of peripheral sovereign debt to Bunds should be tighter than at present. Current spreads incorporate a substantial uncertainty premium on account of the unknown future structure of the euro-area fiscal and financial system. This risk premium is expressed via an increased sensitivity of spreads to fiscal position.

A small portion of this uncertainty premium is attributable to the (small) possibility of euro-area break-up; but the larger source of uncertainty derives from the future structure of the European bond market while still operating within a single currency union.

For example, as regards the seniority structure of European bonds, if there were to be an E-bond, would it be senior to outstanding issues? Would future domestic sovereign bonds have embedded collective action clauses (CACs)? Will the permanent rescue facility, the European Stability Mechanism (ESM), be a "preferred creditor", explicitly senior to outstanding bonds (or only to new bonds), leading to a two-tier bond market with old debt not subject to restructuring but new debt explicitly subordinated?

...as fiscal/financial uncertainty is reduced

It could be that, once policy uncertainty has been removed and government debt levels have stabilised, spreads will converge to the "stable" country regime observed over the past three years (Figure 2). This "stable" country regime in the "blow-out"/readjustment period does not

include the additional sensitivity to fiscal position because the "stable" countries are much less likely to require outside assistance or be subject to a credit event, and hence are less likely to be affected by the new and uncertain policy framework.

The presumption of removal of uncertainty is a large one, and conclusions based on it are largely a reflection of the long-term equilibrium level. However, for some potentially better-placed economies (such as Spain), we think it could be possible if policymakers succeed in stabilising the deterioration in debt/GDP levels and clarify the future of the intra-euro-area fiscal support systems.

The path to equilibrium could be slow…

One feature of the "remain intact" scenario is that it might take longer to reach equilibrium: because there would be no significant event or phase-change in policy to remove the uncertainty premium, the process could well be gradual.

The likely outcome for the weaker periphery economies (Portugal, Ireland, and Greece) is heavily dependent on future debt management policy – if there are any credit restructuring events, and how they are handled. Assuming that they are managed smoothly, and that dependable and permanent fiscal support mechanisms are implemented, spreads for these weaker periphery countries could also phase-shift back to the lower risk premium regime of the "stable" country regime. However, if a debt restructuring event were to be executed poorly, the uncertainty premium and hence the high sensitivity of the country's sovereign spreads to fiscal position would likely remain for much longer, and a return to the "stable" regime of low debt/GDP-spread sensitivity would probably be only a distant possibility.

…but debt should more accurately determine spreads…

The "remain intact" scenario should reach a stable equilibrium, as many of the temporary fixes are transformed into permanent and transparent frameworks and institutions, and any debt restructurings are completed in an orderly manner. In this event, we would expect all countries to revert to the "stable" country regime where debt/GDP matters for spreads – unlike during the euro "honeymoon" period, when it was overlooked – but not to the excessive present levels of sensitivity of many of the periphery economies.

…and periphery spreads to Bunds could fall to say 90bp

Under this scenario the average periphery spread to Bunds could fall to approximately 90bp. The scenario would likely have a limited impact on core spreads, although the removal of uncertainty about the future of the euro system, and the reduced implicit liability of the periphery on the core, would likely lead to a small lowering of core yields.

Debt/GDP levels would also be affected, although less than under the other two scenarios. On the basis of current Nomura economic forecasts we expect debt/GDP ratios to rise at a slowing rate, and almost all countries to peak in the next three to four years. Using Nomura-projected peak debt/GDP forecasts and the core regime debt/GDP sensitivity, the average periphery spread to Bunds could rise from 90bp, as discussed above, to 110bp.

Scenario 3: The euro area breaks up

If implicit periphery support were lost…

One of the key differences between the "remain intact" and "break-up" scenarios is that in the "remain intact" scenario there is implicit support from other states (although perhaps contingent on private-sector burden sharing). In the "break-up" scenario all states are on their own. The strongest economies would probably have marginally lower spreads under the "break-up" scenario than under the "remain intact" scenario because they would not have the implicit burden of supporting the periphery.

…spreads would widen markedly

Conversely, peripheral spreads would likely be significantly wider than under the "remain intact" scenario for given public debt/GDP ratios, because of the removal of fiscal support by the rest of the euro area. Put another way, the periphery sovereign spreads' sensitivity to fiscal position would increase even from the current heightened levels.

A break-up would involve unprecedented uncertainties…

A break-up scenario would involve unprecedented uncertainties. The complexities involved in re-denominating contracts into new local currencies are just one issue. Managing an orderly transition to new currencies in countries with highly integrated real and financial sectors (and a system based on free capital mobility) would pose a challenge bigger than any previous currency union break-up.

Previous examples include the break-up of Czechoslovakia, the Soviet Union, and, to a lesser extent, Yugoslavia, each of which introduced a national currency which was initially fully

exchangeable at parity. Exchange controls and/or full independence followed later. But even in the case of Czechoslovakia it quickly proved impossible to keep the new exchange rate close to the old parity, and there was significant exchange rate volatility shortly after the break-up.

In the process of breaking up, many, if not all, of the periphery economies might well restructure their debt. If this restructuring did not include conversion into local currency, the constructive impact on the debt levels could be counteracted by the depreciation of their currency once it became fully flexible. This could increase the (domestic currency) size of their restructured remaining debt denominated in euros and other foreign currencies.

…and might lower periphery debt…

The average equilibrium depreciation across the periphery could be closer to 15%. Hence if, for the sake of illustration, a debt restructuring were to represent a reduction in present value of approximately 30%, the break-up and subsequent restructuring would still yield a net reduction in countries' debt/GDP levels, even if the restructured debt were to remain in euros: 30% (restructuring) – 15% (currency depreciation vs. currency of debt) = 15% PV reduction of debt in local currency terms. However, we estimate that the initial depreciation of the new individual currencies could be much larger, especially in cases where new national central banks would be lacking inflation-fighting credibility. In the extreme case of Greece, we could imagine a currency depreciation in the region of 50% in the initial years of a break-up.

…but inflation would probably negate this

However, sovereign debt yields would also reflect expectations about growth, inflation and monetary policy. Under a euro-area break-up scenario, the new and relatively inexperienced policymakers at the individual countries' central banks may not have sufficient credibility to contain domestic inflation in the face of the inevitable sharp depreciation of their newly free-floating currency. This effect would likely negate any constructive impact on yields from the lower debt/GDP levels resulting from a simultaneous restructuring event.

Overall, in our judgement, peripheral yields after a euro-area break-up would likely be significantly higher, as well as significantly more sensitive to fiscal position.

As with periphery sovereigns, core sovereign spreads would reflect monetary, economic, inflation, and credit risk. Break-up of the euro would likely lead to a decline in export growth of the core countries whose economic growth, through the increase in intra-region trade, has benefited the most from the currency union.

Core currencies would appreciate...

Additionally, the newly-floating core currencies could well rise to a new equilibrium level between 5% and 15% higher because of the removal of the uncertainty premium and the new core currencies appreciating to their higher equilibrium real exchange rate level.

...their growth would slow...

Such currency appreciation, by making core country exports less competitive, would slow economic growth, primarily through the international trade channel. Credit risks would also decline as the implicit burden of support for the periphery was removed. The already low sensitivity of the core's spreads to fiscal position would likely fall further.

...while yields and volatility would fall

In summary, both the level and volatility of core yields would almost certainly decline once a new equilibrium had been reached after a euro-area break-up.

Figure 4. Summary of the likely impacts of the three scenarios

Scenario		Core Yields	Average periphery, spread to Germany (currently 420bp)
E-bond	Individual sovereign debt	Current +5bp	+200bp
	E-bonds (60% debt/GDP)	Germany -15bp	-15bp
Remain intact		Marginally lower yields	+110bp
Euro break-up		Lower	+500bp

Source: Nomura

The future of the euro

From the outset the euro was a controversial construct. As discussed in Chapter IV, analysts argued from long before its inception that the euro area would be far from an optimal currency area. With a number of these concerns now having materialised, investors have become increasingly sceptical about the sustainability of the euro area in its current form.

Future uncertainties are affecting the euro

Linked to this, the euro has become significantly more volatile. While cyclical factors have played a part in this, increasingly the swings have been driven by the risk premium that investors have demanded for holding the euro.

The value of the euro can be viewed as the probability-weighted average of various scenarios, of which three, each fundamentally different, warrant particular consideration:

i. **Break-up**. The euro ceases to exist and the euro-area countries adopt individual currencies.

ii. **Change in composition**. The euro survives, but peripheral countries leave the euro area, and only core euro-area countries continue to use the euro.

iii. **Remain intact**. The euro survives, and all current member countries stay in the euro area.

Scenario 1: Break-up

The "break-up" scenario is hard to evaluate

The "break-up" scenario is hard to evaluate, not least because it is difficult to find clear precedents. There have been many currency unions before the euro area, but they were generally based on an existing currency as an anchor, rather than a new currency such as the euro. And the degree of financial sophistication and capital mobility was much less than is the case today.

Break-up would involve individual national central banks issuing new currency. There would be a conversion process, whereby euro-denominated instruments (currency, deposits, and securities) would be converted into national currencies at some specified rate. The ECB would have to be dissolved, and its assets divided between the individual member countries.

It could trigger a banking crisis and deep recession

The main problem with the "break-up" scenario is that it would have significant practical, logistical complications. Any suggestion that a break-up of the euro area was being contemplated would generate major capital flows, between euro-area countries and, potentially, out of the euro area too, as investors sought currencies with the greatest value and safety. This would likely trigger a euro-area-wide banking crisis, and be followed by a deep recession in most European economies.

In the transition, the euro risk premium would spike

Over time, new euro-area currencies would emerge, and a new Deutschmark would likely be the favourite candidate for a safe and strong alternative to the euro. However, other new currencies would likely weaken substantially in the absence of ECB backing, reflecting much weaker country-specific fundamentals. In the transition phase towards new individual currencies, therefore, the risk premium of the euro would almost certainly spike sharply, because of both the significant uncertainties, and the direct and severe negative economic implications of the break-up itself, linked to disruptive capital flows.

Beyond the issue of risk premia, it is helpful to have some impression of currency "fair value" at the country level. The Box: *Fair value for individual euro-area currencies* presents three basic metrics for each economy. For simplicity these are expressed as fair values vis-à-vis the dollar, but the focus is on the differences between countries.

The simplest metric is based on each country's CPI (Figure 5). This puts fair value for Greece, at one end of the spectrum, at around 1.05, and at the other end fair value for Finland at around 1.35, and Germany at around 1.25.

Fair value for the periphery would be lower than for core

These estimates do not take cyclical considerations into account. In a world where the current euro-area countries had their own free-floating currencies and independent monetary policies, there would be an additional gap in currency values because of different interest rates and risk premia. Because growth in countries such as Greece stands to be secularly weak, a cyclically-adjusted measure of fair value would tend to be lower than the simple price-level-based

measure in Figure 5. A cyclical adjustment of -15%, relative to a long-term fair value estimate of around 1.05, would suggest a cyclically-adjusted fair value around 0.90.

Similarly, countries with stronger growth, such as Germany, would likely have a cyclically-adjusted fair value above the long-term fair value. Hence, a +15% cyclical adjustment relative to fair value of around 1.25 would suggest a cyclically-adjusted fair value around 1.45 (which is the level reached in late 2009 before concerns about the risk premium surfaced).

Such calculations give some sense of the extent to which new euro-area currencies might move relative to one another. But they do not take into account risk premia, which would likely be extremely volatile in a "break-up" scenario. History shows that spikes in currency risk premia can be dramatic:

The crisis in 2008 saw significant weakness (around 25%), even for European currencies with relatively robust fundamentals, such as the Swedish krona (SEK).

- During the break-up of the exchange rate mechanism (ERM), the Italian lira weakened by around 50%.

We think risk premia on some new euro-area currencies could easily exceed 50% in a "break-up" scenario: after all, a break-up of the euro area would be far more dramatic than the earlier break-up of the Exchange Rate Mechanism.

Given the costs, we see the probability of break-up below 10%

The potential economic costs associated with a break-up could be very high in terms of lost output and lost jobs. This in itself creates a strong incentive for euro-area Member States to pay a price to avoid this outcome. Mainly for this reason, we regard the probability of the break-up scenario as low – less than 10%. (Indicative investor probabilities are shown in Figure 6.)

Scenario 2: Change in composition

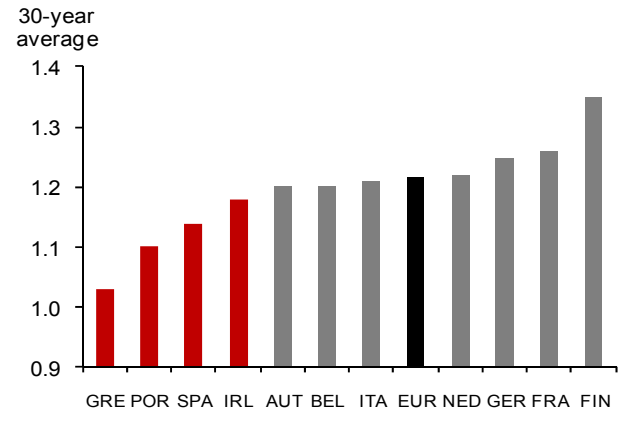
The second scenario is one in which the euro and the ECB survive, but some countries leave the euro area, most likely in an effort to generate economic stimulus through currency devaluation. A country leaving the euro area, such as Greece, would have little prospect of repaying existing euro-denominated debts (the value of the debt in domestic currency would increase). Hence, this scenario would almost certainly involve government defaults in some form. And government default and currency depreciation would likely also provoke a banking crisis.

The cost of leaving would likely outweigh benefits in periphery

Policymakers in the economies of Europe's periphery have to evaluate the costs of such an outcome against those of staying in the euro area and forcing adjustment through internal devaluation (relative deflation vis-à-vis other euro-area countries). It is not obvious that the benefits of an internationally more competitive currency would outweigh the costs that would result from severe tensions in the banking system, capital flight, and currency instability.

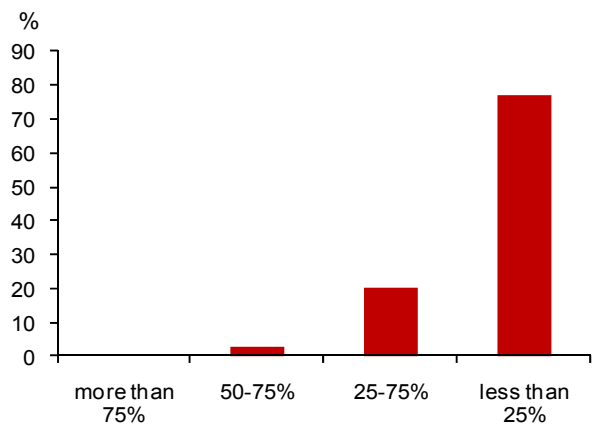
In addition, there could be further costs associated with leaving the euro area. These could include exclusion from the European Union, exclusion from free-trade arrangements, exclusion from the European political process, and the cost of losing transfers from the EU budget. One reason why none of the peripheral countries – including Ireland and Greece – appears to have

Figure 5. CPI-based fair values for euro-area countries



Source: Nomura
Note: based on a client survey conducted in January 2011.

Figure 6. Investor probabilities of euro-area break-up



Source: Nomura

seriously considered leaving the euro area is that the costs of so doing would likely outweigh the benefits of currency devaluation.

Essentially for this reason, we see the probability of peripheral countries leaving the euro area as moderate, at around 20%. But the scenario cannot be dismissed: some countries, after enduring prolonged recession as a function of fiscal austerity, could look to this option.

The impact on EUR/USD would be small long term

That said, the implication of a change in composition of the euro area on EUR/USD fair value should not be overstated. Any such change in composition would likely involve weak peripheral countries leaving the euro area (if the stronger countries were to leave, this would likely turn into a full-blown, "break-up" scenario). However, even were Greece, Portugal, Ireland and Spain all to leave, the impact on the average fair value of the euro for the remaining countries, would be relatively small, at least from a longer-term perspective (Figure 7).

Scenario 3: Remain intact

In our base case…

The third, and in our judgement by far the most likely, scenario is one in which all the current member countries remain in the euro area. If there were no fiscal tensions and systemic concerns about the banking system, this would imply that, as in earlier times, the euro could trade basically on standard fundamentals. But the risks of sovereign default and related banking sector tensions have created an additional dimension.

Individual economies which in the past have experienced banking crises have had protracted recessions, even in the absence of risk associated with a breakdown of a currency union, and with the stimulus from currency depreciation. Sweden in 1992 is a classic example.

The risk premium of the euro reflects uncertainties linked to Scenarios 1 and 2, but also uncertainties linked to debt sustainability in member countries, and the implications for growth, especially as interlinked banking exposures could imply systemic tensions in the euro area banking system overall. Consistent with this, there has recently been a clear link between easing of peripheral tension and the expectation that the ECB will be able to raise rates.

…three forces are particularly relevant

In considering the outlook for the euro over the next three to five years, three main forces are particularly relevant:

- The risk premium;
- Core fundamentals (of which relative risk-free rates is a key parameter); and
- The euro's reserve currency status.

Euro risk premium may gradually fall

We think the risk premium will gradually come down, and could be close to zero in three to four years' time.

This view is based on two principal assumptions:

i. The euro area is unlikely to break up (Scenario 1), in our view, for several reasons: the high cost of break-up; the still strong, and perhaps strengthening, political will to keep the euro area intact; and the greater resilience of key countries, especially Spain. Over time, we judge, the market is likely to reduce its implied probability of the "break-up" scenario.

ii. The fair value of the euro in Scenario 2 (changed composition of the euro area), where only the core of the euro area maintains the euro, would likely be higher than the fair value of the euro with the euro area in its current form. That said, the transitional dynamics around a changed composition could take time to play out, and could lead to temporary spikes in risk premia.

Figure 7. EUR/USD fair value under different scenarios

Fair value		EUR	EUR ex Greece	EUR ex Greece, Ireland and Portugal	EUR ex periphery* and Italy	EUR ex Germany	EUR core**
CPI-based	30-year average	1.22	1.22	1.23	1.25	1.21	1.25
	1999	1.18	1.19	1.19	1.22	1.16	1.23

Source: Nomura Research.
*Greece, Ireland, Portugal, and Spain. **Germany, Finland, the Netherlands, Austria, and France.

It has often been argued that fiscal union is the only long-term solution to the sustainability of the euro area. The basic tension in the current set-up, without a fiscal union, is that cyclical divergences cannot be addressed through monetary policy.

This leaves only so-called "internal devaluation" (a slow and painful process) as the mechanism for re-adjustment. The economic pain involved in such internal devaluations leaves the currency union vulnerable to political uncertainty and financial market instability.

At least part of the solution therefore would involve fiscal transfers from surplus countries to deficit countries. Compared with the scale of fiscal transfers in the US, the euro area has a long way to go. Figure 9 shows the biggest net receivers of transfers in the US, and the biggest net contributors, as a percentage of GDP by state. For comparison, Figure 9 also plots transfers within the EU though its Cohesion Policy Programme.

Comparing Germany with the wealthy states on the east coast of the US suggests that, for a European fiscal union to reach a US-level of integration, Germany might have to accept transfers of about 3.5% of GDP. Germany's current net EU contribution is 0.7% of GDP.

That said, one of the most successful currency unions in recent history has been the so-called CFA zone,[145] the group of African currencies linked to the French franc (and subsequently the euro). This union, created in 1945, has been held together by more moderate transfers – around 4% of the GDP of the recipient countries, and just 0.5% of French GDP. This suggests that to be effective transfers do not need to be quite as large as those in the US. However, the euro area's current members already have high debt burdens, which have increased the need for external assistance, at least for some time.

A mini-fiscal union would speed the fall in risk premium

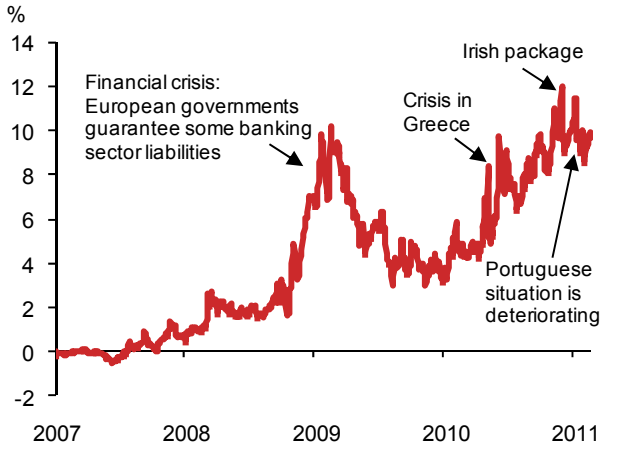
If the euro area were to move towards being at least a mini-fiscal union, risk premia could decline and financial stability be achieved more quickly. Our central case would be for moderate steps in this direction over the next two to three years, in order for a transfer mechanism to be in place once the EFSF-type backstop expires in 2013.

Even in the absence of any risk premium, core fundamentals in the euro area will be affected by fiscal consolidation, and credit growth may be depressed in problem countries. This suggests real rates should remain low in the euro area for the next three to five years, as many countries work through their overhang of excessive debt.

Euro fundamentals have changed little relative to the US

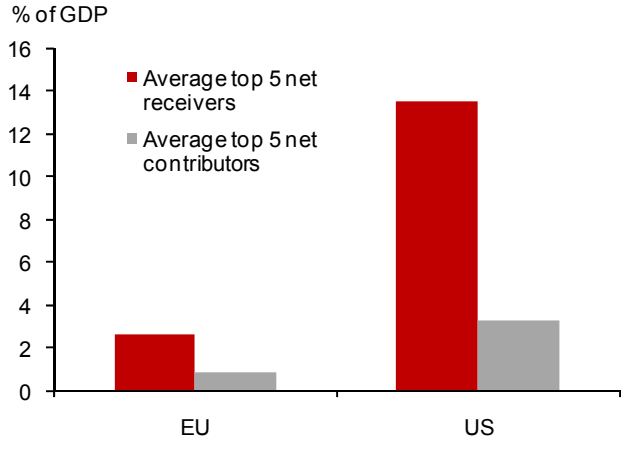
Ultimately, it is (relative) fundamentals that matter most for currencies, so it is important to compare the core fundamentals in the euro area not only with the US, but also with other major trading partners. Over the past two years the euro has declined substantially versus the Swiss franc and the Swedish krona, whereas the decline versus the dollar has been more moderate. This reflects the decline of the euro's fundamentals relative to other strong European economies, while they have remained more of less unchanged vis-à-vis the US.

Figure 8. EUR risk premium



Source: Nomura

Figure 9. Fiscal transfers in fiscal unions



Source: European Commission, Tax Foundation, Nomura

Conclusion

The various influences considered above are brought together in Figure 10, which plots the results of a simple simulation for the euro, based on the following key assumptions:

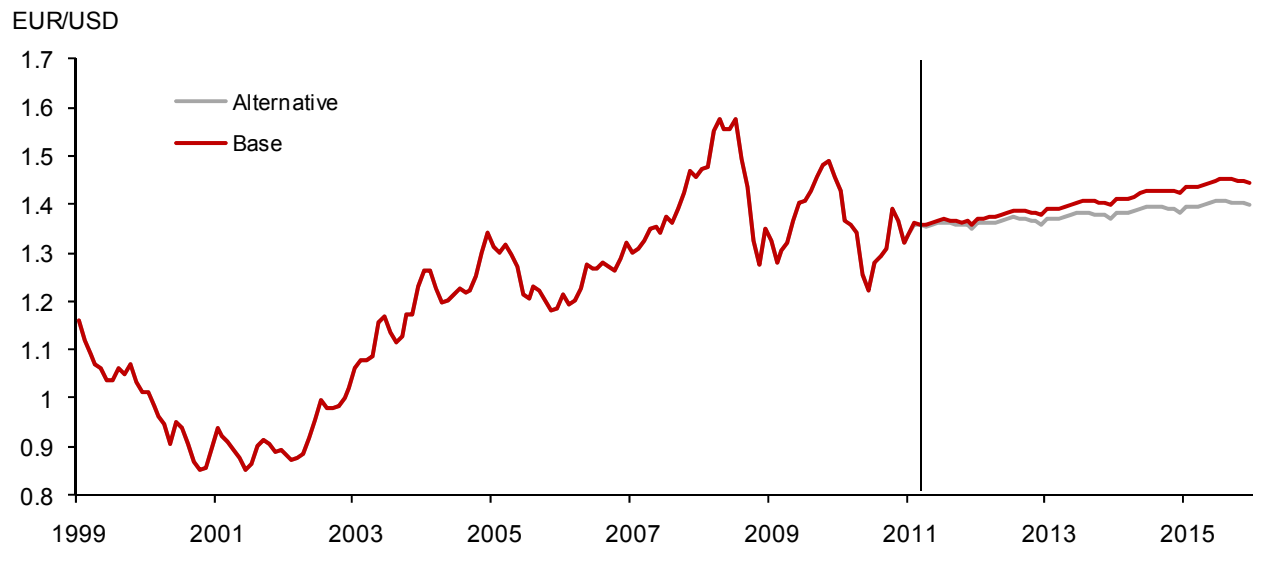
- The risk premium on the euro gradually declines from its current level of about 10% to around 3% (its level before the crisis);
- The real interest rate differential between the euro area and the US normalises towards its long-term average (a 20bp differential in favour of the US, on the expected 10-year real rate); and
- US inflation remains slightly below 2%, and euro-area inflation remains close to the ECB target.

The projection works off the current starting point for EUR/USD, around 1.35. One caveat is that price-based measures suggest that fair value for EUR/USD is about 1.25. This means that a starting point of 1.35 may be moderately over-valued. On the other hand, external-balance-based measures typically put fair value higher, closer to 1.35, largely on account of the higher external deficit of the US.

The simulation also assumes no major impact from a shift in reserve currency status, and no impact from a shift in valuation. Under this simulation, the euro would trade at around 1.45 by about 2015.

Such projections are subject to considerable uncertainties. In practice, the trajectory is almost certain not to be linear: there is bound to be substantial volatility on the way to a new equilibrium.

Figure 10. EUR/USD projection on the "no break-up" scenario



Source: Nomura

The euro's reserve currency status

Potential for further secular gains relative to the dollar, if financial stability in the euro area returns.

The euro may be gaining **reserve currency status**. Over the past decade, the euro has increasingly become an alternative to the US dollar for global reserve holders. It is always difficult to separate valuation effects (because of the rising value of the euro) from active portfolio decisions, but Figure A below shows a secular increase in euro-denominated central bank reserves. Since the euro was introduced in 1999, the euro's share of global foreign exchange reserves has increased from 18.2% to 26.9%, based on IMF data. The flip-side of this has been the declining share of USD reserves.

Over the past year especially, China's authorities have been vocal in their concern about macro policies in the US. This was especially clear when the Fed announced additional quantitative easing (3 November 2010). In addition, it is noteworthy that global central banks continued to accumulate euros at a fast pace throughout 2010, including in Q2 2010, when questions about the sustainability of the euro area were most pressing.

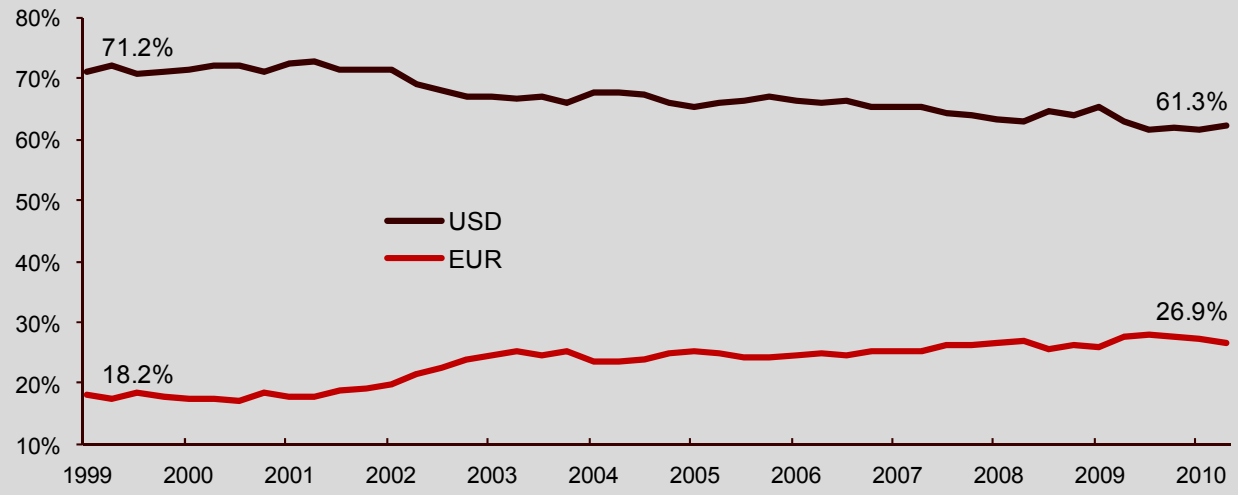
One element in the euro's perceived credibility has been the stance of the ECB. While its policies in relation to cyclical management and handling of banking sector tensions have been controversial, there has never been much questioning of its willingness to tackle potential inflation problems. This has been playing into central banks' continued willingness to accumulate euros.

In any case, the secular increase in appetite for euros in central bank reserves may continue, especially if financial stability appears to be returning, and especially if the euro area moves towards a fiscal union, perhaps also with a more uniform bond market. The issuance of paper by the European Financial Stability Facility (EFSF) is already a step in that direction, and positive responses from China and Japan, the world's two biggest reserve holders, in relation to initial issuance, support this. All this could be structurally positive for the euro over a three- to five-year horizon, at which point the euro share of reserves may have increased to a level where a further increase is less desirable. At that point, the US may also have improved its own structural fundamentals, including long-term fiscal consolidation.

In this scenario, it is even conceivable that the risk premium could turn negative. This could be the case if the fiscal union in the euro area assures the sustainability of Member States' debt while the fiscal situation in the US continues to deteriorate. This has happened in the past, and helps to explain part of the substantial appreciation of the Deutschemark, from 3.68 DM per USD in 1970 to 1.73 in 1979 – an appreciation of more than 50%.

If fiscal concerns in the euro area diminish, as a function of fiscal consolidation and improved regional institutions, and concerns about the macro outlook in the US and expansive Fed policies remain. The euro's reserve currency status could improve considerably further: and we could see the risk premium on the euro turning negative as a result.■

Figure A. Shares of official FX reserves



Source: IMF Cofer

Fair value for individual euro-area currencies

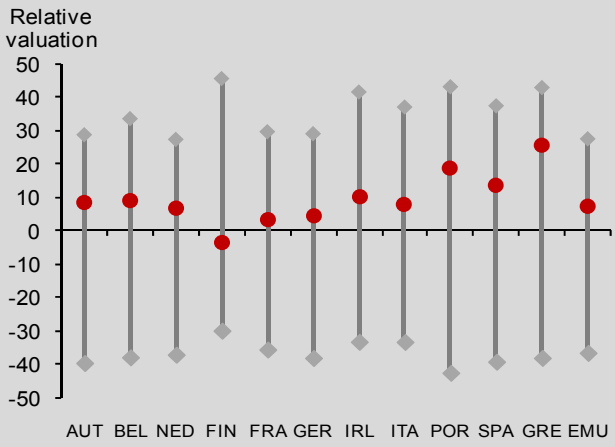
Fair value for the euro based on fundamentals in Greece and Portugal is substantially below the current level.

There is no one agreed-upon metric for currency fair value. But a few relatively simple metrics of currency fair value and misalignment can provide a rough guide to the adjustments warranted for individual euro area countries. In a scenario where the euro area remains intact, adjustments would need to happen through inflation differentials. In a scenario where the euro area breaks up, adjustments would happen (and much faster) though nominal exchange rate moves.

Using a simple real exchange rate measure, and benchmarking relative to the average exchange rate over the past 30 years, suggests that the highest estimated fair values are 1.35 for Finland and 1.25 for Germany. At the other end of the spectrum, fair value for Greece and Portugal is estimated at 1.03 and 1.10 respectively.

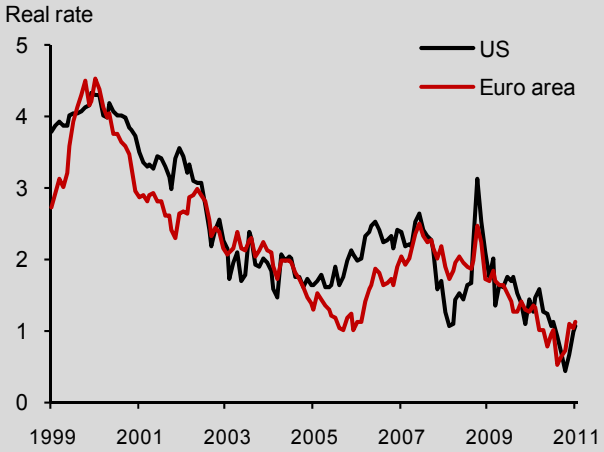
Benchmarking to the level of real exchange rates in 1999 produces similar results.

Figure A. High-low valuations based on CPI averages



Source: Haver, Nomura.
Note: Red dots are current valuation vis-à-vis 30-year avg.; grey lines represent 20yr range in valuation.

Figure B. Real 10-year interest rates – US vs. euro area



Source: Bloomberg, Nomura.

An alternative measure of fair value for country-specific exchange rates can be derived using the cross-sectional relationship between GDP per capita and gaps between actual exchange rates from PPP rates. The deviations from the cross-sectional relationships can then be used to estimate fair values.

This method suggests that the highest fair values are for Germany and the Netherlands, at 1.37 and 1.35 respectively. At the other end of the spectrum, Finland (as a result of a historically very high price level), France, and Greece have lower estimates of fair value, in a range of 1.20-1.24.■

Figure C. Individual fair values

		AT	BE	FI	FR	DE	GR	IE	IT	NL	PT	ES	EUR
CPI-based	30y average	1.20	1.20	1.35	1.26	1.25	1.03	1.18	1.21	1.22	1.10	1.14	1.22
	1999	1.19	1.16	1.22	1.23	1.24	1.07	1.09	1.15	1.18	1.12	1.07	1.18
PPP gap		1.33	1.27	1.20	1.23	1.35	1.24	1.31	1.27	1.37	1.28	1.32	1.30

Source: Nomura

Vasant Naik | Jeremy Rosten | Mukundan Devarajan

New realities for bond managers

The debt crisis has changed the dynamics of euro sovereign bond markets with important consequences for portfolio managers.

- Risk estimates of this asset class have increased by more than 30% since September 2008, with spread risk now accounting for over 35% of overall risk.
- With the rise in spread volatility and credit risk, credit-investing techniques and considerations have become a must for investors in this asset class.
- Taking our base-case assumptions of default probabilities, optimal allocations overweight Portugal and Ireland, at the expense of a short position in Italy.
- Under more conservative assumptions, optimisations shy away from Irish debt, allocating overweights mainly across Belgium, Italy, and Spain.
- In both cases Greece adds value as an out-of-index allocation.

While this is far from the last word on the subject, what is clear is that a major structural change has occurred, and this is already changing the face of sovereign investing.

Introduction

The debt crisis has radically changed the nature of risk and return in euro sovereign bond markets. New highs have been reached in the spreads of peripheries over core yields, accompanied by an increase in volatilities and tail-risks of excess returns of peripherals over core benchmarks.

Asset allocation is complicated by the rise of spread risk

As an aid to asset allocation decisions in the new sovereign risk paradigm, we present a simple framework of peripheral excess returns that allows for spread volatility, transitions in credit quality and potential deterioration to 'distress'. We apply this framework under two contrasting assumptions of downgrade risk to determine an optimal allocation to core/peripheral bonds at the current time.

The first issue to consider is the evidence for the new credit-like behaviour of peripheral spreads. This is followed by the application of a risk-model analysis to a euro sovereign benchmark, to demonstrate the rise of spread risk as a major factor in the euro sovereign asset class. A framework is then presented for modelling peripheral spreads and excess returns by means of an approach that allows for spread volatility, transitions in credit quality, and potential default.

Characterising the changes in sovereign spread dynamics

Peripheral sovereign spread levels and volatility have risen...

The increase in spread levels[146] and volatility of euro peripheral sovereign-debt markets over the last three years occurred at a pace, and to an extent not previously seen. This increase makes them more akin to corporate credit than they were in the pre-crisis era. As the properties of spread behaviour in corporate credit markets have been well documented, we use them as a point of reference with which to compare and understand the dynamics of peripheral spreads.

We begin by comparing the history of spread and volatility levels in the euro peripheral sovereign and corporate credit indices since 1999.

...far more than euro corporates...

Figure 1 shows that in comparison with the pre-2008 sample, average sovereign spreads widened sixfold in the 2008-10 period, while volatility estimates increased twentyfold. In contrast, both corporate credit spreads and volatility increased approximately threefold.

...and with different dynamics

Corporate credit markets saw a widening of spreads in 2008-09, followed by a sharp tightening in 2010, whereas sovereign markets continued to widen in 2010. A similar pattern was apparent in volatility levels. Furthermore, we note that these spread and volatility increases have been observed across all peripheral countries, and have not been driven by the odd outlier (Figures 2a and 2b).

Figure 1. Average spread levels and volatilities (bp, p.a.)[147]

Time period	Spread levels		Spread change volatility	
	Euro peripheral sovereigns	Euro corporates	Euro peripheral sovereigns	Euro corporates
1999-2007	15	65	5	18
2008-2010	98	232	104	57
2008	38	232	28	45
2009	66	293	52	65
2010	190	173	180	37

Source: Nomura Research, Bloomberg

Understanding the increase in sovereign spread volatility

Increases in volatility can be attributed to rising spread levels...

Increases in volatility can be partly attributed to a rise in spread levels, in line with the well-known empirical observation that spread changes tend to be *log-normally* distributed. In other words, the dynamics of spread volatility are driven by those of spread levels and of the underlying volatility of proportional spread changes. Figure 2 presents the estimates of this underlying volatility (also known as the *log-normal spread volatility)* in the euro peripheral sovereign and corporate credit markets.

...and increasing log-normal volatility

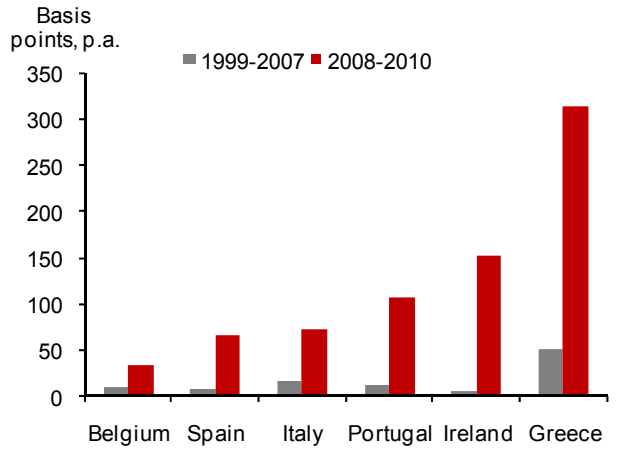
Log-normal volatility levels have increased markedly in the last three years in the case of peripheral sovereigns. This contrasts with the observation that, in the corporate credit markets, estimates have remained relatively stable. This suggests that, unlike in the case of corporate credit, the increase in spread volatility of peripheral sovereigns in Figure 1 is not purely explained by a rise in spread levels.

Figure 2. Log-normal spread volatility[148] **(%, per week)**

Time period	Euro peripheral sovereigns	Euro corporates
1999-2007	7.2	3.7
2008	10.3	2.9
2009	10.0	2.6
2010	12.0	3.0

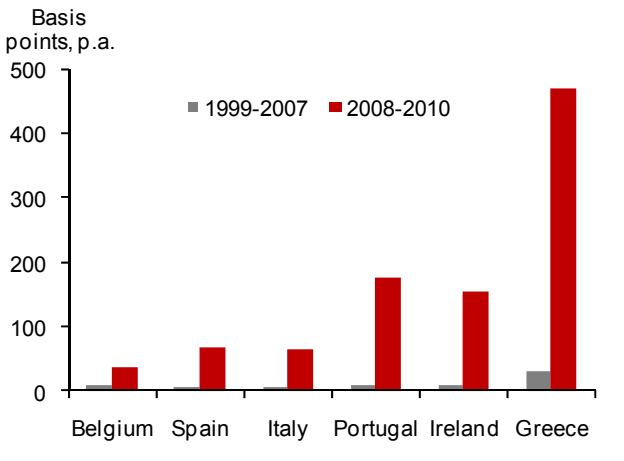
Source: Nomura Research, Bloomberg

Figure 2a. Spread levels



Source: Nomura Research

Figure 2b. Spread change volatility



Source: Nomura Research

Dynamics of correlations in the euro bond market

Correlation between spreads has also risen

The degree of co-variation across peripheral sovereigns and that between peripheral and corporate spreads, is another key component of the assessment of risks inherent in the peripheral sovereign debt market.

Figure 3a presents the average pair-wise correlations (estimated across a rolling 52-week window) between peripheral sovereign spread changes. It shows that while these correlations tend to be high on average (approximately 47%), they have risen significantly in the past three years, reaching historical highs in 2010 (approximately 80%).

As Figure 3b shows, the correlation between sovereign and corporate spread changes has also risen in the past 12 months. Interestingly, however, these correlations, while higher than before the outbreak of the euro area sovereign debt crisis, are not at historical highs.

The above examination of spread, volatility and correlation levels in the peripheral sovereign market points to significant changes in the scale and distribution of the risk of euro government bond portfolios. Below, we document these changes by analysing the risk characteristics of a euro sovereign bond index.

The changing risk profile of the euro sovereign bond index

The sharp rise in spread levels documented above has led to substantial increases in risk exposures. Figure 3 displays this increased exposure in terms of returns under a spread-widening scenario of 10% of current spread levels.

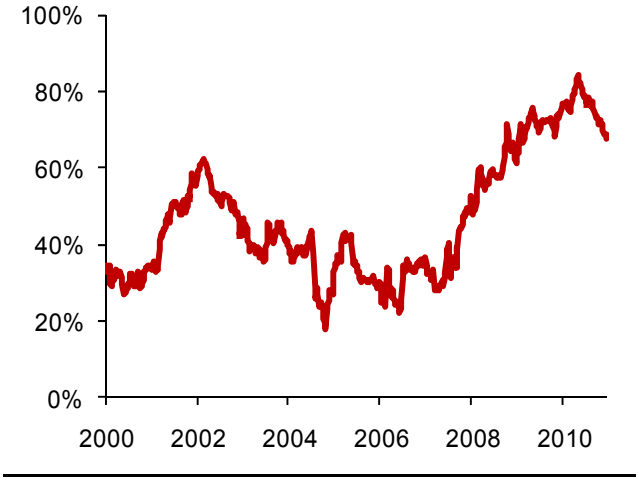
Figure 3. Exposure to proportional spread-widening scenario (10%)

Country	Returns (bp)	
	Pre-crisis	End-2010
Belgium	11	59
Ireland	14	373
Italy	27	119
Portugal	14	197
Spain	14	145

Source: Nomura Research

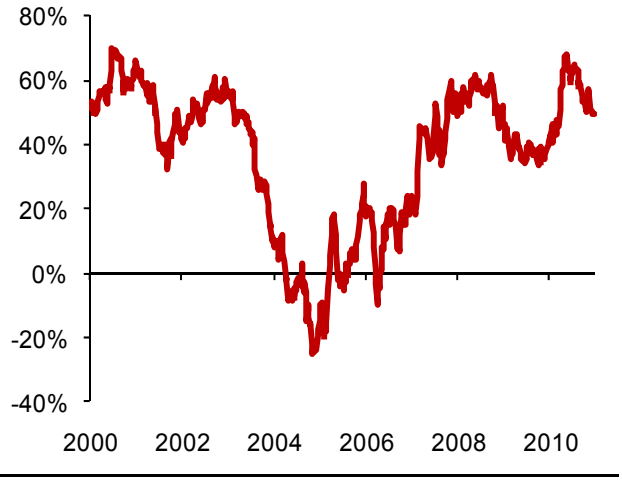
This means, for example, that spread-risk estimates of Spanish debt have increased over this period from 14bp to 145bp for a 10% spread-widening – a 9.4-fold increase. In contrast, in duration contribution terms, Spanish exposure rose by only 18% (from 0.48yrs to 0.56yrs).

Figure 3a. Average pair-wise correlations[149]



Source: Nomura Research, Bloomberg

Figure 3b. Peripheral vs. corporate correlation[150]



Source: Nomura Research, Bloomberg

A simplified set-up for risk attribution

We present a model for risk attribution

To assess the total risk of the benchmark in the new environment, we construct a simplified risk model for euro government debt and present the resulting risk reports for before the 2008 crisis and as of December 2010. The model consists of a set of risk factors with estimates of factor volatilities and correlations as of the chosen date of analysis.

Each country in the index has a designated spread factor and an exposure to yield curve risk. For core issuers, spread is modelled using basis point changes, whereas for peripherals proportional changes in spreads are used. Risk statistics are calculated at three levels.

1. **The overall risk** of the index: using the estimated volatility of total returns;
2. **Yield Curve and Spread risk** at the factor grouping level**;** and
3. **Core vs. Periphery** attribution of spread risk – decomposed at country level.

The resulting risk reports are summarised in Figures 4 and 5. Figure 4 shows the risk profile of the index before the onset of the crisis (mid-September 2008) and at the end of 2010.

Figure 4. Risk report for euro sovereign index: pre crisis vs. end of 2010

	Pre Crisis			End of 2010		
	Isolated return vol (% p.a.)	Contribution to vol (% p.a.)	Share of risk (%)	Isolated return vol (% p.a.)	Contribution to vol (% p.a.)	Share of risk (%)
TOTAL	**4.25**	**4.25**	**100.0**	**5.57**	**5.57**	**100.0**
Yield curve	**4.38**	**4.32**	**101.6**	**5.77**	**3.58**	**64.3**
Spread	**0.71**	**-0.07**	**-1.6**	**4.94**	**1.99**	**35.7**
Core	0.12	0.04	1.0	0.12	0.03	0.6
Periphery	0.66	-0.11	-2.6	4.88	1.96	35.1

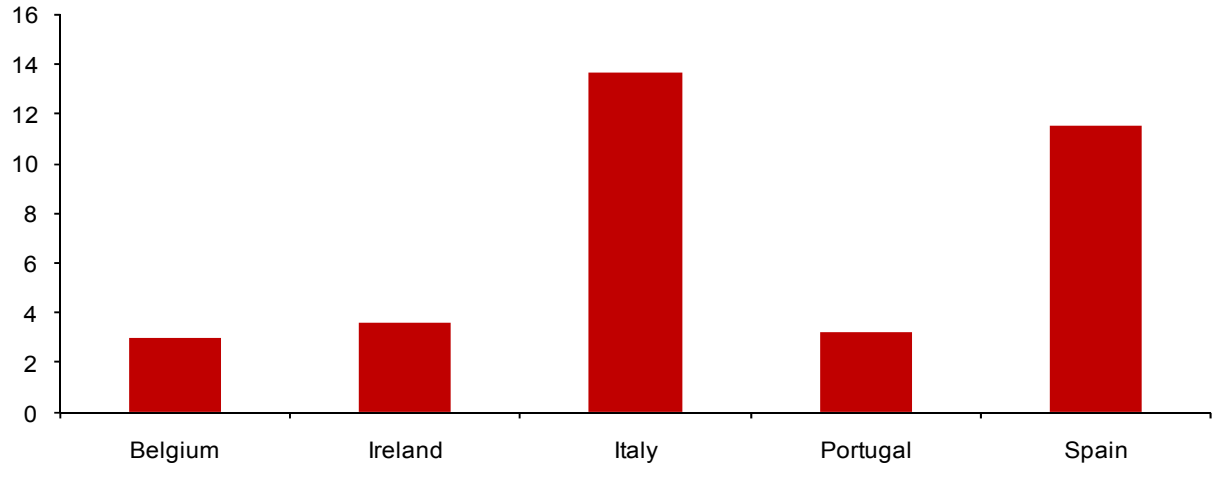
Source: Nomura Research

The first column shows the risk due to exposure to a risk factor, or set of risk factors, assuming that no other exposures exist, as of September 2008. For example, if all spread volatilities were set to zero, the exposure of the index to yield curve risk would imply a total return volatility of 4.38% per year.

The second column includes cross-effects between risk factors, namely those of correlation, and attributes the total risk in an order-independent manner. This reduces the risk contribution of yield curve factors to 4.32% from 4.38%.

The third column simply converts the second into a percentage-of-risk-contribution. The column structure is repeated in columns 4-6 for the end-December 2010 analysis.

Figure 5. Risk contribution across peripherals



Source: Nomura Research

The risk picture of the index at the end of 2010 was markedly different from that before the crisis (Figure 4).

Overall risk is up by 30% and spread risk rears its head

Overall, risk rose by approximately 30% over that period, driven by a similar increase in yield curve volatility. Before the onset of the crisis, the risk of the index was almost entirely attributable to yield curve risk. However, as of the end of 2010, the risk-profile was quite similar to that of a corporate index, with spread risk having almost the same isolated volatility (4.94% p.a.) as yield curve risk (5.77% p.a.), and contributing some 35.7% of the total index risk.[151]

Ireland and Portugal punch above their (duration) weight

Figure 5 shows the proportions of total risk arising across the peripheral spread exposures, and sums to the 35.1% number in the final column of Figure 4. Risk contributions are driven by issuance, average duration of issuance and spread volatility. It is therefore not surprising to see Spain and Italy as the major contributors. However, the risk contribution of Ireland and Portugal (approximately 3.6% and 3.2 % respectively out of 35.1%) is far in excess of their share of duration contribution from peripherals (0.11 and 0.12 yrs out of 2.79yrs). This is due to their much higher spread volatilities.

This analysis indicates that yield curve risk has risen significantly, and that spread risk has emerged as a major source of volatility in euro Sovereign portfolios, making peripheral government debt comparable in this sense with corporate credit. Techniques already well-established in the world of corporate debt investing have become highly pertinent in this asset class.

An asset allocation model for the new sovereign risk paradigm

Asset allocation can no longer be about carry alone

Asset allocation decisions in the euro government bond market have traditionally been approached from the simplistic standpoint of maximising 'carry'. This was warranted when spread volatility was minimal, and all sovereign exposures could be viewed as default-free.

Given the recent increases in spread levels and volatility, however, together with heightened probabilities of default, a more sophisticated approach is necessary to model sovereign risk exposures. To this end, we propose a simple framework to account for the new paradigm of risk and return in the euro government bond market. The salient aspects of the framework are:

- **Exposures to peripheral euro area sovereign spread risk**. Exposure of the portfolio to peripheral sovereign bonds can be viewed as spread trades overlaid on a broad benchmark of government bonds. This makes it possible to model purely the dynamics of spreads and credit quality in order to arrive at an overall asset allocation.
- **Dynamics of credit quality**. With the emergence of credit risk in euro sovereigns, an asset allocation model needs to take account of differing credit quality among issuers, and the possibility of migration from one quality sector to another, including the possibility of entering a state of distress.

  This behaviour is modelled by means of a transition matrix for various possible credit states. We allow a transition into an absorbing state of distress, which includes the state of formal default or restructuring.
- **Dynamics of spreads**. Changes in sovereign spreads, beyond those due to deteriorations in credit quality, are assumed to be driven by a log-normal diffusion process.
- **Correlation**. All spread and credit quality processes are simulated in a correlated multivariate fashion. This allows for the incorporation of intuitive correlations between jumps in spreads associated with changes in credit quality and changes in spreads from the log-normal processes.

Transition probabilities are the key input to the asset allocation

The above assumptions make it possible to describe the dynamics of spreads, and hence of excess returns of peripheral sovereign bonds, over a duration-matched portfolio of core euro area sovereign bonds at any horizon. A risk-return optimisation is then applied to construct a maximally efficient set of overlays.

The principal parameters that drive distributions and resultant allocations are:

- **A transition probability matrix** for credit quality states, together with an assignment of each country to an initial credit quality state;
- **The log-normal volatility** of the spread diffusion process; and
- **A correlation matrix** for spread and transition processes.

The above framework was used to generate 10,000 simulations of 6-month spread changes and the associated excess returns for each peripheral country.[152] We classify countries into different credit quality states based on their current ratings by the major agencies.

Two sets of assumptions of probabilities of downgrade to distressed status are applied to these credit quality states. In the base case, these probabilities are chosen to be in line with experience in the corporate debt market.[153] In the stressed case, we have used significantly higher values. The resultant assumptions are shown in Figure 6.

Figure 6. Credit Quality Categorisation and Migration Assumptions

Countries	Credit quality	Annual probability of downgrade to distressed status	
		Base Case	Stressed Case
Austria, Finland, France, Germany, Netherlands	AAA	0%	0%
Belgium, Italy, Spain	AA	0%	0.16%
Portugal	A	0.02%	2.07%
Ireland	BBB	0.65%	9.79%
Greece	BB	8.18%	20.04%

Source: Nomura Research

Excess return characteristics in the base case

Summary statistics for the marginal distributions of each country's excess returns in the base case are shown in Figure 7. These should be interpreted as excess return characteristics of country sub-indices of the wider benchmark.

Figure 7. Peripheral excess return simulations: base case

	Belgium	Ireland	Italy	Portugal	Spain	Greece
Initial spread level (bp, p.a.)	81	553	128	391	176	986
Average excess return (bp, p.a.)	69	672	113	409	163	1,094
Volatility (bp, p.a.)	265	1,373	465	1,056	602	2,519
Information ratio	0.26	0.49	0.24	0.39	0.27	0.43
95% value at risk (bp, p.a.)	439	1,974	773	1,631	999	4,928

Source: Nomura Research
Note: Initial spread levels are as of 18 February 2011

Two factors in particular are evident from the statistics above:

i. Excess returns are broadly in line with the carry arising from the initial spread levels, mainly because probabilities of transitions in credit quality are low.[154]

ii. Greece, Ireland and Portugal, notwithstanding their relatively high absolute probabilities of downgrade, earn more than their initial spread carry.

Figure 8. Peripheral excess return simulations: stressed case

	Belgium	Ireland	Italy	Portugal	Spain	Greece
Initial spread level (bp, p.a.)	81	553	128	391	176	986
Average Excess Return (bp, p.a.)	58	127	134	223	140	584
Volatility (bp, p.a.)	311	1,909	496	1,212	630	2,802
Information ratio	0.19	0.07	0.21	0.18	0.22	0.21
95% value at risk (bp, p.a.)	446	4,208	811	2,008	1,023	4,928

Source: Nomura Research
Note: Initial spread levels are as of 18 February 2011

Excess return characteristics: stressed case

In the stressed case, default risk affects lower-rated sovereign debt excess returns:

- When probabilities of distressed states are increased, the attractiveness of Ireland. Greece, and Portugal is much reduced, with excess returns and Information ratios falling significantly (Figure 8).
- Risk measures for all countries increase, with AA rated bonds being affected by contingent behaviour in lower rating categories should they experience downgrade.
- Information ratios in general fall and equalise with the exception of Ireland, suggesting a likely avoidance of Irish debt in any asset allocation.

Asset allocation implications

The above excess return distributions in a risk-return optimisation process can in turn be used to derive a set of optimal overlay allocations relative to our euro government bond benchmark.

In so doing, the following assumptions are made, as representations of realistic investment constraints for this asset class:

- A maximum total overweight to peripheral countries of 25% is imposed, together with maximum issuer overweights by rating category;[155] and
- Maximum allocations to Greece of 0% or 2% are imposed as an out-of-benchmark view.

Main features of the results are presented below.

Base case

The base-case allocation of a mean-variance optimal portfolio with the above assumptions and a target excess return of 30bp is shown in Figure 9.

Figure 9. Base case allocation to peripheral sovereigns (Target Return: 30bp)

	Max. allocation to Greece	Belgium	Ireland	Italy	Portugal	Spain	Greece	Tracking error volatility (bp p.a.)
Benchmark allocation		6.3%	1.8%	24.8%	2.2%	9.8%	0.0%	
Active overlay	**0%**	-0.6%	3.2%	-3.6%	3.0%	0.6%	0.0%	55.6
	2%	-1.6%	2.3%	-5.7%	2.1%	0.3%	1.2%	50.1
Portfolio overall allocation	**0%**	5.7%	5.0%	21.2%	5.2%	10.4%	0.0%	
	2%	4.8%	4.1%	19.1%	4.4%	10.1%	1.2%	

Source: Nomura Research

Base case: overweight Ireland and Portugal; underweight Belgium and Italy; Greece adds value out-of-index

The base-case allocation (excluding Greece) in Figure 9 is in line with the Information ratios in Figure 7 and favours Ireland and Portugal relative to Belgium and Italy. The inclusion of Greece improves the Information ratio of the overlay from 0.54 to 0.60. An additional risk of 0.5% per annum of (excess) return volatility would be associated with an expectation of approximately 27bp per annum of excess return.[156]

Stressed case

The optimisation was then repeated incorporating the same constraints, but using the stressed rating transition matrix. The allocations to the country sub-indices for a target return of 30bp are presented in Figure 10.

Figure 10. Stressed case allocation to peripheral sovereigns – target return: 30bp

	Max. allocation to Greece	Belgium	Ireland	Italy	Portugal	Spain	Greece	Tracking error volatility (bp p.a.)
Benchmark allocation		6.3%	1.8%	24.8%	2.2%	9.8%	0.0%	
Active overlay	**0%**	5.3%	-0.6%	7.8%	2.5%	10.0%	0.0%	119.7
	2%	9.4%	-1.1%	4.0%	0.6%	7.0%	1.8%	109.0
Portfolio overall allocation	**0%**	11.6%	1.2%	32.6%	4.7%	19.8%	0.0%	
	2%	15.7%	0.8%	28.7%	2.8%	16.8%	1.8%	

Source: Nomura Research

Stressed case: overweight Belgium, Italy, and Spain; underweight Ireland; Greece still worth inclusion

As is to be expected, given the higher downgrade probabilities and consequent universally lower expected excess returns, the potential upside in such a scenario is significantly lower. As shown in Figure 7 above, Information ratios of Ireland and Portugal are lower than those of their higher-rated counterparts, and, the optimiser correspondingly takes advantage of the possibility of underweighting Ireland afforded by its presence in the benchmark.

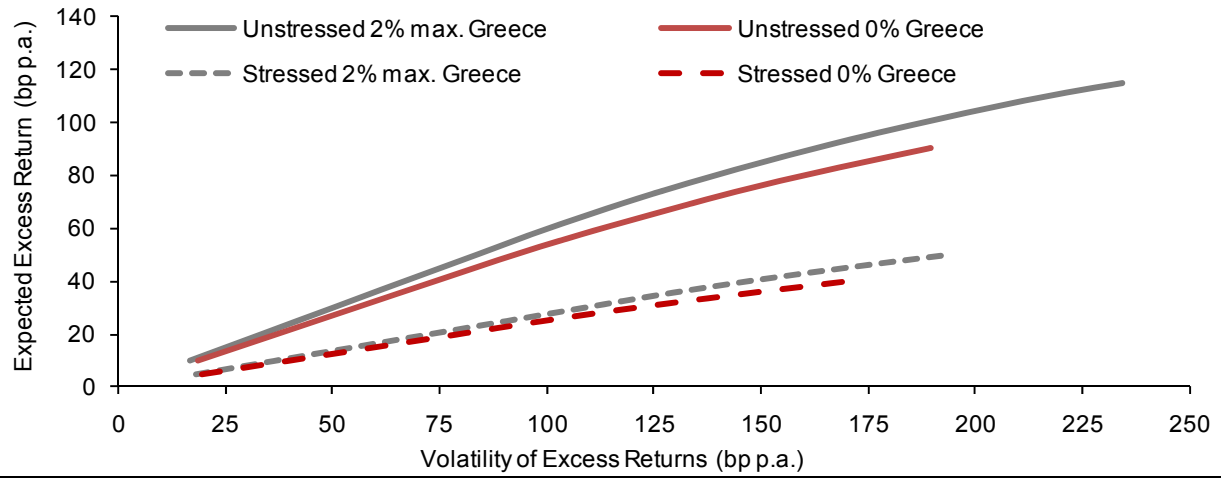
Spain, having the highest Information ratio (0.22) of all the countries, receives the highest allocation, with Belgium and Italy sharing the bulk of the remaining allocation.

The larger downside risk results in a far less efficient portfolio to achieve the 30bp return target. Volatility of excess returns over the benchmark rises from 55.6bp per annum to 119.7bp, and provides an overall Information ratio for the portfolio relative to the benchmark of 0.25.

With a risk budget for excess return volatility of 0.5% per annum, excess returns above the benchmark have an expectation of approximately 14bp per annum. Out-of-index positions in Greece somewhat improve efficiency of the overlay and allows an expected excess return of 30bp for a reduced volatility of 109.0bp per annum.

The full efficient frontiers are shown in Figure 11. ■

Figure 11. Efficient Frontier for the different cases



Source: Nomura Research

Chapter VII Ian Scott

The outlook for European equities

We are optimistic regarding the outlook for European equities: aggregate valuations are low, earnings growth is healthy, while sovereign debt concerns are a dominant influence on cross country and cross sector valuations, suggesting these concerns are already fully reflected in prices.

- Over the past decade, European companies significantly improved margins and profitability, but this was not reflected in the performance of equities.
- Europe's sovereign debt crisis hit equities hard – visible not only in the performance and valuation of financials, but also at the broader market level.
- We think this implied "cost" is too high, and that the market is taking an unduly negative view, particularly given the continuing recovery in earnings and, importantly, revenues.
- Weak stock market performance has led to some appealing valuations, relative not just to history but also to fundamentals, and other assets.
- Bank earnings of more leveraged economies will likely continue to underperform. At some stage, this may be more adequately reflected in bank valuations.

We expect a 17% return from European equities in 2011, and recommend overweighting financials and peripheral stock markets.

Past performance and current valuation

Equities performed poorly despite improved profitability

The lacklustre performance of European equities over the past decade disguises a substantial improvement in both operating performance and returns. Since 2000 – a period in which European stocks generated a paltry 1% annual return – earnings before interest, taxes, depreciation and amortisation (EBITDA) margins in the non-financial sector averaged 18%, well above the 15% achieved during the prior decade (Figure 1).

Meanwhile, the return on equity improved to average 15%, from 12%. Notwithstanding this increased profitability, European stocks trade on a below-average price/book multiple (Figure 2). This holds true both including and excluding financials.

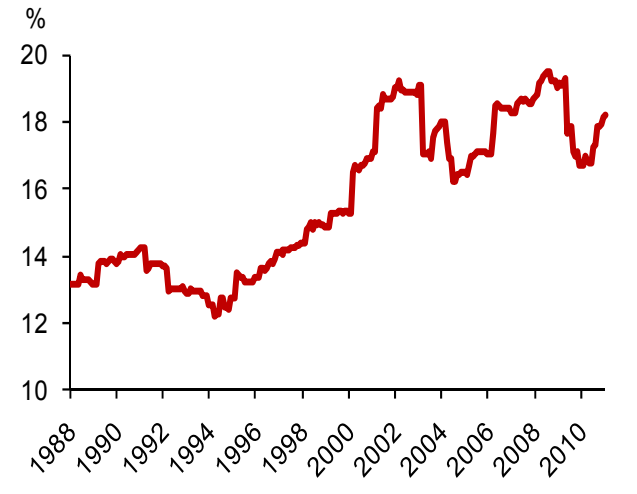
Valuations look attractive relative to historical norms…

Other measures of value also look attractive relative to historical norms. The current free cash flow yield of 6.5% compares with the average over the past 22 years of 3.7%, and the dividend yield, now 3.4%, compares with the average yield over the past 22 years of 2.8%. The healthy free cash flow to dividend cover ratio suggests that there is considerable scope for companies to raise payouts in the future.

…and relative to other asset classes

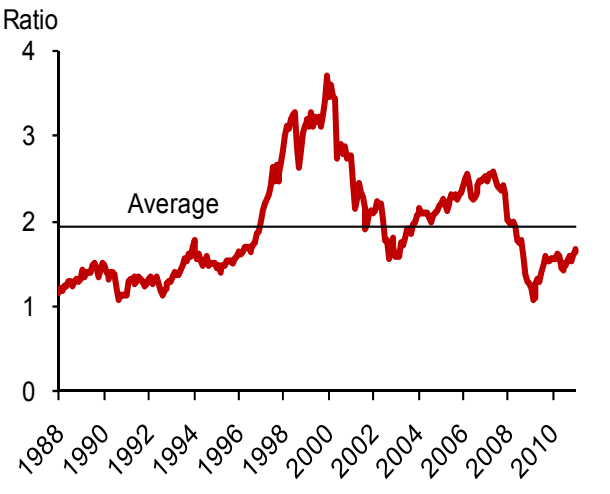
Stocks also look appealing relative to other asset classes. BAA-rated corporate bonds currently yield 4.5% in euros, 110 basis points above the dividend yield. This is a tighter spread than

Figure 1. European non-financial sector EBITDA margins



Source: Worldscope, FTSE , Nomura Strategy research

Figure 2. European price/book multiple



Source: Worldscope, FTSE , Nomura Strategy research

normal. Since the euro was launched, BAA corporate yields have averaged 200 basis points above the dividend yield while, unusually, several large European sectors – Telecom, Utilities, Energy and Media – now have dividend yields above their respective corporate bond yields. The implication is that the market is either anticipating a very low growth rate from equities, or is attaching a very high risk premium to them.

We calculate the risk premium embedded within European equity valuations at present to be 7.3%, well above the historical, 22-year average, of 4%. The high embedded risk premium is inconsistent with current implied and realised volatilities, which have returned to normal levels with the fading of the effects of the global financial crisis. Nevertheless, one issue that still weighs heavily on investor opinion towards European equities is the sovereign debt crisis.

Impact of the sovereign debt crisis

Sovereign debt concerns continue to weigh on the market...

The sovereign debt crisis has had a substantial impact on both the recent performance of and current valuations attached to European stocks. This is most readily seen by comparing the performance of financial stocks in Continental Europe with that of their UK-listed peers.

Relative performance

...visible in Continental European financials...

UK and Europe ex-UK financial stocks were highly correlated in 2009, but in 2010 they diverged substantially (Figure 3). Since the end of 2009, Continental European financials have underperformed their UK peers by 20%. Because loan growth has been accelerating in Continental Europe but remains negative in the UK, and the UK continues to face some important economic challenges of its own, it seems reasonable to attribute the bulk of the underperformance of the Continental European financials to concerns about their exposure to sovereign risk.

The shortfall in performance is equivalent to a loss of around $230bn in the market capitalisation of Europe ex-UK financials, relative to the UK sector – a huge implied “hit” in respect of sovereign default risk, especially as the UK banks and insurance companies also have exposure. We think that this implied “cost” is too high, and that the market is taking an unduly negative view in factoring in such a penalty.

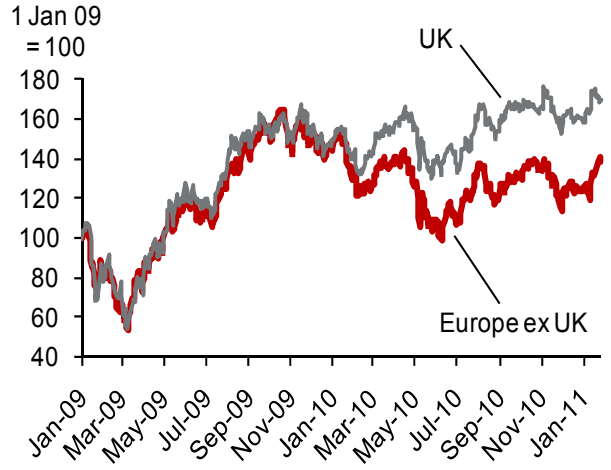
As well as this underperformance, Continental European financial stocks now also trade at a substantial discount to their peers – a 20% price/book discount, with an even larger, 40%, discount relative to the US-listed sector.

The broader market level

…and at the broader market level

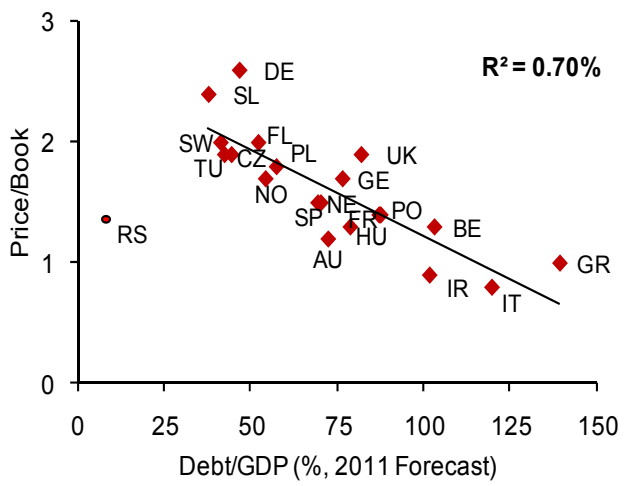
While the debt crisis has exacted a heavy price in terms of relative performance and valuation among the financials, the impact is visible at the broader market level too. As Figure 4 demonstrates, 70% of the variation in the valuations of European bourses can be accounted for, in a statistical sense, by their respective countries’ government debt/GDP ratios.

Figure 3. Performance of financials: UK and Europe ex-UK*



Source: FTSE, Nomura Strategy research.
*USD total return

Figure 4. Trade-off: public debt and price/book multiples*



Source: Worldscope, FTSE, Nomura Strategy research, Nomura Global Economics.
*Russia not included in calculations.

This is a high correlation: for most of the recent past, European stock investors effectively ignored the government debt position when valuing the region's national stock markets. Prior to 2008, government debt/GDP ratios typically explained less than 10% of the valuation differentials, obviously well below the current 70% (Figure 5).

Debt/GDP ratios seem to be the most important factor…

It is instructive to compare this currently-strong trade-off between valuation and the government debt/GDP ratio with other influences. For example, credit default swaps (CDS) for the various sovereign bonds "explain" rather less of the differences in valuation across the region's bourses – just 35% in fact (Figure 6). Stock investors thus seem focused more on sovereign debt levels in their own right, rather than on the possibility that a particular sovereign borrower might default.

This suggests that stock markets are discounting a "two tiered" or "multi-tiered" Europe – a Europe in which companies listed in countries with high government debt/GDP ratios are considered likely to have severely impaired profitability in the years ahead. Such a scenario could result from slower economic growth in those countries with high levels of government debt, or perhaps also from national policies specifically designed to raise the tax burden on large listed companies.

The scale of the valuation discount associated with being listed in a country with a high government debt/GDP ratio is large. Again referring to Figure 4, stocks listed in countries with government debt/GDP ratios of 40-50% trade at around two times book, while those with ratios at the other end of the spectrum currently trade below book. In other words, the equity of those companies in the former category is twice as valuable as the equity in the latter group.

…more so than CDSs, current profitability, and public deficits

Thus the government debt/GDP ratio apparently accounts for more of the variation in national stock market valuations than is the case when comparing sovereign CDS. Government debt levels are also currently more significant than profitability, which explains just 33% of the valuation disparity (Figure 7). Finally, and less surprisingly, government deficits have virtually no explanatory power for national stock market valuations in Europe (Figure 8).

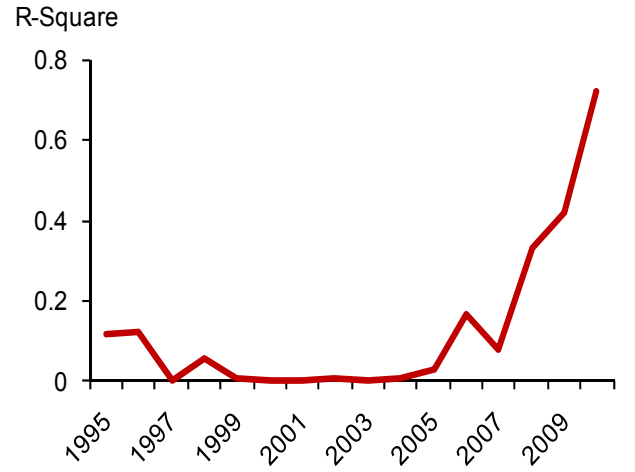
These considerations pose the following question: against the backdrop of low valuations and a substantial improvement in aggregate profitability, yet a continued depressing influence from the impact of the sovereign debt crisis on the valuations of financial stocks and individual national stock markets, what may the future hold for European equities?

The future

We are optimistic about European equities

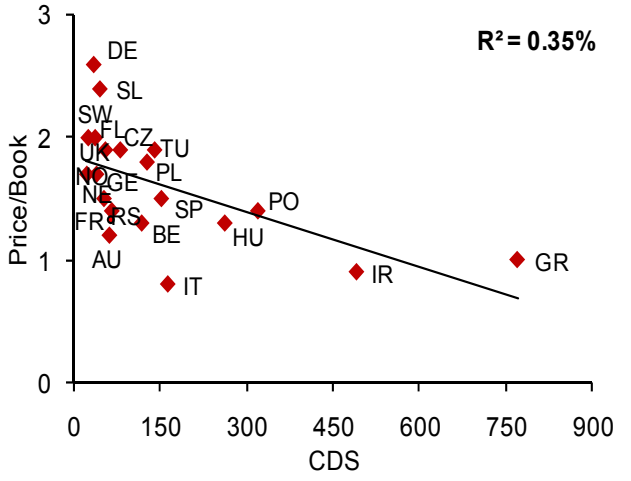
We are optimistic regarding the outlook. The current relatively low valuations attached to the market seem inconsistent with the fundamental improvements in profitability and margins over the past decade. Moreover, during the recent recovery, European companies have consistently surprised consensus estimates in terms of their ability to grow both earnings and, more recently, revenues.

Figure 5. Correlation: public debt and price/book ratio*



Source: FTSE, Nomura Strategy research.
*R^2 of annual regression of cross-country price/book multiples and government debt/GDP ratios.

Figure 6. Trade off: price/book multiple and Sovereign CDS*



Source: Bloomberg, Worldscope, FTSE, Nomura Strategy research.
*Russia not included in calculations.

Indeed, among the reports for Q4 2010, European listed company revenues have grown by 15.3% (year-on-year), up from the 13.3% growth rate seen in Q3. While the ratio of positive to negative surprises for earnings per share (EPS) dropped a little in Q4 from Q3, revenue surprises have quickened, with investors rewarding revenue surprises more generously than surprises in EPS.

Earnings and revenues are improving

This upward trend in earnings and, especially, revenues, alongside improvements in both business and consumer confidence, suggest that the sovereign debt crisis has not passed through to the wider European economy, or, by extension, hurt the fortunes of the great majority of European companies. Indeed, even for the financial sector, there are encouraging signs that the funding difficulties faced by companies listed in stock markets of the peripheral economies have not fed through to the sector as a whole.

Bank lending in the euro area is perhaps the best indication of this. Mortgage lending expanded by 4.4% in December compared with the same period a year ago, while in the UK loans fell. French and Italian banks have been leading the way by growing their loan books by 6% and 8% respectively.

Growth is filtering through to firms in peripheral Europe

In addition to the economic and earnings trends apparent across the Europe ex-UK region as a whole – with the improvements in the larger economies outweighing any deteriorations elsewhere – there are also signs that the strengthening growth in the "core" economies, and in Germany in particular, is beginning to filter through to firms in peripheral Europe.

While domestic demand in Greece, Ireland, Portugal, and Spain has suffered as a result of the crisis, there are signs that export growth is accelerating, offsetting part of the weakness. In the November trade data, Greek exports grew by 38%, compared with a year ago, Spain by 25%, Portugal by 25%,[157] and Ireland by 16%.

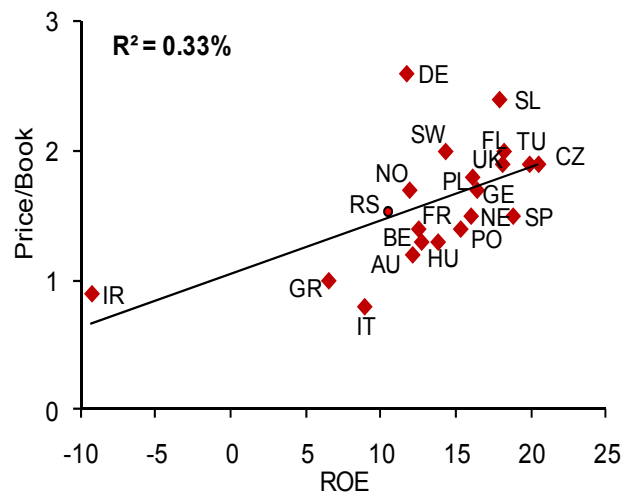
A counterpart is that the imports of Germany rose by 33%. The responsiveness of trade flows is vital – the more integrated the euro-area economy, the less appropriate it is to apply such large discounts to companies listed in peripheral or highly-indebted economies.

Summary

In summary, European companies have improved their underlying (through-cycle) margins and profitability over the past decade, while the valuations currently being attached to the asset class appear low – not only relative to historical norms, but also to current observable measures of risk such as implied and realised volatility, or credit spreads. The ongoing recovery in EPS and revenues continues to outpace expectations.

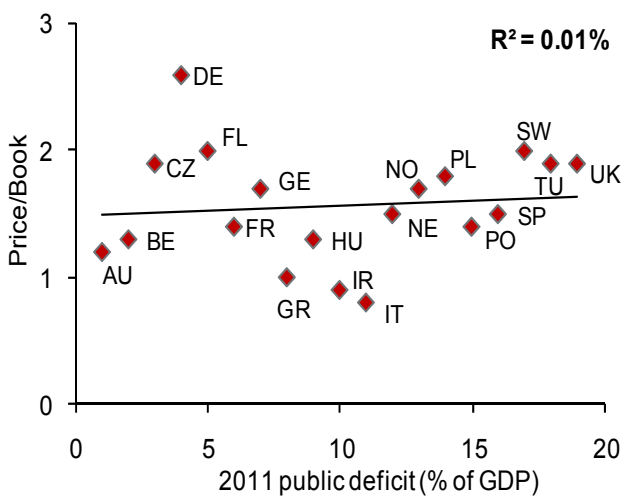
Against this background the market has extracted a heavy "cost", in terms of both the valuation and relative performance of the region's financial stocks, and those countries with high levels of government debt.

Figure 7. Trade-off: price/book multiple and return on equity*



Source: Worldscope, FTSE, Nomura Strategy research.
*Russia not included in calculations.

Figure 8. Price/book multiple and public deficit*



Source: Worldscope, FTSE, Nomura Global Economics, Nomura Strategy research.
*Russia not included in calculations.

Investors in European equities appear far more concerned by the prospect of a "two tier" Europe – in which some economies and national stock markets are consigned to a prolonged period of low growth and low profitability relative to others – than they do about the probability of national sovereign defaults. We suggest that this "cost" may well be too high, especially in the light of improvements in lending growth and the recent responsiveness of trade flows.

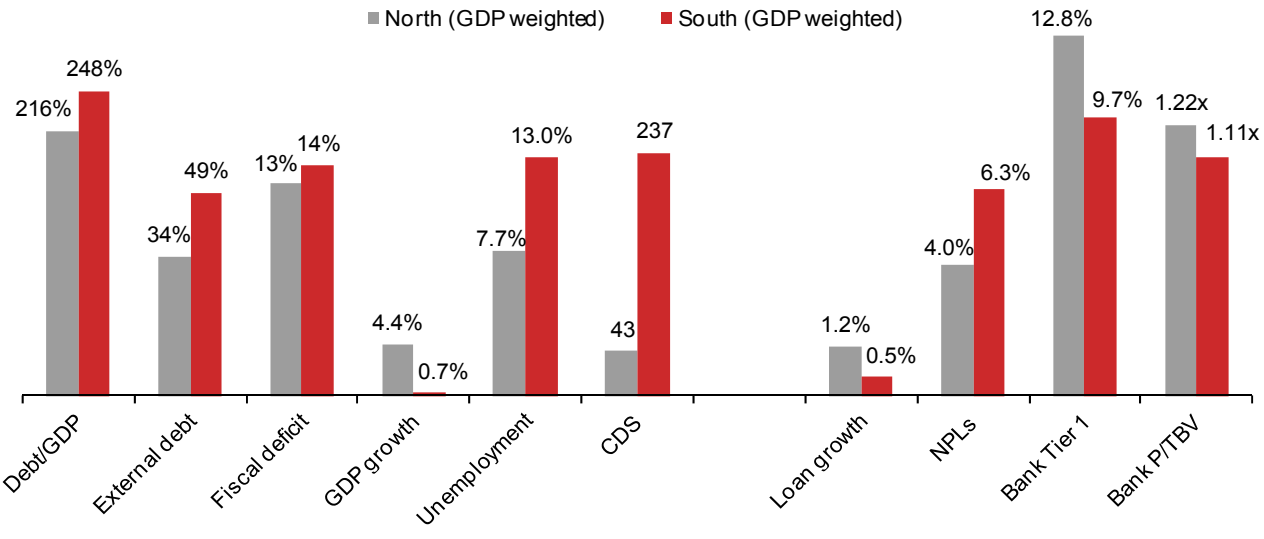
We continue to expect a healthy 17% total return for investors in European equities in 2011, and recommend overweight positions in peripheral equity markets and the European financial sector.[158] ■

European banks

As regards Europe's banks, Jon Peace, Nomura's European banks analyst, considers that a more benign market assessment of the outlook for the euro area in early 2011 has led to a considerable rally in southern European banks year to date, and a significant convergence in country valuations across the sector on a price/tangible book basis. However, year-end results have shown a very different earnings outlook, with the more leveraged southern European economies seeing, in general, slower loan growth (given private sector deleveraging), weaker margins (owing to a higher cost of funds), and weaker credit quality trends (either a slower normalisation or, in the worst case, a double dip) than their northern European counterparts.

As a result of weaker bank earnings in more leveraged economies we believe that a north/south, or perhaps more accurately a core/peripheral, divide will persist as a theme in bank investing for a number of years, given the considerable time it takes to bring debt back down to stable levels. At some stage, this may be more adequately reflected in valuations, but the convergence in valuations in early 2011 leads us to believe that the valuation differences are insufficient as of today.

Figure 9. The north/south divide in European banks



Source: Datastream, OECD, Central banks, Nomura research
Note: North is Scandi, UK, Switzerland, France, Germany while South is Greece, Portugal, Ireland, Spain, Italy

Chapter VIII Peter Attard Montalto

Enlargement and Emerging Europe

Emerging Europe is frequently overlooked in popular discussions on Europe's future. However, enlargement is important for the EU, the euro area and the economies of Emerging Europe.

- Aspirations to join both the EU and euro area are strong in Emerging Europe.
- Continuing convergence stands to bring benefits to both regions.
- Collectively the countries of Emerging Europe are likely to grow faster, perhaps considerably so, than the EU over the next few years.
- Although the path of convergence is rocky and the pace of expansion may have slowed, the convergence process is nevertheless well defined.

There are however a number of difficulties to overcome. And because enlargement is unlikely to resolve the euro area's deeper problems, it has moved down the priority list, at least for a while.

Introduction

Emerging Europe can be defined in a number of ways, but is often defined geographically, to incorporate the countries east of Germany, Austria and Italy, and west of the Caspian Sea. Thus, the region includes the Baltic States, the Balkans (including Turkey), Ukraine and Georgia (and surrounding countries), but excludes Russia.

An alternative definition is based on intent, and thereby includes the European countries that view themselves on a path towards the West. Such a definition may at first seem somewhat outdated, given the end of the Cold War. However, we think it still has relevance, particularly when considering the administrations in the Commonwealth of Independent States (CIS), which can oscillate between leaning towards Russia on the one hand and the EU on the other.

For much of the post-War period the region was a frontier market, at the political crossroads between the West and Russia, and engaged in the Cold War struggle. The EU's views have long been a legacy of these times. Meanwhile, portfolio investors, corporate FDI investors, policymakers, politicians and markets have been progressively turning eastwards for over 25 years, during which time the region has developed rapidly and ambitiously.

Emerging Europe is gaining importance

Emerging Europe's importance to the EU has grown and conversely. Moreover, the importance on both sides continues to increase, notwithstanding the problems in the economies of Europe's periphery.

The importance of Emerging Europe and the EU

Countries are at different stages along the path to union. Some are outside the EU, but part of the Neighbourhood Policy, others have applied for official candidacy of the EU, and some have been granted candidate status. Others are members of the EU, but still have below-average GDP per capita. Only a small number of the region's economies[159] are members of the euro area, and deemed to have converged fully. (For a comprehensive list of the EU's 27 Member States and those in the euro area, see Box: *Europe today,* in Chapter I.)

"Convergence" is a complex, two-sided process of integration that is simultaneously economic, political, and ideological. Integration is "pushed" by states and populations in the East, and "pulled" by governments and policymakers in the West. The process starts with a country that has low GDP per capita and outside the EU and, through investment, ends with an economy that is richer, more developed, and more similar to Western Europe.

The pull factors

Expanding eastward brings myriad benefits…

The EU itself is a supranational organisation with an explicit mandate to seek its own expansion. Its legal basis is a constitution in all but name, underpinned by a notion of solidarity. Behind this lies a larger and grander agenda of uniting the peoples of Europe, combined perhaps with some degree of "mission creep", in the sense that a body that is competing on the international stage wants to speak for as many countries and represent as many individuals and units of economic output as possible. The political dimension is strong and extends beyond the economic.

…to the EU

To some extent therefore, expansion depends on the political hue of the politicians involved. From a right-of-centre perspective, the EU's eastward expansion should benefit all, through free trade, common standards, strengthened institutions, enhanced development, a widening of the EU consumer market, and a source of cheap and competitive manufacturing and labour. In an increasingly uncertain world, drawing former communist countries towards the Western view of the world, including its foreign policy, is also advantageous, not least in the matter of energy security.

A centre-left perspective, however, would have a different focus, placing greater emphasis on solidarity, the common ties between societies, the spreading of social justice and human rights, an introduction of the European welfare state model, and the prevention of war. These ideals are perhaps more in line with the EU's historical roots and also perhaps more federalist ideals.

Given the multitude of different actors and policymakers involved, many perspectives tend to be represented and it is these "pull factors" that drive the EU to be integrationist and expansionary.

The push factors

There are also a number of "push factors" that have led the policymakers in Emerging Europe to join and remain on the convergence path.

…and to Emerging Europe...

The first is political. The EU and even the euro remain popular across Emerging Europe. Memories of the communist times still linger, and we think there is a low level of trust in national governments. The desire to secure against being subject to a communist regime is deep seated. National governments can gain credibility with electorates by looking westwards, and populations are not averse to handing power to the supranational level.

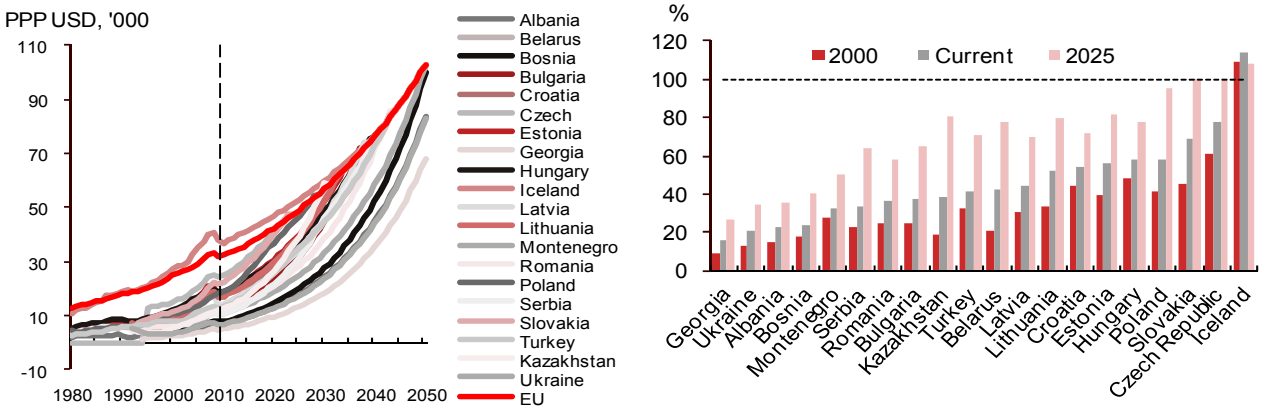
Further, national policymakers look to the "premia" in terms of the cost and availability of funding, as well as increased FDI interest from investors when a country is on a credible track to EU membership.

...where the EU and the euro remain popular

Countries, especially small ones, thus consider that they have much to gain from being part of a larger entity and at the EU table, and prefer that to falling between Asia and Russia in the East and the EU in the West. Increased security – economic, military, and energy – is important politically, and a generation of policymakers see a need to reform their countries and to "catch up" as quickly as possible for the maximum benefit of their populations. This is a major task, which is most easily resolved by the process of convergence. Although GDP per capita may not change fundamentally upon accession to the EU, convergence will have broader effects in terms of freedom of movement of labour, capital, and goods and services, as well as politically and institutionally, as the country integrates into the EU governance and institutional set-up.

Although the euro area is by no means wholly unified, and notwithstanding the lack of convergence within the euro area and its crisis, the euro area is still seen as one unit, one economy, and regarded as the ultimate goal of convergence. In many ways, policymakers in Emerging Europe are now more integrationist than those of Western Europe.

Figure 1. Convergence – nominal GDP per capita and proportion of EU average



Source: Eurostat, Nomura Global Economics

Note: We assume forecasts for GDP converging to Nomura's estimate of potential over the medium run. We assume once a country has converged (i.e. passed the EU average GDP per capita) then it stops the process of convergence and from then on grows at the same rate as the EU average.

The integration of Emerging Europe is thus as much about its importance to Western Europe as it is about the needs of Eastern Europe.

The convergence process

Convergence paths are well defined

The EU has sought to expand its influence in Eastern Europe, in key areas, through a well-defined path of convergence and candidacy.

At its most fundamental, the process of convergence increases per capita income, through the redistribution of income from richer Member States to poorer ones, thereby accelerating what would be a much longer process were countries to have to fund themselves wholly through domestic income and budget revenues.

The EU is currently reaching out to the CIS states, Ukraine, Kazakhstan, and some Balkan countries through its European Neighbourhood Policy (ENP) framework, which provides funding and support for a ring of countries of strategic importance around the edge of the EU. The policy includes free trade agreements, geopolitical assistance (including partnership with NATO in matters of military interest), energy security issues, infrastructure, and transport, as well as a range of other areas including crime and justice. The ENP framework also includes countries in Northern Africa and the Levant, including Israel and Egypt.

This initiative is currently the widest, albeit also the loosest, form of direct, special interaction that the EU has with other countries – beyond normal global diplomatic relations, which are now being strengthened under the new External Action Service. The initiative operates alongside the existing sphere of soft influence of the European Bank for Reconstruction and Development (EBRD) within wider Emerging Europe in promoting investment in key economic areas.

The Structural and Cohesion funds play a fundamental role...

The initiative came into play during the recent financial and economic crisis, where the EU, alongside the IMF, provided assistance to Ukraine. This decision was motivated importantly by the interconnectedness of banking systems. For the purposes of convergence, however, the ENP is divided into two blocs: east and south. The group of countries in the eastern bloc is of particular interest to the EU, because these countries are more likely to aspire to join the EU.

…and are allocated mostly to Emerging Europe

The ENP came into being in 2007, and covers only a limited number of states that are at the start of the convergence process. Pre-2007 policy was softer and less regimented, but funds have been the main convergence tool from the outset, and are known collectively as the Structural and Cohesion funds. For the period 2007-13 the size of this fund will be €327bn.

The funds are divided into three tranches, the main one being the Convergence Objective, which directs money to regions within a country that have a GDP per capita of less than 75% of the EU average. However, because the funds are technically distributed by region, recipients also include certain poorer parts of richer States such as Germany, France, and the UK. Of the two smaller tranches, one is directed at cross-region cooperation (mainly infrastructure and transport), and the other at boosting competitiveness.

Over 80% of the disbursements go to Eastern Europe, and almost exclusively to the countries already within the EU and those that are near to joining. The eastern bloc in the Neighbourhood Policy is also supported more actively by the European Bank for Reconstruction and Development (EBRD), the European Investment bank (EIB), or by specific EU projects of strategic interest. Other countries receive a much smaller amount and then only if they border EU Member States.

The full process of convergence has four basic steps:

- Pre-membership convergence,
- Candidacy,
- Membership, and
- Euro-convergence.

The process has four basic steps

Pre-membership convergence: At this stage a (low GDP) country expresses an interest in EU membership, and starts to implement the obligatory reforms. This process begins attracting FDI and financial market investment, in concert with the EBRD. The country is still very much viewed as an emerging market in the classic sense, with a high degree of political uncertainty,

significant levels of state ownership, and an underdeveloped social welfare state. Productivity increases from a low base, with investment causing the economy to become increasingly competitive.

The EU begins pre-candidacy negotiations, free trade agreements are signed, and a pathway plan is agreed as part of the ENP. Membership is then applied for and the country completes a detailed questionnaire on every part of its legal, economic, and social systems.

Candidacy: The EU in turn analyses the application and questionnaire, and starts to devise a negotiation plan based on an assessment of the current reforms that the country requires to become an EU Member State and comply with the EU's laws and codes. Candidacy status is awarded during this process, as detailed negotiations open on individual "chapters". There are 31 chapters, covering policy areas from freedom of movement of labour, services, and capital, through agriculture, fisheries, environment, and competition policy, to fiscal, economic and industry policy, and foreign affairs.

Incentives can become perverse

During this period a country sees more rapid convergence in country risk premia, further investment and, in some cases, additional investment from the EU, in infrastructure in particular. Real GDP per capita convergence accelerates and further reforms are undertaken to accommodate the EU, which again makes the country more attractive. The country is still independent, however, and can pursue its own policies to improve its competitiveness that it might not be able to do within the EU. It is during this stage that incentives can become perverse, and the "Serbia dilemma" can arise (see Box: *The "Serbia dilemma"*).

The "Serbia dilemma"

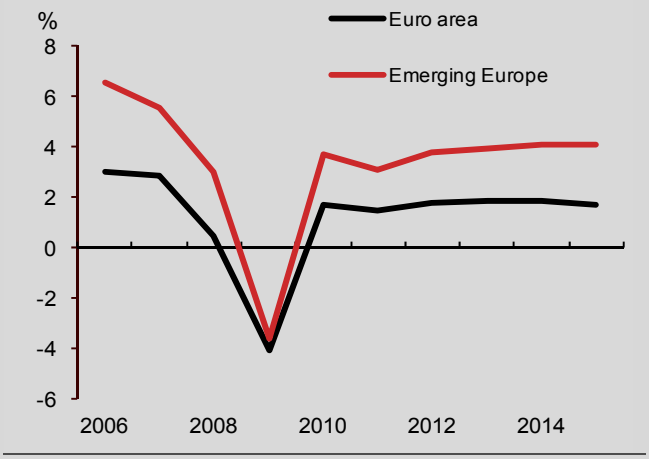
Emerging Europe is likely to grow faster than the euro area as a whole over the coming several years (Figures A and B). A problem for many of these countries as they converge and become candidate countries is that they enter a "sweet spot". By this time they will already have a free trade agreement with the EU and may also have free trade agreements with other countries, including Russia and the CIS or Turkey. Further, their journey along the convergence path will have attracted an accelerating pace of inward investment and have led to rising living standards, as well as more developed internal markets and institutions.

Thus a country may find itself in a situation whereby it is sufficiently far along the convergence path to enjoy most of the benefits that it will have when it eventually joins the EU, but also has many of the advantages of being an independent state that it may well lose upon joining the EU (such as free trade agreements with non-EU countries). This is very much the case for Serbia – hence the term "Serbia dilemma".

At such a stage the incentives for national policymakers can become perverse. Most of their country's development will have come about because it has been converging towards the EU and that goal must remain credible to continue to attract investment. However, some investors may well be put off if they consider the country is likely to be joining in the near future and hence about to lose some of the benefits of being outside the EU. Policymakers may therefore try to prolong the time they are in the "sweet spot".

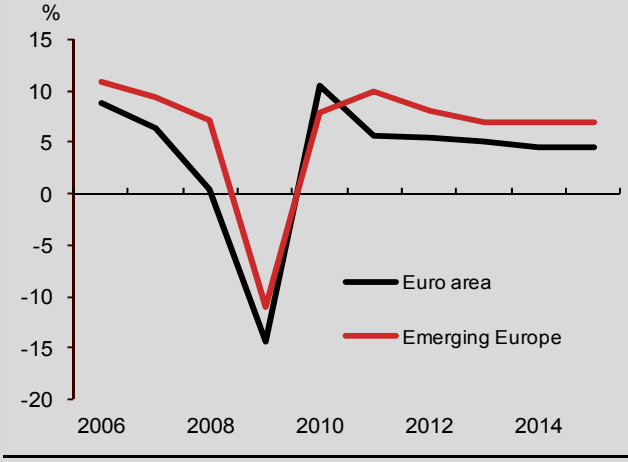
However, the EU has already recognised this problem. It now allows only a gradual phasing-out of external free trade agreements and other advantages once a country is accepted as a member.■

Figure A. Differing growth rates of GDP



Source: Nomura
Note: raw data for Q2 2010 filtered for Q3 2010

Figure B. Differing growth rates of exports



Source: Nomura
Note: raw data for Q2 2010 filtered for Q3 2010

Membership: As the chapters are closed, one by one, an Accession Treaty is drawn up, which details the specific policy provisions or opt-outs that the country may have, and changes to the existing EU Treaties required to accommodate a new Member State (such as voting weights in the Council).

Once signed by all the EU Member States, membership is complete, after which the new Member State receives a significant amount of structural fund money from the EU, which boosts its potential growth, competitiveness, and speed of convergence. As a full member of the EU the country typically receives a wider range of investor flows, particularly smaller business FDI and retail portfolio capital, thus further reinforcing the process of convergence.

Euro-convergence: Once in the EU and fed by structural funds, the next goal for the Member State and the EU will be joining EMU. This will have been a stipulation of the Accession Treaty, though the timeframe pursuant to which it has to be completed is not set. The process of convergence typically occurs in parallel with GDP per capita convergence, as risk premia and rate differentials are reduced and economic cycles start to become more synchronous.

The process is however much more uncertain now, because the current crisis has raised the question of what exactly a pre-EMU Member State is converging to. According to the rules, however, the path is clear:

- Once the candidate state has met the specific requirements to enter ERM-II, it pegs its currency to the euro at a level previously agreed with the EU Council. The ECB and the Member State's central bank must then keep the currency within a band of +/- 15% of the agreed central parity level. The Council must be satisfied that the peg can hold, that the value is appropriate, and that the Member State can credibly adopt the euro in the near future.
- The candidate state[160] is then assessed in May every year in terms of its closeness to meeting the Maastricht Criteria (which includes legal and logistical readiness), and its economic convergence more generally. (For more on the Maastricht Criteria, see Box: *The Maastricht criteria*.)
- When the country has met the Maastricht Criteria, the EU Council must then vote to allow it into EMU and for it to adopt the euro. In consultation with the ECB, a decision is then made on the appropriate level of the "irrevocable conversion rate" for the domestic currency to the euro. This level is generally the central parity of the ERM-II band.
- The country then, on a set date, replaces its currency with the euro, joins the ECB, subscribes capital, and joins the Eurogroup of policymakers.

Is convergence then complete?

In the minds of many policymakers and markets the answer may well be "yes" – it has reached the end of the formal process of convergence and is being treated differently by investors. However, the Member State may well still have below-average GDP per capita and will as a result still be supported by structural and cohesion funds.

This question therefore remains open. The countries that have adopted the euro most recently did so just before the current crisis (Slovakia, Slovenia, Malta, and Cyprus) and there has been insufficient time to judge whether they have continued rapid convergence or whether investors now treat them as euro-area economies, causing them not to converge further. These have generally been smaller states, however, with limited capital market investment.

The real test will come when Poland and Hungary (eventually) join, and the issue will be whether they can continue to boost productivity and remain attractive investment hubs. A fall in yield and premia of these countries, particularly if they prove to be stronger economies than some in periphery Europe, may lead previous investors (Emerging Markets investors) to look for more attractive yields (and currencies) elsewhere.

The Maastricht Criteria

The Maastricht Criteria are part of the Treaties, and specify the criteria according to which a country shall be deemed to have converged sufficiently with the euro area to be allowed to join.

The criteria are often misinterpreted as simple digital measures. In fact, there is far more flexibility than is often imagined, with some qualitative targets too. This allows for some degree of political leeway in their interpretation.

1. **Qualitative criteria:**
    a. Legal compatibility of the candidate state and euro-area legislation.
    b. Integration of markets, the situation of balance of payments, unit labour costs, and other price measures.
    c. The structure and sustainability of the country's current exchange rate framework (this is not the same as whether it is in ERM-II or not).
    d. The sustainability of government finances and the durability of low long-run interest rates.
2. **Quantitative criteria**:
    a. Price stability: a rate of HICP inflation not more than 1.5pp higher than the three best-performing EU Member States in terms of price stability (i.e. the countries with the lowest positive inflation that are also less than 2%).
    b. Fiscal stance: A country must not be in the Excessive Deficit Procedure (EDP) and…
        i. Close to having a public sector deficit below 3% of GDP.
        ii. Gross government debt must be less than 60%, or within near reach of that target.
    c. ERM-II: a country must have been within ERM-II for at least two years and not have devalued the central parity of the band in that time.
    d. Long-run interest rates: Nominal rates must not be more than 2pp higher than the reference countries used under the price stability criteria above.

The criteria are tested by the ECB each May and published in the Convergence Report. In this report the full extent of the criteria, beyond the well-known quantitative ones, becomes apparent.■

The future of convergence

The ultimate decision is political and rests with the Council

The integration and convergence process is driven and managed by the Commission,[161] but the ultimate decision to accept an application, give candidacy status and then award membership is political and rests with the Council. The appetite of the existing Member States for expansion and the relationships with the candidate state are therefore crucial.

Politics play an important role in the speed of convergence…

Hence, while the "push" and "pull" factors are strong and aspirations to join the EU and the euro too axiomatic to be derailed, the Commission must address the candidacy concerns raised by existing Member States, including importantly those that involve the security of the euro and the liability for euro-area bail-outs. Convergence processes can therefore slow, or even falter, with the views of Member States and national considerations.

One case in point is Turkey, which made an application for EU candidacy way back in 1987, and another is Serbia, whose candidacy is facing objections from Denmark and other countries and is being hampered by its recent history and war. Thus the process of expansion of the EU itself has slowed, both because of a shift of emphasis and concentration within the Council and the "difficult" politics of some of the newer prospective states.

Policymakers in the euro area have not wanted to be seen to lower the credibility of the euro convergence criteria – the reputation of which has already been tarnished by the current European crisis and the revelation that countries that did not technically meet the criteria were nevertheless admitted. In this light and because of the recent enlargements, such concerns stand to continue to be important in determining the speed and nature of convergences. Other issues too stand to be important.

…and there are other issues too

Money, the EU budget: The structural and cohesion funds, the key driver and accelerator of the convergence process, rely on funding from the richer Member States. Expenditure in this area currently accounts for nearly 30% of the entire EU budget, second only to the Common

Agricultural Policy (CAP). Currently, there is a move by a group of richer Member States within the EU Council to freeze the budget in real terms during the next budget semester, which runs from 2014. Such a move would limit the resources available for convergence funding, given likely additional Member States joining as well as the demands for spending in other areas.

However, the effect might not be particularly large: at present the structural funds are substantially underspent, due in large part to the bureaucracy involved in their distribution. Moreover, as Member States further along the convergence path (together with regions in more developed Member States that also receive such funding) reach the threshold for funding, the fund will be phased out. This is likely to apply to a number of areas during the next budget semester, whereupon the balance of funding for those areas may shift back towards national budgetary expenditure.

Co-financing limitation: A concern related to the inefficient use of funds is that during the crisis Member States in Emerging Europe have often been unable to muster the revenue required to co-finance many of the cohesion and structural fund projects. This problem may be short-lived for some Member States, such as Poland, which is set to continue its strong recovery. But for the region as a whole an export- rather than consumption-led recovery will likely mean a slow recovery of revenues, prolonging the issue.

Concentration fatigue: In the richer Member States a degree of “EU enlargement fatigue” has set in. This fatigue is based on the view that the EU already has enough problems of its own, not least from governance issues with the 27 Member States, so that these, rather than expansion, should be accorded priority. This is particularly evident in the current crisis, where reforms of EU economic governance, the Stability and Growth Pact (SGP), and finding credible policy and funds to shore up the euro are much more pressing.

The EU accession process involves long and complex negotiations and is as onerous for existing members (particularly the one that holds the presidency of the Council) and the Commission, as it is for the country trying to join. With most of Europe’s richer countries now inside the EU, the “easy” expansions have taken place, leaving countries that are lower down the convergence path requiring greater pre-accession reform and probably more even longer and more complex negotiations. For now at least EU expansion is not the first priority, even if the EU is happy to continue negotiations with those that are already particularly close to joining (such as Croatia and Serbia).

One area where there has not been a loss of interest, however, is the continued expansion of the euro area, although concentrations and energies here too have had to be deployed towards crisis resolution.

Possible decoupling: For some countries, including those already in the EU, the differences in competitiveness between countries may bring change to the more customary convergence path.

In the past, convergence has generally taken place primarily with respect to the economies of the EU. However, in the future the convergence path of a country may acquire a somewhat different trajectory. In particular, a more diversified export and investment base with Asia could mean that these economies develop a rather different dynamic.

This may happen with the country as a whole (e.g. as with the Czech Republic and the Baltic States) or be limited to individual sectors; such as in Hungary, which is targeting research and high tech manufacturing; Romania, which is looking at infrastructure; Serbia, at export and labour intensive and manual labour sectors; and Slovakia at consumer durables. It may also occur because an economy is less open (as with Poland).

Although GDP per capita convergence would presumably still take place under such a scenario, it could make EU accession and adoption of the euro more tenuous, because many of the traditional economic “pull” factors would become less relevant. Such a partial decoupling might thereby slow down a country’s convergence, but equally it could help it by increasing its attractiveness to, and even its influence within, the EU.

For some economies in Emerging Europe there are signs that such decoupling may be happening, but it may be that this is in fact only a mild diversification away from Western Europe, rather than any true economic independence.

The state of play

Our Maastricht Scorecard (Figure 2) assesses how each key country fares with respect to the convergence criteria, and includes our forecast date for ERM-II entry and euro adoption.

Poland seems furthest along the euro adoption path

Poland. We judge that Poland is the most advanced of the major Emerging Europe countries along the path of adopting the euro. This has been helped in part by domestic support (though this has wavered somewhat since the onset of the difficulties in the euro area) and by the government's imperative to be seen to be progressive and reforming and at the heart of Europe, along with countries such as Germany. Such a view is not unjustified, given the economy's size and strength, and its not having gone into recession during the crisis.

That said, 2011 is an election year in Poland, and politics are getting in the way, slowing fiscal consolidation and extending the time it will take to the meet the convergence criteria. In November, after the elections, an important document is expected to be published, containing a new timetable and roadmap to adopting the euro. We think it is likely to state that Poland intends to adopt the euro on 1 January 2016, which would mean entry into ERM-II in Q1 2013 at the latest. Poland has been more cautious in public. Its previous roadmap was derailed by the global economic crisis and national politics.

We think Poland is likely to negotiate a central parity rate for ERM-II of around 3.7 for EUR/PLN. The Commission's preferred value is perhaps closer to 3.5, while Poland's is closer to 4.1. Although it has strong growth, complacent economic policy risks a loss of investment to other countries in the region – indeed to some extent this is already happening. The process of convergence is not yet complete and wide disparities in income remain.

Hungary is in a difficult position

Hungary. The Hungarian government is in a difficult position. It is pro-EU and pro-euro, but it is also populist and as a result nationalistic at the same time – a difficult balancing act. In our view, populism, combined with the impact of the current crisis, has dashed any hopes of its adopting the euro in the near future, notwithstanding its determination to be a strong voice within the EU. The target date for euro entry has been pushed back by four years, but we think it may happen a little earlier than that, because of the pressures it is under from neighbouring states, and the government's likely desire to lock in some structural real exchange rate weakness. We therefore pencil in H2 2014 for entry into ERM and 2018 for adoption of the euro. We think that there will be more than two years between the two events, because growth is low and there are difficult structural adjustments to be made.

The Czech Republic stands out as the most anti-EU/euro...

Czech Republic. The Czech Republic appears to be one of the most anti-EU, anti-euro, anti-integration convergence country and yet arguably the furthest along the path, helped by its trade linkages and investment growth during convergence. The Republic's negativity can be seen in many policy areas in the EU council, ranging from social policy to finance to economic policy, where the Czech Republic often sides with, for example, the United Kingdom.

...but this stance could soften as others join

We suspect that the Czech government asked the Commission to remove the requirement to adopt the euro from its accession treaty, but that it was rebuffed for fear of the euro losing its natural expansionist tendency. Our best guess is that the Czech Republic will be eventually persuaded by the Commission to commit more fully to adopting the euro, and that this will happen around 2015 as it becomes more obvious that other countries are on the verge of joining. Accordingly we pencil in 2015 for entry into ERM-II and 2018 for adoption of the euro.

Croatia. Croatia is on target for joining the EU in 2013, having made a concerted effort to join as soon as possible, and having managed to keep enlargement on the EU's agenda at a time of general enlargement fatigue. We expect it to want to adopt the euro as soon as possible following its accession, which suggests a date of around 2016.

Serbia. The current Serbian government has deep-rooted pro-EU tendencies and, having applied, is now aggressively pursuing EU candidacy status and accession. We judge that it will take around six years for Serbia to achieve EU membership, and that it will aim to adopt the euro as soon as possible following its successful incorporation into the EU – we pencil in 2022 as the most likely year. Serbia has benefited strongly from the convergence anchor and has geared its economic policy to take advantage of this.

Latvia and Lithuania. Both countries have been hit hard by the current crisis, but both have maintained their currency pegs to the euro as part of their ERM-II style frameworks, which have been in place since 2005 and 2004 respectively. Both are already competitive economies and their competitiveness is increasing through domestic deflation. Both countries wish to join the euro to put an end to the problems caused by speculators targeting their national currencies. We expect the Commission to be supportive and judge that, provided they stick to their current economic plans, they will meet the requirements to join the euro as soon as 2015.

Romania and Bulgaria. Both countries had a relatively rapid process of EU accession, but they are still relatively poor compared with other countries in the region. They will be an important test bed for the EU in determining whether such a combination is sustainable. Both countries are looking to join the euro soon, even though national sentiment has softened due to events in the euro area. Romania seems in many ways the more determined to join and has less institutional reforms to undertake.

That said, in terms of quantitative metrics, Bulgaria is arguably the more converged. We see Romania entering ERM-II in 2013 and Bulgaria in 2014; and then Romania adopting the euro in 2016 and Bulgaria in 2017. However, given underlying fiscal issues in both countries (being addressed in Romania, but to a lesser extent in Bulgaria) these dates could prove too optimistic.

Euro sentiment has remained robust among new joiners

Slovakia, Estonia and Slovenia. These countries also stand to be test cases, as they have recently joined both the EU, and the euro area. All three Member States are still converging in terms of per capita GDP and are strong industrial, export-led countries. Policy will be vital in continuing to drive growth and convergence and in attracting investment.

Slovakia stands out: although its economy has suffered from entering the euro area at a rate that may be too strong, effective economic and industrial policy is driving investment and growth. Euro sentiment in each country has apparently remained robust through the current crisis.

Bosnia, Montenegro, Macedonia, Albania, and Kosovo: These five countries are being actively "courted" by the EU and are seen as important for its new foreign policy remit. Macedonia and Montenegro are official candidates, Albania has applied and is awaiting official candidate status, and Bosnia and Kosovo have not yet applied.

All five governments are pro-EU and a positive sentiment has been sustained throughout the crisis, helping to anchor investors' expectations and attract capital. The countries are also key

Figure 2. Nomura`s Maastricht Scorecard

Country	Convergence criteria					Obligation to adopt	Forecast dates			EU joining date / forecast
	HICP Inflation rate	Government finances: annual deficit/GDP	Government finances: gross debt/GDP	Long-term interest rate	In ERM II		ERM II	Euro	EU	
Criteria	<2.4%	-3%<	<60%	<5.7%	2 years					
Czech	1.3	-3.8	43.8	4.2	No	Yes	2015	2018	Y	2004
Hungary	4.7	-2.4	70.0	7.2	No	Yes	H2 2014	2018	Y	2004
Poland	2.7	-4.0	54.6	6.3	No	Yes	H1 2013	2016	Y	2004
Romania	6.1	-4.0	42.0	7.1	No	Yes	2013	2016	Y	2007
Bulgaria	3.0	-2.0	20.0	5.3	No	Yes	2014	2017	Y	2007
Latvia	-1.2	-3.8	51.3	5.1	5 years	Yes	2005	2015	Y	2004
Lithuania	1.2	-3.2	33.0	4.4	6 years	Yes	2004	2015	Y	2004
Croatia	1.8	-3.5	42.5	6.5	No	Yes in EU		2016	N	2013
Serbia	10.3	-3.8	42.0	n.a.	No	Yes in EU		2022	N	2017
Iceland	1.8	-1.1	74.7	6.6	No	Yes in EU	2018	2021	EEC	2018
Denmark	2.2	-3.5	48.0	2.5	12 years	No, Referendum	1999	Soon after referendum	Y	1973
Sweden	1.9	-1.5	42.0	1.1	No	Yes	After referendum	Not set	Y	1995
UK	3.3	-7.3	88.2	4.1	No	No	Never?	Never?	Y	1973
	Last	*2012 forecast*	*2012 forecast*	*Last*	*Current*		*Forecasts*			

Source: Eurostat, Nomura Global Economics
Note: Red indicates criteria not met; grey criteria met

areas of investment for the EBRD. However these countries are still significantly poorer than others in the region and the path of convergence is still long. We think that this group of countries could join in 2025.

Iceland is keen to adopt the euro

Iceland: Iceland is still in the EEC and so is closely integrated economically with the EU, but without the additional spheres of policy influence from Brussels. However, following its severe economic crisis, it is now keen to join the euro, not least to get rid of its volatile and vulnerable currency (the smallest free-float currency in the world). Iceland applied for accession to the EU in July 2009 and is now an official candidate.

There are few areas of major policy disagreement (apart from fishing, where we consider that public rhetoric probably exaggerates the importance of the issue), and we judge that it could become a member of the EU as soon as 2018 and adopt the euro soon afterwards, possibly as early as 2021.

Turkey has been waiting to join the EU since 1987

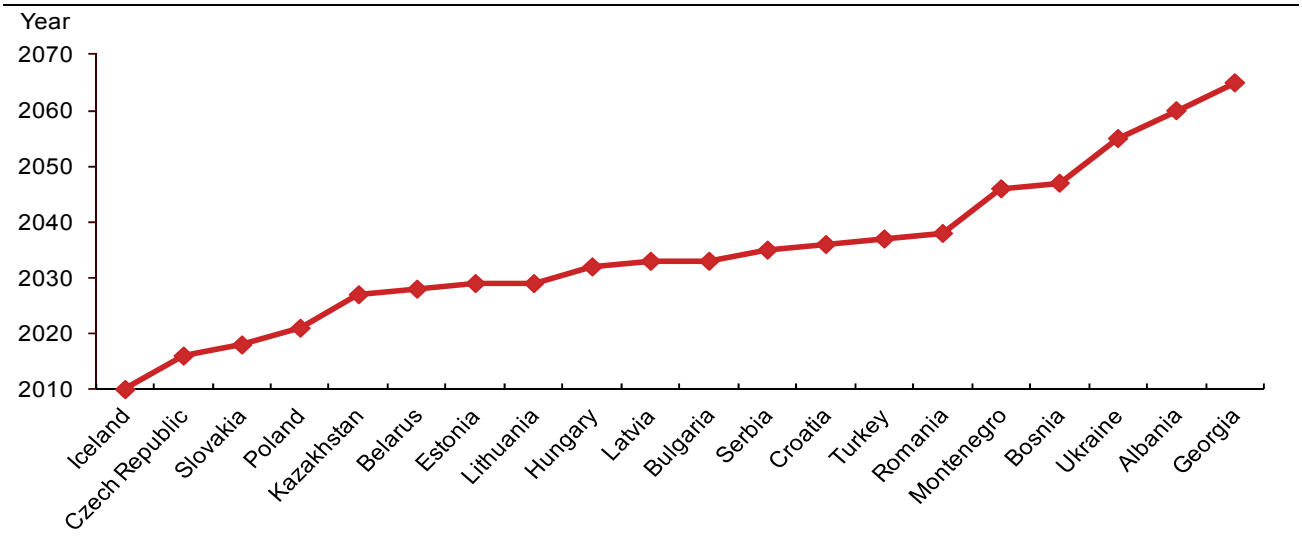
Turkey: Turkey applied to join the EU in April 1987 and is still technically in the negotiating phase, with candidate status. Opinion in Turkey remains finely balanced, however, and in the EU too there is a spectrum of opinion ranging from enthusiastic to hostile. However, the Commission evidently remains firmly supportive and Turkey also has backing in the European Parliament. Turkey's joining would require significant political capital within the Council, as well as within Turkey, and the current financial/economic crisis has put this on hold.

We think that Turkey will eventually join – and have put a notional date of 2030 on it, but this is beyond any reasonable forecast horizon. Turkey is seen by many investors as more European than it used to be in its economic and fiscal policy outlook, as well as in its institutional framework; and it is still broadly on a convergence path. However, it is a particular example of the "Serbia dilemma", and also raises the question of towards what these countries are converging. As a strong and well respected emerging market economy it is thriving and stands to continue to do so on its own – though this may owe in some small part to the fact that it is still regarded as being on the convergence path.

Ukraine, Georgia, and other CIS states: While the EU is actively engaging with these countries, and while they fall within the ENP, we doubt that there is any meaningful push for EU membership at the moment, either nationally or within the EU. That said, the main issue for investors is whether their administrations are turning towards the West, or towards Russia. Georgia is certainly turning towards the EU and benefiting from greater convergence, but in Ukraine matters are less certain under the new government.

Morocco, Norway, and Switzerland: These three countries have all applied for EU membership, but each has subsequently abandoned the process. Morocco shifted from the pro-EU direction in the late 1980s and its application was rejected. It now sees its future as one that is close to the EU, especially the Mediterranean states, but is more aligned with the Gulf

Figure 3. GDP per capita convergence date forecasts for Emerging Europe



Source: Eurostat, Nomura Global Economics
Note: We assume forecasts for GDP converging to Nomura's estimate of potential over medium run. Date shows when a country will be within 10% of EU average GDP per capita.

Cooperation Council (GCC) and fellow North African states. Norway is still in the EEC and therefore has free-market linkages with the EU, and both Norway and Switzerland retain close bilateral relations with the bloc. Public opinion in both countries is still unfavourable towards EU membership and does not look set to change. We expect the status quo to continue for the foreseeable future in all three countries.

Israel, Egypt and the rest of the Levant: EU membership has been mentioned from time to time for all countries in this zone, either within the specific countries or within the EU. However, such moves are mostly by marginal, fringe groups, and we see little real interest on the part of the EU or these states. That said, further cooperation stands to be fostered through bilateral and regional initiatives.

Will EMU expansion bolster the euro?

Policymakers believe expansion is good for Europe…

A fundamental issue is whether further expansion of the euro and convergence of countries into it can strengthen or save the euro. The view of Europe's policymakers is clear to us – expansion is seen as essential in keeping the euro "alive and kicking": hence the lauding of Estonia's entry into the euro area in January 2011.

…but credibility relies on keeping countries on track

Markets will ultimately judge the euro by its weakest member(s). Similarly, the policy credibility of the euro area as a whole lies importantly in keeping countries on track, without incurring moral hazard. It is difficult to see how allowing countries that have had questionable fiscal policy (both in the recent past and longer term) to join the euro would strengthen the euro. For small countries such as Latvia, the effect would not be significant: but for countries such as Poland or Hungary, which are large, do not have a good track record and generally have highly politicised electoral fiscal cycles, the effects could be far more significant.

Emerging economies tend to support tighter fiscal integration and rules

Running counter to this, however, is a set of new countries which are, on average more integrationist than are older Member States, could well be happy to accept any such proposal made by the Commission, and indeed – wishing to be seen as at the heart of policymaking – may push forward such policies themselves. In general, so far, countries in Emerging Europe have been supportive of greater fiscal integration and tighter rules, and we expect that to continue.

Hungary's presidency of the EU Council in the first half of this year and Poland's in the second half, will be important, not only in helping to shape the EU response to the current euro area crisis, but also in policy suggestions, outcomes and agendas, and helping to reconcile differing opinions in the Council. This task is a tall order for new Member States and the experience of the Czech Republic's failed presidency in 2009 lingers in the memory of many policymakers in Brussels.

Hungary and Poland have invested much political (and monetary) capital in their presidencies, and this could be an early sign of Emerging Europe's future at the heart of EU policymaking.

On the economic front, as these countries are already within the EU, it is unclear whether adopting the euro will confer any significant economic benefits on the rest of the pre-existing euro area countries. Statistically speaking, countries with higher growth, lower debt and better competitiveness dynamics may well improve the headline euro area averages, but underlying growth and potential growth would change little.

Countries in Emerging Europe are increasingly diversifying their exports away from Europe into Asia, Latin America and even back to Russia after ten years of shifting away from there. This is also the case for sources of investment, as countries seek to take advantage of the global increase in inter-EM trade and investment. In some sense, therefore, the rest of the EU becomes less relevant, even as these Emerging European countries come closer to adopting the euro. The key question is: does that make the euro less appealing?

We believe not. The arguments set out above – political and economic – still apply. By the time these countries join, the euro area also stands to be a stronger economic bloc in fiscal terms, and is likely to have made further progress on its structural issues. Again, this can be viewed either as convergence – but in parallel rather than specifically to the rest of the euro area – or as a strengthening of the euro if or when these countries join.

Conclusions

Expanding the EU and the euro area brings a range of consequences.

Expansion of the EU and the euro area will almost certainly have relatively little effect on the issues immediately confronting the euro area. Resolving these will have more to do with the policies of the present euro area economies – the framework, its implementation, and thereby its credibility.

Longer term, however, the EU stands to benefit from the above-average growth of dynamic new members, some of whom are also opening up useful links to faster-growing regions of the world, particularly Asia.

Moreover, each additional economy increases the economic and thereby geopolitical importance of Europe, which is already larger than the US in terms of both GDP and population. Taken together with developments in other areas, including foreign policy, this increases Europe's voice in the world and may be constructive for its citizens.■

Chapter IX

The future of Europe

Europe's future will be determined importantly by the evolution of the euro area; and that will depend importantly on the strength of the political will to make the monetary union truly succeed.

- It was known at its inception that the euro area had design flaws, including a lack of fiscal union, and no mechanisms to deal with asymmetric shocks or diverging competitiveness.
- However, political factors trumped economic concerns: a united Europe, and thereby the single currency, was at root a political project.
- Many of these economic concerns, as well as newer ones, have surfaced with the current crisis. A range of fundamental reforms is now needed.
- Europe being a collection of individual, and individualistic nations, achieving fundamental reform usually requires a crisis; this has been the case over the past 50 years.
- The underlying will to overcome this crisis is strong. Policy is advancing on a number of fronts and, we judge, will ultimately quell this crisis. If so, the euro area should be stronger.

Europe's path is unlikely to be straightforward however. Years hence the euro area may still not be a fully optimal monetary union. This crisis may well not be the last. But, provided that political will remains, Europe will probably continue to proceed, stepwise, towards sustainability.

The need for reform

The main points raised in each of the chapters are presented in the Executive Summary at the beginning of this Study. Below, we summarise why we are cautiously optimistic about the future of the euro area, and hence of Europe as a whole.

Design flaws allowed problems to reach crisis proportions

It was well known, from before its inauguration, that there were a number of flaws in the design of the euro area. These flaws included: the absence of fiscal union; insufficiently strong centralised control over Member States' budgetary positions; no mechanism to deal with asymmetric shocks; no mechanism to deal with diverging relative costs and inflation; no framework for crisis resolution; and poor structural labour and product market policies, particularly in a number of the peripheral economies.

These design flaws allowed problems to build up during the euro's "honeymoon decade", so that ultimately these reached crisis proportions in some of the periphery economies (see Chapter II). And because Europe's authorities lacked a number of requisite policy tools, this debt crisis is testing the very foundations on which the euro was built, and giving rise to a compelling debate about whether the euro can survive its second decade.

Reform is now both necessary and urgent

Reform on a range of fronts is now both necessary and urgent (see Chapter IV). Paradoxically, in Europe it seems to take a crisis to provoke the reforms that are needed to prevent crisis. A collection of individual and individualistic nations, Europe as a whole does not find it easy to enact reform unless impelled to do so.

Moreover, this crisis is complex and difficult (see Chapter III). In Greece the origins lie in public sector excess. In Ireland and Spain however they lie in private sector excess. But as private sector debt became public sector debt, as it so often does when private debt becomes systemically large, the problems merged to produce sovereign debt crises that have changed the sovereign debt market fundamentally, and quite possibly permanently (see Chapters V and VI). The crisis has also impacted heavily on European equities (see Chapter VII).

A further layer of complexity and difficulty is added by the secular decline in the competitiveness of the economies of the periphery vis-à-vis the core economies. While currency depreciation is not the panacea that is sometimes claimed, restoring these economies' competitiveness to the level at the time the euro was formed will be painful, and will take time.

Solving these problems requires not only technical but, even more, political solutions. It will be the strength of political will, even more than the ability to formulate stabilisation policies, that will

ultimately determine the shape of the euro area's future, and thereby the future of the European Union as a whole.

Political will

Political will stands ultimately to shape Europe's future...

The issue of political will arises at two levels: at the level of the EU as a whole, and at the level of individual countries – partly the periphery countries themselves, but also importantly in the two largest economies, Germany and France.

Political will at the EU level. The political basis of the European integration project seems, on the evidence of the recent pronouncements and actions of Europe's Heads of State, to be intact. This is not altogether surprising: the achievements over the more than fifty year period since the signing of the Treaty of Rome in 1957 have been considerable (see Chapter I). It is hard to envisage the Chancellor of Germany and the President of France not taking all possible steps to keep the euro area intact. Neither would seem likely to wish to go down in history as having presided over the dissolution of the euro area or even, if it can be avoided, its dilution or fragmentation.

...the will is strong at the EU level...

Moreover, there is an evident desire at political and policy levels in Europe not to see the integration project derailed by financial markets, which are often seen as short-termist, and not accepting of any responsibility for the long-term development of a politically stable and secure Europe. Although it may be accepted that markets will price in the uncertainty that surrounds the ability of periphery countries to follow through with the appropriate policies – indeed that is one of the roles of markets – many EU policymakers believe it is their duty to give these countries the benefit of the doubt. Not to do so would be to risk allowing speculation about insolvency to become self-fulfilling.

In creating the European Financial Stability Facility (EFSF) and the European Financial Stability Mechanism (EFSM), European Heads of States acted decisively, if initially somewhat slowly, to Europe's crisis. Moreover, they have found a way to create a permanent replacement, the European Stabilisation Mechanism (ESM) which, although requiring a change of the Lisbon Treaty, may avoid the necessity of holding referenda in member countries (see Annex).

These are not the actions of policymakers ambivalent about the future of the euro area.

...and is holding up at the country level

Political will at the individual-country level. In the countries of the periphery the political will necessary to restore public finances, the situations of the banks, and to carry through structural reforms has been strong, so far at least. That said, political uncertainties and resistance may grow as the near-term implications become clearer, as policy reforms start to bite more deeply, and as political pressures rise.

In **Greece** there is some political discontent, although less than might have been expected, given the scale of retrenchment – a fiscal tightening of 6% of GDP in 2010, and with more to come. Greece has achieved a double-digit tightening before – between 1989 and 1995, when it attempted to meet the Maastricht criteria in its run-up to euro entry. That tightening may however have been easier to sell to the Greek public: the future gains – not least a reduced cost of sovereign borrowing, as well as membership of the club to which Greece was keen to belong – were self evident.

Discontent may well persist, albeit in different quarters, as Greece continues to implement its structural reforms pursuant to the EU/IMF programme. Reforms involving pension entitlements, the retirement age, employment law, and product market competition are always politically painful. Overall discontent could even strengthen, to the extent that economic growth is slow to resume.

In **Ireland** there is public anger at the situation in which the country finds itself, much of this being directed at the banks. Ireland's fiscal tightening is large – around 10% of GDP over the four years to 2014, with much of this coming in 2011. Recognition is growing that, in assuming responsibility for its banks' debts, Ireland's then government put the fiscal cart before the banking sector horse, obliging Ireland's taxpayers to bear disproportionate – near total – responsibility for the banking sector's debts. Ireland has to deal with its banks more aggressively, with a view to the public sector exiting its blanket guarantee as soon as possible. (For an extended discussion of this issue, see Nomura (2011), *The Irish question*.)[162]

...so far at least

Within the **core countries**, and particularly Germany, there is popular resistance to the notion that hard-working taxpayers in the core countries are being required to provide help to brethren in the periphery countries, which are not infrequently portrayed as less disciplined and less hardworking. And opposition parties have chosen to emphasise the term "bail out" which, wrongly, suggests a permanent transfer, rather than "financing package", the officially-preferred nomenclature, which more accurately portrays the reality of loans which, at least under present arrangements, are to be paid back.

Looking ahead

The burden of reducing debt will however be huge...

Political will at many levels will have to remain resolute. While the evolving permanent financing packages will continue to support the economies of the periphery, with official lenders continuing to roll debt over at concessional, albeit not particularly generous, rates, the burden in the peripheral economies of reducing public debt will nevertheless be huge.

Greece is, notwithstanding its tight fiscal policy that, on present plans, will put it in primary surplus by 2012, is likely to have a public debt/GDP ratio of almost 160% in 2013. And the ratio can probably be only substantially reduced if a strong privatisation programme is followed within the next four years.

Ireland, on present plans, is likely still to be running a primary deficit of over 4% of GDP in 2012, and to have a public debt ratio of around 120% of GDP. The actual level of debt however is dependent on the level of additional support given to the banking sector.

Portugal similarly is likely, on present plans, to see its public debt/GDP ratio rise above 90% before finally it stabilises, probably around 2013; and Spain is likely to see its ratio rise above 80% of GDP before it stabilises, possibly around 2014-15 under current plans.

...growth is crucial in helping this become more manageable

Growth therefore becomes a crucial issue in helping to make these countries' debt dynamics more manageable long term. Most economies that have achieved quick recoveries from debt crises, including the Nordic countries in the early 1990s and various Asian economies in the late 1990s, have done so on the back of strong currency-depreciation-induced exports. That possibility however is not open to individual economies in a monetary union.

Structural reforms are the great hope. And here there is, seemingly paradoxically, considerable scope, largely because the structural policies of Greece, Portugal, and Spain, though not Ireland, are currently so poor. These three economies rank at or near the bottom of the rankings of OECD economies (see Chapter IV).

Structural reforms are the great hope

The European economies, particularly those currently under strict conditionality, are likely to make significant progress in reforming various of their structural weaknesses in labour and product markets. These could provide an upside to growth more quickly than sometimes presumed: signs could appear from perhaps 2013, although this is far from certain.

Circling back to debt

If the peripheral economies stick to their programmes, after some years, it may be feasible and appropriate for the core countries to ease some of the burden on the these economies. This would probably occur through a range of "back-door" restructurings, such as buying-back ECB-held bonds, easing terms on official loans, lowering interest rates, and extending debt maturities.

Back-door restructurings could also support

The cost of doing so would not be particularly high. The public debt of Greece, for example, is less than 4% of euro area GDP, and the sum of Greece, Ireland, and Portugal amounts to less than 7%.

The policies to come

The euro area needs institutional reform...

The euro area will not be safe from the risk of recurrent financial/economic crises until its institutional arrangements have caught up with its degree of economic and financial integration.

There is however much uncertainty at present about the precise policies to be proposed. More will be learned at end-March when, at their Summit, EU leaders reveal what has been dubbed in advance their "Grand bargain." The bank stress tests due to be published around June will also be important.

A mini fiscal union seems probable...

What is clear however is that there will have to be at least a selective ceding of national sovereignty to the EU. A full-fiscal-transfer union is not likely: notwithstanding the strong political commitment that exists in Europe, it is still hard to see sovereign states being prepared to provide permanent transfers of resources on a national basis. (The EU's "structural funds", while a type of permanent transfer, are undertaken on a "regional needs" basis, rather than on a national basis.) However, some form of mini fiscal union, involving greater alignment and coordination of fiscal policies across the euro area, does seem probable. Indeed, the EFSF is itself a form of mini fiscal union with a cap.

We envisage a progression along the following broad lines.

...this should help prevent another Greek-type problem

Fiscal positions. To prevent the recurrence of the direct public-sector problems in Greece, greater centralised control is needed over the budgets of Member States. Public deficits and debt will almost certainly be subjected to considerably strengthened scrutiny. This is likely to include:

- **Stricter oversight** at the European level by the European Commission, with more equal weight given to deficits and debt. In some countries this might be augmented by independent oversight from a body such as the Office for Budget Responsibility (OBR) in the UK, or by more Member States adopting fiscal rules that are enshrined in their national constitutions, (such as Germany's "debt brake");
- **Early warnings** and suggested corrective action from the Commission; and
- **More enforcement**. Fixed rules and automatic sanctions seem unlikely: more probable is some form of semi-automaticity, as currently supported by the German government, the ECB, and the European Commission. If a country was determined to be in violation, penalties could kick in as a matter of course, and might be lifted only if the Council of Finance Ministers so decided.

To prevent another Irish-type problem is more difficult

Macroprudential policies. The problems in Ireland are as serious as they are in considerable part because of their trans-border implications for banks in other countries. Such problems are not unique to the euro area: national banking issues very often become international issues.

To prevent such problems requires a different set of policies – macroprudential policies containing a large supervisory/regulatory element and also a monetary policy component. The need for such policies extends beyond the euro area: the United Kingdom, for example, will also be introducing such a policy framework.

A macroprudential toolkit is being developed

Within Europe there will almost certainly be greater cooperation and alignment of financial market policy/banking policy/regulation through a European-wide micro- and macro-prudential policy toolkit, overseen by the European Commission and the ECB. This may include:

- Greater monitoring and peer review;
- Early warnings (but initially without enforcement);
- Recommendations for policy change; and finally
- Enforcement (by discretion rather than by rules and automatic sanctions, although reverse consensus is being discussed).

Additional reforms seem likely in respect of cross-border resolution of banks/living wills; and the monitoring and controlling of credit – possibly by non-price means. One implication is likely to be that the European banking sector will have fewer and larger institutions.

A crisis resolution mechanism is coming

A permanent crisis resolution mechanism. This has been agreed in principle, along the lines of the present EFSF, but probably larger: i.e. a framework for resolving public debt issues (and private debt that could become public debt) in a more orderly way than has been possible in this crisis. This would likely include:

- Involvement of the private sector in future debt resolution;
- Strict conditionality;
- Some form of Brady-bond-type option for resolving private/public debt issues; and

- Some form of common bond/guarantee/collateral (effectively insuring a part of the debt of the economies of the periphery) in exchange for strict reforms. Countercyclical unemployment insurance from an increased EU budget would seem unlikely.

The issue of moral hazard would thereby have effectively been laid to rest by new tough rules in respect of deficits and debt having been put in place at the euro area level.

Euro area imbalances may be a particularly intractable problem

The competitiveness issue is one of the euro area's biggest challenges, and could prove particularly intractable. The rising relative costs and prices in the peripheral economies have both contributed to, and been exacerbated by, these economies' problems, and in turn have contributed to the imbalances that have built up in the euro area.

Solving this problem requires that in the years ahead prices and unit labour costs grow more slowly in the peripheral economies than in the core. This is not easy. It would have to involve agreement with the major unions, and the alignment of various product market regulations with best practice, rather than national vested interests. Naturally some countries are likely to resist this strongly.

But longer term labour market integration will help

Longer term, as Europe's labour market becomes progressively more integrated, particularly as regards youth, the severity of this problem may well diminish, but it will probably be many decades before Europe's still-regional labour markets are as responsive to supply and demand factors as they are in the United States.

Conclusion

We thus take the declaration by Europe's Heads of State on 16 December 2010 (when formalising their intention to establish the European Stabilisation Mechanism and amend the Lisbon Treaty accordingly) as meaning what it says: that Heads of State are "ready to do whatever is required" to protect the euro.

Strengthening evidence that the euro area authorities are indeed proceeding along the requisite basic lines stands to be a key signal that the euro area's domino problems are on the way to being stopped. To the extent that all this happens, the euro area and thereby the EU stands to become a more robust monetary union – perhaps even with stronger instruments or practices for controlling the budgets of its individual Member States than the US federal government has in respect of its states. The US federal government often imposes conditions, or offers incentives, along with its funding grants. However, the US federal government's powers over the states do not come close to the 'coercive force' of the EU/IMF programmes in Greece or Ireland.[163]

Meanwhile the euro area as a whole will have far more people, as expansion occurs into Eastern Europe, which looks set to play an increasing role in Europe's future (see Chapter VIII).

This crisis may not be Europe's last, but...

Europe's future path will not be straightforward. Even some years from now the monetary union may not have become fully sustainable. But as structural policies bear fruit and structural characteristics converge, the union will become less prone to the sorts of problems that have been afflicting it, and better able to deal with new types of shock should they occur.

... sustainability will proceed stepwise

This crisis may not be the last. But provided that political will remains, Europe will probably continue to proceed stepwise to sustainability.■

Annex **Peter Attard Montalto**

The Lisbon Treaty

The Lisbon Treaty forms the cornerstone of the EU's economic, political, and institutional base.

- The Treaty has proved sufficiently broad and flexible to permit the range of policy responses necessary to manage the crisis.
- The existing framework provides much scope within which to implement further policy reform to strengthen the EU and enable it to avoid similar crises in the future.
- Deeper reforms are needed to create a more optimal currency area, but such substantial changes to the Treaty seem unlikely.

Introduction

The Lisbon Treaty has proved capable

Throughout this current crisis the response of the EU has been extraordinary, in two respects. The first was the fundamental change of mindset in accepting that there were issues that had to be addressed. The second concerns the measures that have been put in place to address them.

The breadth and flexibility of the Lisbon Treaty have proved to be beneficial, and the Treaty has demonstrated itself capable of providing a legal basis for the policies needed to address the situation.

Investors have had to become familiar with the Treaty – a complex and difficult task that occupies the minds of many legal experts. Being economists, not lawyers, we offer only under advisement our outline interpretation of the present and evolving situation of some of its parts.

The basis for action

EFSM and EFSF were created pursuant to Article 122...

Article 122. The first issue concerns the very basis for action, Article 122 of the Lisbon Treaty, pursuant to which both the European Financial Stability Mechanism (EFSM) and European Financial Stability Facility (EFSF) were created.

The article states that action can be taken to help individual Member States, in the interest of solidarity. It also stipulates that this assistance can be financial, but that assistance can be provided only where the difficulties in which a country finds itself are caused by circumstances beyond that country's control.

The EU determined that the recent difficulties faced by the economies of Europe's periphery were caused by the financial crisis originating in the US. This was a liberal interpretation, and has become controversial.

...on the basis of a controversial interpretation

The EU interpretation is now being tested in the German Constitutional Court, which may well rule on the issue during 2011. Our judgement is that the first clause of the Article is indeed sufficiently general to allow the EFSF (a Council institution) to act. But a problem could arise with the EFSM (a Commission facility which provides assistance from the Union): it may well fall foul of the second clause.

1. *"Without prejudice to any other procedures provided for in the Treaties, the Council, on a proposal from the Commission, may decide, in a spirit of solidarity between Member States, upon the measures appropriate to the economic situation, … [ ]."*
2. *"Where a Member State is in difficulties or is seriously threatened with severe difficulties caused by natural disasters or exceptional occurrences beyond its control, the Council, on a proposal from the Commission, may grant, under certain conditions, Union financial assistance to the Member State concerned. …[ ]."*

The other much-talked-about articles in the Treaty are Article 123, which governs the ECB's actions in the crisis, and Article 125, the supposed "no bail-out clause".

Article 123 prohibits certain actions by the ECB

Article 123 prohibits the ECB from subsidising national debt, or offering direct loans to Member States, even in a crisis. The ECB's Securities Market Programme (SMP), which buys government bonds of the periphery states in the secondary markets, has therefore been dubbed a liquidity support programme, rather than quantitative easing (QE) to lower borrowing costs of

Member States. Operations in the secondary markets, or indeed primary market QE (buying debt at auctions), would not be allowed.

At the time that the Treaty was written this was a red-line issue for Germany, and it remains so. The importance of this article can be seen by the current debate, within the EU and among investors, about what entity could in the future be responsible for buying Member State debt.

1. *"Overdraft facilities or any other type of credit facility with the European Central Bank …. [ ] …. in favour of Union institutions, … [ ] … central governments, . [ ] … shall be prohibited, as shall the purchase directly from them by the European Central Bank … [ ] … of debt instruments."*

Article 125 is often called the "no-bail-out clause". We disagree with its being so dubbed, judging it to be one of the areas of the Treaty which, rather than being general, is instead quite specific. Part of the issue here is what is understood by "bail-out." If "bail-out" means providing another Member State with a loan or cash, then our reading of Article 125 is that this is not forbidden.

Actions so far seem within the bounds of Article 125

What the article apparently does prohibit, however, is transfer of liability from one Member State to another, or from a Member State to the EU as a whole. A bail-out of this form has so far not been undertaken in this crisis. No Member State has taken responsibility for the individual bonds or loans of another country, even if there is determination to help the state in trouble to honour those commitments. We do not therefore consider that Article 125 constitutes a block on current policies.

However, this article was of such concern to the Council that, in May 2010, the EFSF (and the Greek bail-out itself) was given a specific, "liability-remote", structure so as not to contravene the Treaty. In the case of the Greek bail-out, bilateral loans were provided, and the existing debt was not subsumed by other Member States. And while Member States guarantee the EFSF, neither they nor the EFSF is liable for Member-State debt. Notwithstanding, this article too is being tested by the German Constitutional Court.

1. *"The Union shall not be liable for or assume the commitments of central governments, … [ ] … or public undertakings of any Member State, … [ ] … A Member State shall not be liable for or assume the commitments of central governments … [ ] ... of another Member State..."*

Ensuring the sustainability of monetary union

Reform is needed to secure against future crises

More recently the EU, and more specifically the euro area, is at a difficult juncture in terms of its resolution of this crisis. The Lisbon Treaty has provided many of the tools and constraints needed to keep the Member States on the straight and narrow, and give a more secure basis for the single currency. Here the Stability and Growth Pact (SGP) was the key part of the Treaty, together with the accompanying Excessive Deficit Procedure (EDP) in the Treaty's Protocols.

The current framework seems adequate…

While the Treaty couches policy in these areas in generalities, the Commission came up with specific policy in both areas, as it was mandated to do by the Treaty. The issue became the implementation of these policies, and how they passed through the Council. We judge that the existing framework (as opposed to the specific policies themselves) is sufficiently flexible to accommodate the policy changes needed to secure against a future crisis.

...but policy must improve to create a more optimal currency area

The challenge now is how the policy base of the single currency is to be reformed in order to make the euro area an optimal currency zone, or at least move it closer to that goal. The Treaty is key here. The process is being carried out almost entirely under the existing rules – Articles 121 and 136 – which state the need for policy coordination and cross-country policy surveillance to ensure the sustainability of monetary union. Again, however, such rules, particularly as regards surveillance, were already in place under the Maastricht Treaty, but they were implemented neither as fully nor as properly as is now being envisaged under the new "budget semester" cycle of cross-country monitoring.

Article 121

1. "*Member States shall regard their economic policies as a matter of common concern and shall coordinate them within the Council... [ ] .*"

2. *"The Council shall, on a recommendation from the Commission, formulate a draft for the broad guidelines of the economic policies of the Member States and of the Union... On the basis of this conclusion, the Council shall adopt a recommendation setting out these broad guidelines..."*
3. *[Multilateral surveillance clause]*
4. *"Where it is established, under the procedure referred to in paragraph 3, that the economic policies of a Member State are not consistent with the broad guidelines referred to in paragraph 2 or that they risk jeopardising the proper functioning of economic and monetary union, the Commission may address a warning to the Member State concerned. The Council, on a recommendation from the Commission, may address the necessary recommendations to the Member State concerned."*
5. *[Further multilateral surveillance clause]*

Article 136

1. *"In order to ensure the proper functioning of economic and monetary union, … [ ] … adopt measures specific to those Member States whose currency is the euro: (a) to strengthen the coordination and surveillance of their budgetary discipline; (b) to set out economic policy guidelines for them, while ensuring that they are compatible with those adopted for the whole of the Union and are kept under surveillance."*
2. *[Such policies can be put in place via QMV.]*

The co-decision-making process is under way

The co-decision-making process is currently under way, strengthening the existing rules and framework laid down in the Treaty for the SGP and the EDP, as well as economic governance more generally, and strengthening structural reform policy.

The constraints of the Lisbon Treaty

The Treaty constrains policy

While the Treaty has supported the policy response to the crisis, it has also constrained what policies can be put in place.

It has been suggested that some degree of compulsion should be added to post-crisis economic governance. But this was quickly dismissed on the basis of political and Treaty difficulties. In part this can be interpreted as the Treaty doing its intended job of protecting the interests of Member States:

- **Removal of voting rights as part of EDP**: There is no mechanism for this under the present Treaty, which specifies that voting rights can be removed only for serious human rights violations. Removal of voting rights would therefore require a change to the Treaty, which has been deemed unfeasible by the Council given the politics involved.
- **Ejection from the euro:** There is no provision for this in the Treaty, even should a country want to leave. (At the time of the formation of the euro, and indeed still, convergence into the euro area was considered to be a one-way street.) There is a presumption that the process for a Member State voluntarily leaving would work similarly to the way provided in the Treaty for leaving the EU. This involves notice being given by the state concerned, followed by a "work out period".

  However, a forced exit would require Treaty change, and is seen as both politically impossible and contrary to the euro area's principle of solidarity.
- **Withholding structural funds or other Union payments** (such as under the Common Agricultural Policy (CAP)): The Treaty contains some scope to allow for this but, as with voting rights, it would normally be used only in extreme circumstances. And it has run into heavy opposition from the countries of the periphery, for whom Union payments will be vital to recovery, and from others in Emerging Europe who need these funds in order to develop and converge.

For ESM an amendment is needed

So far the policy route from the crisis seems to be reform via the co-decision framework, but with one exception – the establishing of the European Stability Mechanism (ESM) (the post-2013 permanent rescue facility). To facilitate this, a short clause is to be added to Article 136 of the Lisbon Treaty:

1. *"The Member States whose currency is the euro may establish a stability mechanism to be activated if indispensable to safeguard the stability of the euro area as a whole. The granting of any required financial assistance under the mechanism will be made subject to strict conditionality."*

That this is being done pursuant to Article 136 shows that the ESM will be a euro-area entity (although we understand that, like the EFSF, it will not be an official Union body) and thereby not something for which non-euro-area states will be liable. But the clause is laced with politics, German politics in particular. The reference to "indispensable" and the need for strict conditionality were necessary to keep core European states happy. Equally, the whole process of Treaty change itself is being undertaken in order to satisfy Germany and its Constitutional Court.

The EU had hoped to avoid having to change the Treaty

The EU and the Commission in particular did not want to undertake the long and difficult process of Treaty change, judging (perhaps correctly) that the existing rules were sufficient – while recognising the need to ensure that the entire mechanism would not be unwound by the German Constitutional Court. What the change does is to make central the stability of the euro area, as opposed to the needs of individual Member States in Article 122. It is also couched in general terms, allowing for more detailed policy to be developed later.

The change process tends to be lengthy and complex...

The process of Treaty change will now likely take two years, notwithstanding the "simplified modification" being undertaken. A complex process of ratification by national parliaments will now have to occur, even if the full change process involving inter-governmental conferences and referenda is avoided (although it is still uncertain whether domestic Constitutional Courts in some countries will require referenda).

This method of change is allowed only if "competences" (power or sovereignty over policy) are not being transferred up to the EU. This may well be technically correct. The Treaty amendment does not entail any transfer of competence, and Member States that sign up to the ESM will do so by agreeing individually to abide by conditionality. This process of change may be fraught with difficulty, as was seen with the ratification process of the Treaties of Lisbon and Nice before it, and each step is sure to be focused on intensely by investors.

The EU clearly wishes to use the simplest process possible for Treaty change. It wants to avoid any knock-on problems in other areas of policy and bargaining between Member States – such as one saying that it will support a given clause concerning, say, economic governance, only if it gains support for, say, a new clause on social policy.

However, that might be to miss the important opportunity that Treaty change could provide. The specific aim was to avoid transferring competences to the EU so as not to trigger the full and more complex form of Treaty change. What would be ideal, in our view, would be a move towards an optimal currency zone, with transfers of competences in more areas of economic and fiscal policy, and so greater control and oversight from the centre.

...but is needed to strengthen the EU

Alternatively, given the absence of political appetite for full fiscal union, an intergovernmental conference on treaty change to strengthen the euro area may have served policymakers well. After all, this crisis is not only a crisis of debt, but also of governance (and solving it means addressing how the Treaty is worded, interpreted, and put into practice). Reforming the SGP articles and EDP protocols in the Treaty would have shown policymakers' resolve to sort out all the issues in one go, and set them in stone. The trouble with the co-decision process between the parliament and Council is that it is opaque, lengthy, and difficult for markets to follow: Treaty change, by contrast, is out in the open.

The Treaty could play an important role in resolving the euro-area issues that are still on the table, but more as a block than a help. While the generality of the current Treaty may well be suited to dealing with governance and surveillance issues, establishing new institutions and competences for the euro area is more difficult:

- **Central Eurobonds issuance**. We think this would be a serious stretch within the scope of the current Treaty. It has been suggested that Article 122-1 could be invoked, but that is normally taken to be a crisis clause. The first issue would arise were a transfer in competence to occur by having a central institution issuing debt on behalf of a Member State. The liability structure of such an institution would be key. It could not be backed by

the EU budget, given that non-euro-area states would be liable. But if it were backed by only euro-area states, how could it be compatible with Article 125?

One way might be to make countries liable jointly and severally for all bonds outstanding (although that would place major contingent liabilities on smaller Member States). However, it would mean that, were a country to default on a payment to a central treasury, other countries would already be liable, not for the defaulting country's specific undertakings (which would not be allowed) but for the bond in general. The free-rider problems here appear complex. Undertaking this would almost certainly in our view require Treaty change.

- **Central taxation**. This is already explicitly allowed under the Treaty, and was one of the more controversial parts during its original ratification. The EU has the ability both to draw general taxation from member governments and also to charge its own taxes in Member States, should a decision be taken in Council to allow it to do so. This is already being discussed on an EU-wide basis, with a form of VAT (of around 1-2%) to fund the central budget. It would be a small additional step to make this euro-area specific.
- **Fiscal rules for euro-area states**. These already seem possible under the existing Treaty, which allows the Commission to devise economic frameworks for the stability of the euro area.
- **Central treasury function**. There is no provision in the Treaty for more generalised expenditure and revenue functions at a euro-area level with regard to specific Member States, and the liability structure of such an undertaking would be complex. This would almost certainly require Treaty change.
- **Cross-Member-State fiscal transfer**. This would depend on the system that was proposed. In effect fiscal transfers already occur in the CAP and structural fund disbursements. It seems possible that, under the Treaty, the structural fund route could be used for more general fiscal transfers to fund the EU budget, although there might be a problem making it euro-area specific. However, more generalised fiscal transfers within the euro area from richer to poorer members, in order to balance budgets, would be difficult and would be a clear transfer of competence requiring Treaty change.

Deeper reform of the Treaty seems unlikely, however

Thus the Lisbon Treaty has provided a framework for the EU's current support of countries. But it has also been, and will likely continue to be, a hindrance to reform in some areas, especially when combined with domestic politics of Member States. This may suggest a need for more general and deeper Treaty reform. But that seems unlikely at present.■

List of abbreviations

AMECO	The annual macroeconomic database of the European Commission
bn	Billion
bp	Basis points
Bunds	German government bonds
CACs	Collective action clauses
CAP	Common Agricultural Policy
CAPB	Cyclically-adjusted primary balance
CDS	Credit default swaps
CEE	Central and Eastern Europe
CFA	Communauté Financière Africaine (African Financial Community)
CIS	Commonwealth of Independent States
CFSP	Common Foreign and Security Policy
CPI	Consumer Price Index
EBITDA	Earnings before interest, taxes, depreciation, and amortisation
EBRD	European Bank for Reconstruction and Development
EC	European Community/Communities
ECB	European Central Bank
Ecofin	Economic and Financial Affairs Council
ECSC	European Coal and Steel Community
ECU	European Currency Unit
EDA	European Defence Agency
EDP	Excessive Deficit Procedure
EEA	European Environment Agency
EEC	European Economic Community
EESC	European Economic and Social Committee
EFSA	European Food Safety Authority
EFSF	European Financial Stability Facility
EFSM	European Financial Stability Mechanism
EFTA	European Free Trade Association
EIB	European Investment Bank
EIT	European Institute of Innovation and Technology
EMS	European Monetary System
EMU	Economic and Monetary Union
EPC	European political cooperation
ENP	European Neighbourhood Policy
EPL	Employment protection legislation
EPS	Earnings per share
ERDF	European Regional Development Fund
ERM	Exchange Rate Mechanism
ESA	European Supply Agency
ESAs	European Supervisory Authorities
ESCB	European System of Central Banks
ESM	European Stability Mechanism
ESRB	European Systemic Risk Board
EU	European Union
EU6	West Germany/Germany, France, Italy, Belgium, Luxembourg, and the Netherlands
EUR	Euro
Euratom	European Atomic Energy Community
Europol	European Police Office

Eurogroup	Meeting of the finance ministers of the euro area
Eurostat	The statistical office of the European Union
Fed	US Federal Reserve
FDI	Foreign direct investment
FROB	Fund for Orderly Bank Restructuring
FTSE	Financial Times and the London Stock Exchange
FX	Foreign exchange
GCC	Gulf Cooperation Council
GDP	Gross domestic product
G20	The Group of Twenty Finance Ministers and Central Bank Governors
HICP	Harmonised Index of Consumer Prices
IBRD	International Bank for Reconstruction and Development
IMF	International Monetary Fund
ln	Natural logarithm
mn	Million
MEP	Member of the European Parliament
OEEC	Organisation for European Economic Cooperation
NAMA	National Asset Management Agency
NATO	North Atlantic Treaty Organisation
NPLs	Non-performing loans
NPRF	National Pensions Reserve Fund
NPV	Net present value
NTMA	National Treasury Management Agency
OAS	Option-Adjusted Spread
OBR	Office for Budget Responsibility
OECD	Organisation for Economic Cooperation and Development
p.a.	Per annum
PASOK	Panhellenic Socialist Movement
PJCC	Police, Judicial Cooperation in Criminal Matters
PISA	Programme for International Student Assessment
PMR	Product market regulation
pp	Percentage points
PPP	Purchasing Power Parity
PTBV	Price to Tangible Book Value
PV	Present value
QE	Quantitative easing
QMV	Qualified Majority Voting
ROE	Return on equity
RTC	Resolution Trust Corporation
RWA	Risk-weighted assets
SEA	Single European Act
SEK	Swedish krona
SGP	Stability and Growth Pact
SIFMA	The Securities Industry and Financial Markets Association
SMP	Securities Market Programme
TARP	Troubled Asset Relief Program
tn	Trillion
UK	United Kingdom
US	United States
USD	US Dollar

VAT	Value added tax
vs.	Versus
WWI	World War I
WWII	World War II
yrs	Years

Three-letter country codes used in charts:

AUS	Australia
AUT	Austria
BEL	Belgium
BRA	Brazil
CAN	Canada
CHL	Chile
CHN	China
CZE	Czech Republic
DEN	Denmark
EST	Estonia
EUR	Euro area
FIN	Finland
FRA	France
GBR	Great Britain
GER	Germany
GRE	Greece
HUN	Hungary
ICE	Iceland
IND	India
IRE	Ireland
ISR	Israel
ITA	Italy
JAP	Japan
KOR	Republic of Korea
LUX	Luxembourg
MEX	Mexico
NED	Netherlands
NZL	New Zealand
PER	Peru
PHL	Philippines
POL	Poland
POR	Portugal
RUS	Russian Federation
SLV	Slovenia
SPA	Spain
SWE	Sweden
SUI	Switzerland
SVK	Slovakia
TUR	Turkey
UK	United Kingdom
US	United States

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Naik, Vasant is a Managing Director and heads the Quantitative Strategies team. His team is responsible for research and development of quantitative investment frameworks and systematic trading strategies for capturing risk premia in global fixed income, currency and commodity markets. Prior to his current role, Vasant was the head of the Global Quantitative Strategies team at Lehman Brothers. He worked at Lehman Brothers from 1998 to 2008. From 1988 to 1998, Vasant was a member of the Finance faculty at the business school of the University of British Columbia, Canada.

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Peace, Jon is a Managing Director and co-Head of Nomura's European Banks research team with specific responsibility for strategy and for wholesale banks. The European Banks team was ranked third in the most recent *Institutional Investor* survey (February 2010) and Jon was recognised in the 2010 *Financial Times*/Starmine survey as No 1 Earnings Estimator in Financial Services. Prior to joining Nomura Jon was Co-Head of European Banks Research at financials specialist Fox-Pitt, Kelton Ltd, and has worked at J.P. Morgan Cazenove and at Arthur Andersen where he obtained his ACA qualification. Jon graduated from Cambridge University in 1993 and holds an MBA from London Business School**.**

Rosten, Jeremy is an Executive Director in Quantitative Strategies. Jeremy was a member of the Quantitative Portfolio Strategies (QPS) team at Lehman Brothers from 2002 until 2008, where he developed an expertise in a variety of portfolio strategy topics including index replication and design, risk budgeting, style analysis and optimisation and a speciality in risk-modelling of fixed income portfolios. From October 2008 he spent two years as a senior investment consultant at a leading firm of consultants to the pensions and insurance industry, joining Nomura in September 2010 specialising in portfolio strategy. Jeremy holds an MA and Postgraduate degree in Mathematics from Cambridge University.

Scott, Ian is Nomura's Global Head of Equity Strategy and Quantitative Research and a Managing Director. He is based in London and is responsible for Nomura's Global and European recommended asset class, sector and stock portfolios. Ian joined Nomura in October 2008 when Nomura acquired the European business of Lehman Brothers. Ian had previously been with Lehman Brothers since February 1995 where he worked as European Strategist until April 2002, at which point he also became the firm's Global Strategist. Since joining Nomura Ian and the team have been highly ranked for both Strategy and Quantitative Research in the European *Institutional Investor* survey.

Prior to joining Lehman Brothers, Ian was Senior Economist at Postel Investment Management (now Hermes Pensions Management). He worked at Postel for four years providing economic advice and contributing to investment strategy. Before joining Postel, Ian worked as an economist in the Economics Department at Bankers Trust in London and, previously, the Economics Department of the Confederation of British Industry. Ian has a Masters degree in Economics from the University of Warwick.

Westaway, Peter is Chief Economist, Europe for Nomura International. He is based in London and is in overall charge of European economics in the Global Economics group with particular expertise in the UK economy. Peter worked at the Bank of England for 13 years where most recently he was a Divisional Head with responsibility for analysis and research on financial markets for the MPC. In 2002-03, he worked on secondment to HM Treasury and provided much of the analytical input to HMT's EMU Five Tests Assessment. Prior to joining the Bank, he was a Senior Research Fellow at the National Institute of Economic and Social Research in charge of the team responsible for modelling and forecasting the UK economy. Peter has a PhD in Economics from the University of Cambridge, where he studied under Nobel prize-winner James Meade, and he was an undergraduate at the University of York.

Endnotes

[1] In terms of GDP. The EU accounts for just over 28% of global GDP.
[2] 'Sinews of Peace' speech, Westminster College, Fulton, Missouri, 1946.
[3] The IMF came into formal existence in December 1945.
[4] The Bretton Woods System came into effect in 1959 and was abandoned in 1971 when US President Nixon announced the US was removing gold backing from the US$. Inflation and a growing trade deficit in the US undermined the US$.
[5] The US held most of the world's gold and the US$ was convertible into gold at $35 per ounce.
[6] In a meeting of the 'Victory Programme' in Washington D.C., 1943.
[7] Marjolin, R. (1989).
[8] Winston Churchill, during his speech to the Academic Youth, University of Zurich, 1946.
[9] He received the title 'Father of Europe' from the European Parliament, of which he was also president 1958 to 1960.
[10] (Robert Schuman, Strasbourg, 1949.)
[11] This was in addition to the aid the US gave to Europe from the end of the war to the beginning of the Plan.
[12] Now the Organisation for Economic Cooperation and Development (OECD).
[13] France, West Germany, Belgium, Italy, the Netherlands and Luxembourg.
[14] Today there are only four members of EFTA: Iceland, Liechtenstein, Norway and Switzerland.
[15] The 's' of European Communities was later dropped, and it became the European Community.
[16] Often taken to be 1945 to 1975, and most strongly linked with the French economy, which was the fastest growing economy of the EU6 in the 1960s (averaging just under 6% GDP growth per year), and the second highest in the 1970s (averaging just under 4% per year). Growth in the US was lower over the same periods, at just over 4% and just over 3% respectively (source: Eurostat).
[17] A regime installed in 1933 by Oliveira Salazar.
[18] At the 1974 Paris Summit.
[19] In 2010 the EU budget was €141.5bn; equivalent to about 1.2% of the EU's GNI (about €235 per head of population). It is not a stabilisation instrument, but a fund to improve the life of its citizens.
[20] Britain, France, West Germany, Italy, the Netherlands, Belgium, Luxemburg, Ireland, Denmark, Greece, Spain and Portugal.
[21] Led by British Prime Minister Margaret Thatcher and Arthur Cockfield.
[22] J. Delors' 1989 report based its definition of Economic and Monetary Union as set out in the Werner Report of 1970.
[23] The ESCB was formed in 1998, and is composed of the independent ECB and the national central banks of the countries of the euro area.
[24] For more on these different models, see Albert (1993) and Smith (1999).
[25] See Blundell (1961).
[26] The Maastricht Treaty is also known as the Treaty on European Union.
[27] Source: Buti and Giudice (2002).
[28] Article 104c, stipulates a number of criteria and positions under which a country's deficit could be greater than 3%, notably: if either "…the ratio has declined substantially and continuously and reached a level that comes close to the reference value" or "the excess over the reference value is only exceptional and temporary and the ratio remains close to the reference value".
[29] Fluctuations between a non-euro currency and the Euro had to remain +/- 15% of the agreed central exchange rate for that currency.
[30] Treaty on European Union, 1992, no. 92/C 191/01.
[31] Europe's single market was ostensibly created in 1993, but remains an ongoing project. The free movement of some services (e.g. energy) were delayed and the process continues today.
[32] Source: Shore, C. (2000).
[33] CEPR: "*To illustrate the deepening of institutional integration we assign scores from 0 to 25 to mark the development of, respectively, a Free Trade Area/Customs Union (considered jointly), a Common Market, an Economic Union, and an area with Total Economic Integration. By summing up the scores achieved at each moment in time, an index of institutional regional integration is obtained. It can range between 0, no integration, and 100, full institutional integration (see Dorrucci et al (2004) for a detailed analysis). Forming a full political union, akin to a sovereign state, goes beyond these five stages. The figure illustrates the evolution of the index, as well as, the main steps toward monetary and financial integration.*"
[34] Estonia, Latvia and Lithuania; and Bulgaria, the Czech Republic, Hungary, Poland, Romania and Slovakia.
[35] The SGP was reformed in 2005 to allow greater flexibility.
[36] Greece met the inflation criteria in 1999.
[37] Concerns have been expressed about manipulation of budget deficit numbers. There was 'creative accounting' in a number of countries but, nevertheless, most made considerable efforts to converge – see De Grauwe (2009).
[38] Greece's deficit however was only marginally above, at 3.1% of GDP, in 1999.
[39] The 11 States were: Belgium, Germany, Ireland, Spain, France, Italy, Luxembourg, the Netherlands, Austria, Portugal and Finland.
[40] European Commission Website, 'Quotes' section (URL: http://ec.europa.eu/economy_finance/emu10/quotes_kohl_en.htm).
[41] The Lisbon Treaty alone took over eight years to agree.
[42] CEPR (May 2010). For more information on the benefits and costs of monetary union, see CEPR (March 2010).
[43] Often taken to be somewhere between stages 4 and 5 of the classification (of the five main stages of integration, first suggested by Balassa (1961)).
[44] Notably: ageing populations, climate change, sustainability of energy, and new security threats.
[45] Source: IMF World Economic Outlook database, April 2010.
[46] Before accession negotiations can be opened, the European Commission must be satisfied that the country meets certain political criteria: stable institutions, the rule of law, human rights and the protection of minorities. The framework and instruments necessary to meet the remaining economic, social and political criteria are then provided. The accession criteria of 1993 were strengthened in 1995.
[47] Although Denmark has been a member of ERM II since it was set up on 1 January 1999.
[48] The variables that inform much of the analysis in this chapter pertain to public, private, and external deficits (flows); public, private and external debt (stocks); and competitiveness.
[49] The euro area's public debt crisis is taken to have begun with the revelations in late 2009 of the true state of Greece's public deficit, thereby causing market revisions regarding future debt obligations. These numbers were subsequently revised (up) yet further in 2010.
[50] The private sector balance is taken as the sum of the household and (non-financial) corporate sector's net borrowing.
[51] Eurostat data for 2006 and 2007 were not available for Greece (as of February 2011).
[52] The period average for 1999-2007 is used where the full set of data is available.
[53] This compares with an average surplus of over 1% of GDP for the euro area as a whole.
[54] See Chapter I: *From Marshall Plan to monetary union* for more on European convergence before 1999.

[55] Based on harmonised indexes of consumer prices, all items (Eurostat).
[56] Greece formally joined the euro in 2001. The pre-euro period for Greece is taken to be 1994-2000, and the post-euro period 2001-2007.
[57] Private debt is measured as domestic claims on the private sector by the banking system.
[58] Except France, which is not shown in the Picture Book.
[59] The financial crisis is taken to have begun in Q1 2008.
[60] Data were not available for Greece for this period.
[61] This memorable phrase owes to Michael Feiner.
[62] Condensed from Kindleberger, C. P., (2000), *Manias, Panics and Crashes*, 4th edition, pp. 13-18 (John Wiley & Sons).
[63] While pre-crisis trend growth may not have been sustainable in some euro-area economies, it is still relevant because it is the rate of growth on which economic agents will have based a range of expenditure decisions.
[64] See Cotter (2009).
[65] Average losses in export market share in 2008 and 2009 were: 8% in Italy, 4% in Greece, and 2% in Spain. Market share also fell on average in the other core economies, while in Portugal it was broadly constant.
[66] Cyclically-adjusted balances are helpful in isolating the long-term challenge for fiscal policy. These balances are not altered by economic growth and thus represent the part of the challenge that fiscal retrenchment must address.
[67] 2009 was deemed the most appropriate point at which to evaluate the full scale of the fiscal challenge that the periphery faces. By 2010, large fiscal consolidations had started, particularly in Greece.
[68] The fiscal tightening is assumed to occur between 2009 and 2020. Beyond the actual fiscal tightening in 2010, an even pace of continued consolidation is assumed to 2020.
[69] The primary balance is assumed to increase gradually from 2010-2020, and then remain constant to 2030.
[70] The historical consolidations depicted are taken from table 9: *Country Experiences with Large Fiscal Adjustment* in the IMF (2010) *World Economic Outlook* (April).
[71] See IMF (2010) *World Economic Outlook* (May).
[72] Ireland's largest fiscal adjustment was earlier (in the 1980s). In the 1990s, when large fiscal consolidations were widespread in other European countries, Ireland did not conduct as large an adjustment, though it did move into significant surplus before euro entry in 1999. Portugal's largest fiscal consolidation was also in the 1980s, though it too consolidated its public finances significantly in the convergence period. (For further information on the convergence period, see Chapter I.)
[73] Based on adjustment in the cyclically adjusted primary balance, see IMF (2010).
[74] In Figure 7, the required consolidations shown for the periphery economies are to achieve a 60% debt ratio in 2030 and assumes an interest rate/growth rate differential of 1%.
[75] If the alternative debt target of 90% is used for Greece, the required fiscal consolidation falls to around 15pp of GDP.
[76] Source: Nomura Global Economics.
[77] The differential turned from negative to positive as the interest rate far exceeded the (now negative) growth rate of GDP. Though bond yields did increase in this period, and countries were faced with new borrowing and the rolling over of existing debt at higher rates, the average interest rate on existing debt did not increase much in this period (for more see Westaway *et al* (2010). This is likely to happen over time however as debt is rolled over and new borrowing occurs at higher rates than has historically been the case.
[78] The rate of increase in the cost of servicing the national debt depends on future refinancing needs, and the cost of borrowing (itself a function of fiscal consolidation, the European Stabilisation Mechanism (which includes the European Financial Stability Facility) and the proposed permanent replacement (see Chapter IV), as well as policies from the ECB).
[79] In the case of Greece, the large stock-flow adjustments from 1999 to 2007 are likely to, in effect, represent misreported deficits – thus deficits and stock-flow adjustments can largely be interpreted as one and the same in this period.
[80] Without the addition of significant stock-flow adjustments, Ireland's debt/GDP ratio would have fallen further.
[81] That private debt rose so markedly in euro area economies such as Ireland is due both to large domestic credit growth and also to growth in external debt, with credit supplied readily by other euro area economies and their banking sectors – which suffered from many of the same financial policy failures as occurred in Ireland.
[82] This is much further away from primary balance than is expected in Greece in 2012, and therefore primary deficits stand to add more to the public debt in Ireland than in Greece over the period. However, Greece's more rapid fiscal consolidation is likely to have a larger impact on its economic growth than might be expected for Ireland. Hence, Greece is likely to have a larger snowball effect, particularly given its much larger public debt.
[83] As per the illustrative fiscal consolidations presented earlier in this chapter, and also the illustrative calculations of required fiscal consolidations in IMF (2010), the target primary balance is assumed to be achieved in 2020 and maintained until 2030, so as to achieve a 60% debt ratio in 2030.
[84] Even once trend growth is restored to the periphery, it is likely that long-term bond yields (and hence over time, average interest rates) will rise. Our central estimates are for average nominal interest rates to rise to 6% in all the periphery economies by 2020, which is likely to be above long-term growth rates. For example a (somewhat optimistic) 3% real growth rate for economic potential, taken together with 2% inflation, gives an interest rate/growth rate differential of 1% after 2020.
[85] For more on convergence in the euro area before 1999, see Chapter I.
[86] The early literature on optimal currency areas includes an important contribution by Mundell (1961). In the specific case of the euro area, many warned in the design phase of monetary union that some limitations left considerable potential for trouble (see for example Bayoumi and Eichengreen (1993), CEPR (1993); and Eichengreen (1993)).
[87] This could help to avoid a situation such as that which followed the stress tests in July 2010, the results of which did not indicate the trouble that Ireland was to find itself in not long after. The results of the first stress tests, in September 2009, were not made public.
[88] See in particular the Box: *Sectoral balances and public debt dynamics* in Chapter III.
[89] From 2007 to 2010: In the euro area: the public debt/GDP ratio increased by 18 percentage points, from 66% of GDP to 84%, and the public deficit from 1% of GDP to 6% of GDP. Over the same period in the US, public debt increased from 62% to 92% of GDP; and the public sector deficit from 3% to 11% of GDP. (source: European Commission AMECO database).
[90] Nomura projections
[91] See Alesina and Ardagna (2010).
[92] The consolidation episodes are those analysed by Alcidi and Gros (2010). The periods which the data cover differ from, but overlap somewhat with, the fiscal consolidation episodes summarised in Chapter III, and reported in IMF (April, 2010) *World Economic Outlook*.
[93] The announcement of the Irish package in May 2010 did bring a measure of debt relief for Greece (on 30% of outstanding debt in 2013).
[94] Countries that participated in the Brady Plan include: Argentina, Brazil, Bulgaria, Costa Rica, Cote d'Ivoire, the Dominican Republic, Ecuador, Jordan, Mexico, Morocco, Nigeria, Panama, Peru, the Philippines, Poland, Russia, Uruguay, Venezuela and Vietnam.

[95] Debt relief occurred through a negotiated exchange of existing bonds, for a range of options including: Par Bonds, Discount Bonds, Floating Rate Bonds/Front Loaded Interest Reduction Bonds, and Past Due Interest Bonds/Interest Arrears Bonds. See Firoozye and Wyman (2010) for more.
[96] See Veron (2010), and Blundell-Wignall and Slovik (2010).
[97] Exposure to Italian public debt was also high, with holdings equating to 26% of Tier 1 capital. Holdings in Ireland, Portugal and Spain were smaller, at 1%, 3%, and 4% respectively.
[98] German banks were also heavily exposed to Italian public debt, holding €72.7bn (48% of Tier 1 capital). See Blundell-Wignall and Slovik (2010).
[99] Germany, France, and the economies of the euro area's periphery have, between them, a number of systemically important banks. Many have received government assistance and/or taken steps to raise additional capital. Such institutions include Hypo Real Estate and Commerzbank (Germany); Crédit Agricole (France); ATEbank (Greece); Banco Popolare; Credito Valtellinese; and Banco Monte dei Paschi di Siena (Italy).
[100] The SMP was announced by the ECB alongside the EFSM and EFSF, over the weekend of 8-9 May 2010.
[101] *OECD Economic Outlook* (2010) No. 88
[102] IBM (2010) ranked Ireland the number one destination globally for jobs created by inward investment, (Source: RTE News, 22 October 2010).
[103] Gray, A., *Inward Investment will be key to recovery*, www.IrishTimes.com, 16 December 2010.
[104] See Duval *et al*., (2007).
[105] See Duval and Vogel*, (*2007).
[106] See Bassanini and Duval (2006).
[107] See Piracha and Vickerman (2002).
[108] Source: OECD (2010) *Euro Area Economic Survey.*
[109] See Barnes et al. (2011)
[110] See OECD (2010).
[111] See Allard and Everaert (2010).
[112] See Allard and Everaert (2010).
[113] See Bassanini and Duval (2006).
[114] See D'aggio (2007).
[115] In 2007 - the most recent OECD data available at the time of writing.
[116] That little change has occurred since 2006 in terms of PISA testing is not surprising: it takes many years for education reforms to begin to show results.
[117]See Bourlès *et al., (2010).*
[118] See Monti (2010).
[119] See Boulhol *et al., (2008)*.
[120] See OECD (2010a).
[121] See OECD(2010b).
[122] Feldstein (2010).
[123] US Census Bureau and Pandl (2010)
[124] In the form of Medicaid matching, the State Fiscal Stabilisation Fund, transportation funding, education-related aid, housing and other aid.
[125] See Bradbury (2010) and Pandl (2010).
[126] Llewellyn, J. (2010).
[127] See Goodhart (2010).
[128] For the first five years.
[129] For a comprehensive, and thoroughly readable, account of time-varying capital ratio policies, see Elliott (Forthcoming).
[130] See also IMF (2010b).
[131] The general government sector is divided into four sub-sectors: central government, state government, local government and social security funds. (See Eurostat *concepts and definitions* database for more).
[132] The data in this paragraph have been taken from the European Commission, Economic and Financial Affairs, http://ec.europa.eu/economy_finance/ameco/user/serie/ResultSerie.cfm.
[133] Under the proposed 'reverse majority' system the Commission proposes an action and/or sanctions, and these are accepted unless a (qualified) majority decides otherwise.
[134] Implemented January 2011.
[135] The Van Rompuy Task Force was set up to drive the reform process of the euro area.
[136] See OECD (2010) *Economic Survey of the Euro Area*.
[137] This form of semi-automaticity would represent a break from the past, and extends to the newly proposed Stability and Growth Pact. The decision-making process is likely to be 'reversed,' such that the Commission proposes action and/or sanctions, and these are accepted unless a qualified majority decides otherwise. (Previously, the Commission would make a recommendation to the Council or ECOFIN, and Minsters would then have to accept it with a (qualified) majority.) For more see Wyplosz (2010). For more on European institutions, and issues such as qualified voting, see Chapter I, including the Box: *The ties that bind: the Treaty base of the EU.*
[138] The Commission is reportedly pushing for semi-automatic sanctions.
[139] A more detailed analysis of the relationship between fundamentals and spreads can be found in our fiscal sustainability scorecard http://www.nomura.com/research/getpub.aspx?pid=354648
[140] See link: http://ec.europa.eu/economy_finance/publications/publication6372_en.pdf
[141] For example see the Bond paper – http://www.astrid-online.it/Dossier--d1/EUROBONDS/EPDA_SIFMA-Europe-Common-Bond-Report-2008-09.pdf and the Bill paper – http://europe.sifma.org/epda/pdf/EPDA-Note-Towards-Common-European-T-Bill.pdf
[142] See link: http://www.ft.com/cms/s/0/540d41c2-009f-11e0-aa29-00144feab49a.html#axzz1EmdoFtnN.
[143] See Delpla, J., and von Weizsäcker, J. (2010), *The Blue Bond Proposal (*Bruegel) http://www.bruegel.org/publications/show/publication/the-blue-bond-proposal.html.
[144] This assumes that risks inherent in swaps, i.e. the banking sector, are similar for Germany and the US. And hence the long-run spread of swap spreads between Bunds and Treasuries, 30bp, is attributable to the increased liquidity premium/reserve currency status of Treasuries.
[145] Formerly the Communauté française d'Afrique, later the Communauté financière d'Afrique.

[146] In all our analyses, we use data from the Merrill Lynch Fixed Income indices, and classify the set of euro area sovereigns into "core" and "peripheral" economies as follows: "Core": Germany, the Netherlands, France, Finland, and Austria. "Peripheral": Ireland, Portugal, Spain, Belgium, Italy, and Greece.
[147] Spreads are defined as the Option Adjusted Spread (OAS) of the bond index of a country to a broad benchmark of euro core bonds. Spread change volatility presented in this Figure is an annualised volatility which is estimated by trimming the top 5% of weekly spread changes.
[148] Log-normal spread change volatility presented in this Figure is a non-annualised volatility, estimated by trimming the top 5% of weekly proportional spread changes.
[149] Rolling 52 week average.
[150] We consider the index defined as comprising euro-denominated debt from major investment grade EMU sovereigns, excluding issuers with less than 1% market value weighting in the more inclusive all-issuer index i.e. Luxembourg, Cyprus, Slovenia, and Slovakia.
[151] This should not be confused with diversification effects, however. For example, while the correlated risk contribution in column 6 of Figure 11 from spread is 1.99% per annum, the overall risk level is lower than the 5.77% p.a. figure for isolated yield curve risk – spread risk does serve to reduce overall volatility in the presence of a pre-existing yield curve exposure.
[152] The analysis presented corresponds to our specific assumptions, but these can easily be adapted to incorporate individual investor views on questions such as default probabilities, correlations, and recovery rates.
[153] Base case distress probabilities are taken from Moody's Global 1 Year Rating Migration Rates Forecast Ending December 2011.
[154] For example. for AA rated debt downgraded to single-A status over a period of six months is estimated from Moody's data at a 5.2% likelihood, and to BBB status at 0.09%, with zero probability of a downgrade to distressed status.
[155] We apply constraints of 15% for each AA rated issuer; 10% for A, and 5% for BBB.
[156] Clearly, in the context of the full benchmark tracking portfolio upon which this additional exposure is overlaid, the incremental total return volatility resulting from the increased peripheral allocation would be less than 50bp after the effects of diversification.
[157] December data.
[158] Please see our 2011 European Strategy Outlook published 5 December 2010 for more details.
[159] As defined geographically.
[160] And indeed all the Member States that are not in the euro.
[161] And indeed the core hub of integrationist and expansionist tendencies within the EU institutions.
[162] See Nomura (2011), *The Irish question*, Global Weekly Economic Monitor, February
18 http://www.nomura.com/research/getpub.aspx?pid=420419
[163] This point has been made by, *inter alia*, Kirkegaard (2010)

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In addition to the works cited above, a considerable part of the current intellectual discussion on which this Study draws owes to a number of commentators, including importantly:

- **Wolfgang Münchau's weekly column in the Financial Times;**
- **Martin Wolf in the Financial Times and blog Martin Wolf's Exchange;**
- **Various contributors to FTalphaville;**
- **Various authors in VoxEU** (many of whom are explicitly cited above)
- **Jeremie Cohen-Setton in his periodic Bruegel Economic Blogs Review**

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