

The Eurozone: Time for reform





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“The end of the euro would be the end of Europe.”

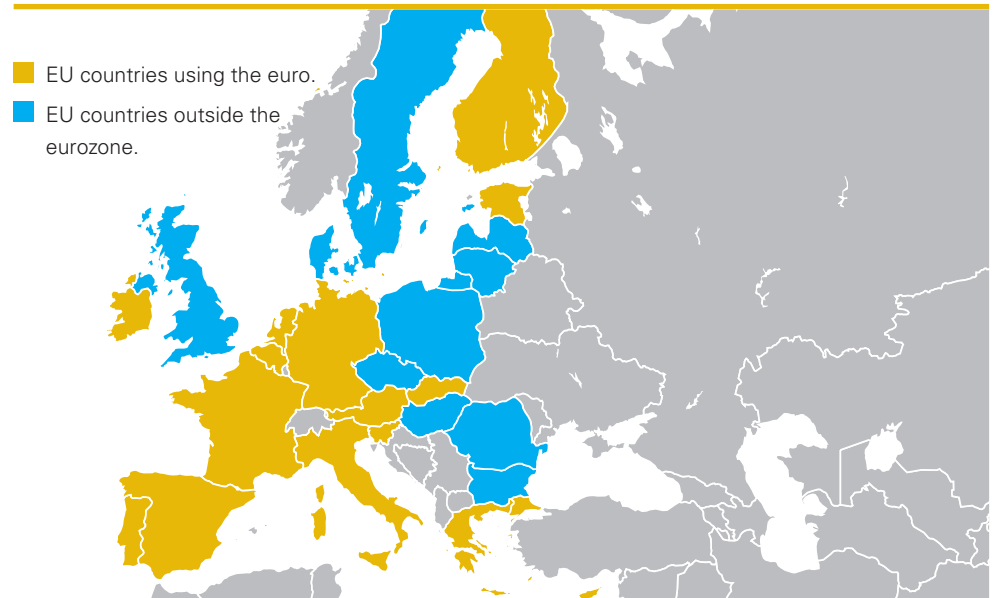
President
Nicholas Sarkozy,
01 January 2011

Overview

At the time of the euro’s launch in January 1999, the Nobel Prize winning US economist, Milton Friedman, pronounced that the euro would not survive its first major European economic recession. There is little doubt his view is being severely tested. Even proponents of the euro may well be united by their belief in the project, but divided in terms of how the bloc should go about strengthening its own position. This is as detrimental to the future of the euro as the sceptics who have been making their own pronouncements since before the euro’s inception – a history captured well in a paper entitled *The euro: It can’t happen, It’s a bad idea, It won’t last*.¹

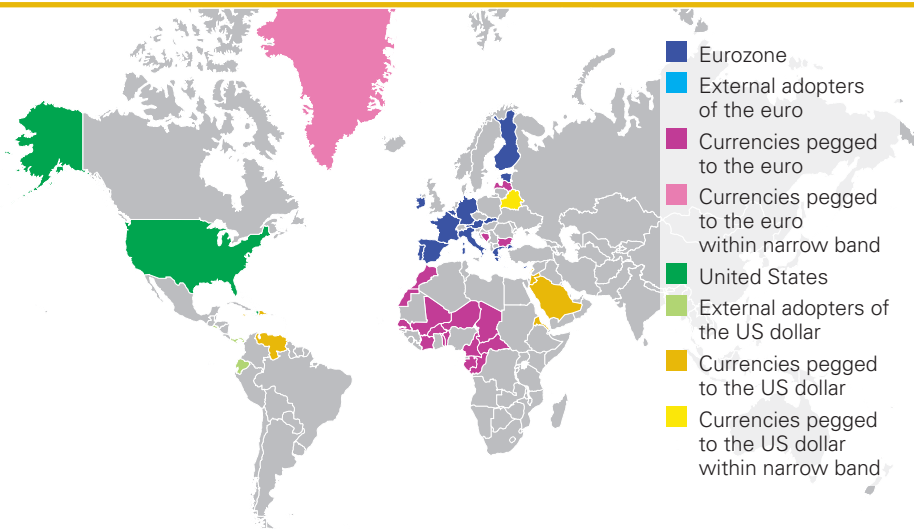
That the euro has grown in importance is without question. It is now the adopted currency for some 332 million people living in 17 out of 27 European Union (EU) countries. This number represents two-thirds of the total EU population. EU countries using the euro are: Austria, Belgium, Cyprus, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia and Spain. Estonia was the latest entrant, joining the euro club in January 2011. There are also some other European states that use the euro, including the Vatican, Andorra and Monaco). Ten EU members remain outside the euro: Bulgaria, the Czech Republic, Denmark, Hungary, Latvia, Lithuania, Poland, Romania, Sweden and the United Kingdom.

The EU and the eurozone



Twenty three countries and territories that do not belong to the EU have currencies that are directly pegged to the euro, representing over 175 million citizens, including more than 150 million people in Africa. The euro is the second largest reserve currency (although there are now hints that it is losing its reserve status) as well as one of the most traded currencies in the world – second only to the US dollar. The euro has the highest combined value of banknotes² and coins in circulation in the world, with more than €817bn in circulation as at November 2010. The EU surpasses the US in being the largest economy in the world in terms of GDP based on purchasing power parity, valued at \$15,047bn (US: \$14,800bn), and the eurozone follows the US at \$10,704bn in 2010.³

Worldwide use of the euro and the US dollar



Note: The Belarusian ruble is pegged to the euro, Russian ruble and US dollar in a currency basket.

The European Monetary Union (EMU) has just celebrated its twelfth birthday, but faces its adolescence with enduring recession and the bloc going through its own crisis of political economy. Consequently, the EMU and the shape of its future are fundamental issues in global financial markets today.

This paper seeks to identify key factors to ensure a secure eurozone by examining the optimal conditions for a monetary union and highlighting critical events – shocks, policy responses and initiatives – in the current crisis in Europe.

Conditions for the success of a monetary union

Over the past year the euro has been tested to near-destruction. With countries at the periphery (Greece, Ireland, Italy, Portugal and Spain) struggling with stagnant economies and unsustainable debt levels, institutional reforms are helping to preserve the cohesion of the eurozone. To permit a better understanding of the processes and conditions involved in becoming a successful union, the history of the United States (US) as a monetary union is considered, and then the example of the Communauté Financière Africaine (CFA) franc zone is profiled.

The historic model for success is a national model of monetary union

In terms of the success of monetary unions, economic historians note a significant difference between the success rates of national monetary unions like the US, Canada, Germany and Italy, compared with international monetary unions such as the Scandinavian Monetary Union and the Latin Monetary Union.

For national unions, monetary integration has been a fundamental part of the process of creating a nation state. But in the case of the Scandinavian Monetary Union and the Latin Monetary Union, the adoption of a common currency ultimately fell apart during the financial turmoil of World War I. The vulnerability of international monetary unions to political and financial shocks suggests that the future wellbeing of the EMU depends on the extent to which it models itself on a national, rather than an international, monetary union. Three factors are deemed integral:⁴

- Monetary integration
- Real integration
- Political will

We will discuss each of these influences in the following pages.

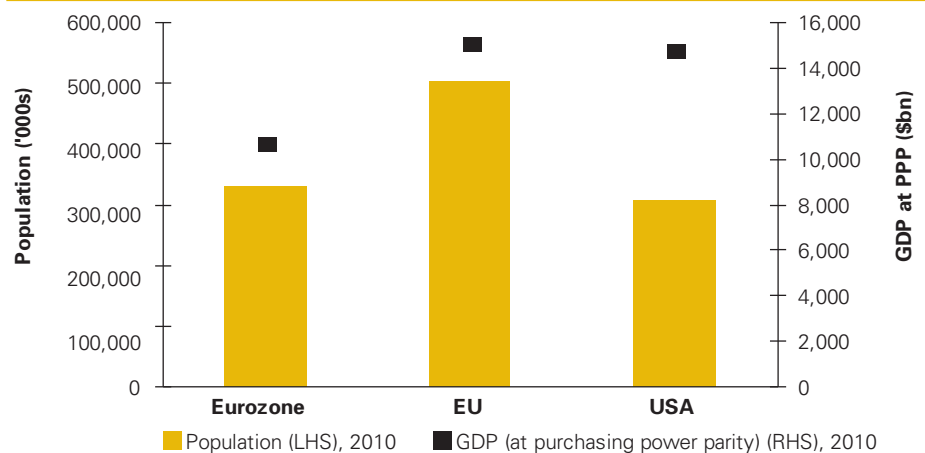
“Last year, for the first time since the euro’s inception in 1999, its very survival was being seriously questioned as peripheral members struggled with stagnant economics and apparently unsustainable levels of sovereign debt.”

William Davies,
Head of European Equities,
Threadneedle

The United States as a monetary union

Although a political as well as a monetary union, the United States serves as a useful point of reference for the European model for a number of reasons. Not only has Europe undergone extensive institutional changes which mean that the project errs on the side of being a national, rather than an international, union, but the current crisis has set in motion calls for some kind of fiscal union within the eurozone. Comparing the eurozone with the US also makes sense because the US is approximately the same size in population and GDP, at purchasing power parity, as the EMU. Finally, comparison with a successful monetary union enables an understanding of the obstacles that Europe still has to surmount in order to realise its own maturity.

The eurozone and the US are similar size markets



Source: IMF

Monetary integration in the US has been a drawn-out process

The blueprint for the eurozone and key European institutions is the Maastricht Treaty, which came into force in 1993. Accordingly, the euro and the European Central Bank (ECB) came into being in 1999. A common monetary policy, set by the ECB – mandated to be independent of the fiscal needs of EMU members – is dedicated to low inflation. In a 1977 amendment to the US Federal Reserve Act 1913, the US Federal Reserve Bank is required to consider wider goals: “to promote effectively the goals of maximum employment, stable prices and moderate long-term interest rates.”

While monetary integration within the European Union has occurred rapidly and according to schedule, the US experience of monetary union has been protracted, linked to the emerging nation state and encompassing a number of important developments.

The First (1791-1811) and Second (1816-1836) Banks of the United States attempted to establish financial order and resolve the matter of fiat currency. The First Bank was created to handle the financial matters of the central government of the newly-formed US (which had been 13 individual states with their own banks), currencies, financial institutions and policies. Both banks failed to have their charters renewed due to political tensions.

Prior to the American Civil War (1861-1865), state bank notes circulated at various discount rates, creating a patchwork currency system. “Notes of sound banks circulated side-by-side with notes of banks in financial trouble, as well as those of banks that had failed (not to mention forgeries). In fact, bank notes frequently traded at a discount, so that a one-dollar note of a smaller, less well-known bank (or, for that matter, of a bank at some distance) would likely have been valued at less than one dollar by someone receiving it in a transaction.”⁵ This confusion led to the publication of magazines specialising in bank note information, including pictures, descriptions, price and whether or not the issuing bank was still in existence.

The Civil War split both the political union and the monetary union. In the North, paper money (greenbacks) circulated at a considerable discount to gold coins, as did Confederate notes in the South. "Gold backed the various Federal currencies that circulated from 1861 [to] 1862. At the lowest ebb of the war for the North, \$2.59 in Federal paper money equalled \$1.00 in gold. The Confederacy suffered a dismal exchange rate of \$60.00 in Confederate currency to \$1.00 in gold."⁶

A successful currency union was achieved with the United States Constitution in 1789, which gave Congress (not the states) the power to create and regulate the value of money. But a unified monetary union with an effective authority was still to take another 150 years to develop.

The national banking system, established by the National Bank Act 1863, finally created a uniform national bank note system. However, demand deposits still did not circulate at par, with charges for cheque clearing varying, depending on the distance from the East Coast money centres. Ultimately it was the Fed that instituted par cheque clearing for the member banks, paving the way for par acceptance of all forms of money.

The Federal Reserve was created in 1913 and consisted of 12 regional Reserve Banks co-ordinated by the Board of Governors in Washington DC. The Reserve Banks initially had some monetary independence within their respective regions with the power to set discount rates. Regional conflicts over monetary policy occurred throughout the 1920s and 1930s, with those conflicts contributing to the paralysis in decision-making that marked the onset of the Great Depression. It was only with the Banking Act of 1935 that full power to implement monetary policy was given to the Board of Governors. Monetary union was complete.

The Constitution of the United States of America provided a strong political base for real integration

Integration of the real economy, particularly capital and labour markets, is another necessary condition for successful monetary union. Integration of the real economy in the US occurred far earlier in the process of becoming a union compared with the schedule and experience of the eurozone.

The US achieved real integration well before full monetary integration. The Constitution in 1789 created a strong political base for integration by prohibiting taxes and duties on inter-state commerce to promote trade across state boundaries and therefore encourage the mobility of labour and capital. Goods markets in the US were well integrated before the Civil War, with similar products selling for similar prices across US regions (adjusted for transportation costs). Similarly, US financial capital markets had become integrated before the Civil War, although this conflict then interrupted the operation of a national capital market for over a quarter of a century.

For the EMU, integration of the goods and financial markets has been slower than monetary integration. While legal impediments to the trade of goods have been removed, price differentials have not been eliminated. And while both long-term and short-term interest rates have converged rapidly since the 1990s, other measures of financial integration, such as the correlation of stock price indexes across financial centres, suggest considerably less integration. Indicators of credit market integration also reveal only modest progress.⁷

As with US goods and financial markets, there is evidence of convergence of both nominal and real wages across the country before the Civil War, with the exception of the South, which, because of the legacy of slavery and the Civil War, took until World War II to integrate. Most integration was the movement of people seeking a better life, reflecting the US being a frontier country. Europe suffers from relative immobility of labour, reflecting significant cultural, language and institutional barriers, as well as greater nominal rigidities, such as high minimum wages and generous unemployment benefits and eligibility. This means that an economic shock does not result in any significant outflow of workers to another region, but instead is registered in the form of higher unemployment.⁸

Political will

Political will has been a key driver for creating the United States of America. The desire of the Thirteen Colonies to separate from Great Britain initially led to the Declaration of Independence in 1776. A subsequent realisation that a confederation of separate states was unworkable led to the Constitution of the United States of America, ratified in 1789. That document provided the foundation for further integration, which in turn strengthened political will and the desire to reinforce the union through legislation such as the National Bank Acts (1863 and 1865) and the Homestead Act (1862).

In Europe too, political will has been a fundamental driver in moving the EU project forward. European countries have overcome significant political and economic hurdles to become a monetary union, and this would not have been achieved without considerable political resolve. The strength of this resolve will continue to be tested during 2011, particularly in light of the tension between a need for fiscal transfer to help overcome the inconsistencies in the EMU, fear of a European superstate and national sovereignty.

The CFA zone is a successful international monetary union

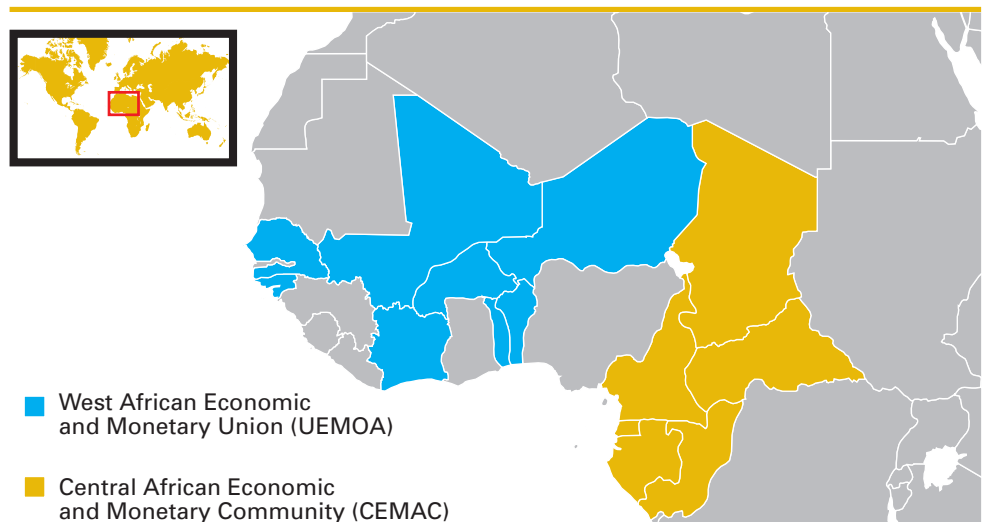
The Communauté Financière Africaine franc zone was established in 1945. It is a 14 country currency union that has proved stable and durable, with the last country to have left the zone being in 1974. The union actually comprises two currencies, the West African CFA franc and the Central African CFA franc, which are guaranteed by the French treasury. Both currencies were pegged to the French franc and, subsequently, the euro.

The circumstances giving rise to the creation of the CFA date back to the end of World War II. In 1945 the French franc was devalued in accordance with the Bretton Woods Agreement. So as not to inflict upon the French colonies the effect of this devaluation, the French government set different exchange rates. René Pleven, the French minister of finance, is quoted as saying:

"In a show of her generosity and selflessness, metropolitan France, wishing not to impose on her far-away daughters the consequences of her own poverty, is setting different exchange rates for their currency."

The CFA is a much looser political union compared with the EMU. The CFA has neither an inter-governmental system of direct fiscal transfers, nor an integrated labour market; in fact, the free movement of labour is much more limited than among the Schengen countries. Member states have distinct languages, cultures and religious beliefs, and different levels of economic and political development. Yet since its inception the CFA has never undergone the same crisis of legitimacy that has beleaguered the eurozone.

The West & Central African franc zone



The level of economic development affects the success of a union

Although the EMU is a far more complex economic area, with a much more developed set of underlying institutional and legal frameworks than the CFA, economic adjustment within the CFA remains subject to the same challenges as that of any monetary union. The CFA zone suggests that neither a system of fiscal transfers nor an integrated labour market is necessary for a successful currency union. However, it also makes sense that any single country with a more sophisticated institutional structure will require a similarly set of developed institutional structures at the union level. This implies that the frameworks required to support integration within the eurozone need to be more complex than a union comprised of less developed countries.

There are several key reasons that account for the ability of CFA countries to be better able to withstand asymmetric economic shocks to their economies:⁹ their level of debt, size of public sector and ability to borrow money on international capital markets. As developed economies, the public sectors of the troubled euro countries are generally large and social transfers of one form or another typically constitute a significant share of public expenditures, which are often funded by external debt. It is this large element of social insurance, along with the ability to borrow cheaply from international markets in order to fund such expenditures, which perhaps distinguishes the EMU countries from those in the CFA zone.

Together these factors suggest that it is the relative maturity of the eurozone periphery economies (and the expectations of the electorate associated with such maturity), coupled with the ostensible economic stability provided by a common currency, that has made European countries at the periphery vulnerable to running up debt-financed public expenditures. This option is generally unavailable to developing economies since global markets are far less likely to extend credit.

Lessons from economic theory and the US experience

It has frequently been cited that the eurozone does not satisfy the classic conditions necessary for a successful monetary union. These conditions are set out in the economic model of an optimal currency area (OCA), advanced by economist Robert Mundell in the early 1960s.

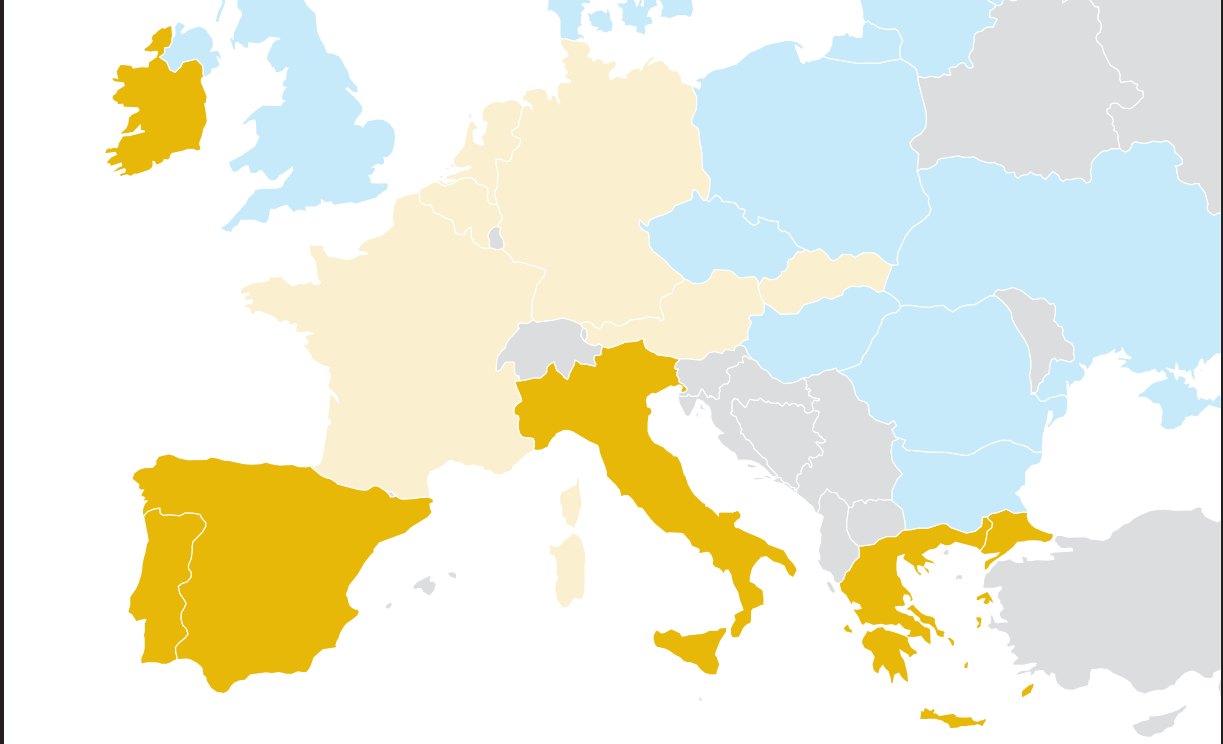
- Labour mobility across the region.
- Openness with capital mobility and price and wage flexibility across the area.
- A risk sharing system such as an automatic fiscal transfer mechanism to redistribute money to areas / sectors which have been adversely affected by the first two features. This usually takes the form of taxation redistribution to less developed areas of a country / region.
- Participant countries have similar business cycles. When one country experiences a boom or recession, other countries in the union are likely to follow. This allows the shared central bank to promote growth in downturns and to contain inflation in booms. Should countries in a currency union have different business cycles, then optimal monetary policy will diverge, and countries may be better off without a shared central bank.

The shortfall of real integration in the EMU, especially the immobility of labour and the asymmetry of shocks, points to the union not being an OCA. It also marks the importance of fiscal federalism – the institutionalising of a system of fiscal transfers to deficit states like that which exists in the US. The US fiscal federal system was established during the Great Depression in the 1930s, with fiscal federal transfers serving to offset much of the interregional losses following the collapse of the US banking system.

In the US, federal taxes collected from the states range from 12% to 20% of state GDP, and consequently, the distribution range of federal money to states is greater – between 9% and 31% of state GDP. In Europe, state collections to the common budget range between 0.8% and 0.9% of GDP, with distribution only equivalent to between 0.5% and 3.5% of member states' GDP.¹⁰ Without greater real integration and the palliative of fiscal federalism to offset growth differentials, the costs of being in a single currency, in terms of the loss of monetary policy autonomy and the abandonment of flexible exchange rates, may just be too high for some member states.

The crisis in the eurozone

Timeline of key events in eurozone countries, 2009-11



Eurozone

09 May, 2010 European Financial Stability Facility (EFSF) is established to provide temporary financial assistance to euro area member states in difficulty. Germany makes the largest contribution (€120bn), with the total fund amounting to €750bn, including €250bn from the IMF.

23 Jul EU lenders are given a largely clean bill of health when banking regulators release the results of bank stress tests. All but seven of the 91 European banks tested would be able to cope with a future financial crisis.

04 Aug EFSF facility is authorised to issue bonds in the market and is assigned the best possible credit rating: AAA by S&P and Fitch, Aaa by Moody's.

01 Oct EU agrees to make changes to the Lisbon Treaty to provide a legal basis for bail-outs.

05 Dec Two Eurozone ministers propose the issue of a European bond; the idea is opposed by Germany.

10 Dec Chancellor Merkel and President Sarkozy call for closer union, asking eurozone partners to draw a fundamental lesson from its debt crisis and move towards political integration.

17 Dec Agreement on the European Stability Mechanism (ESM) to replace the EFSF in mid-2013. This new framework aims to reduce the probability of a future crisis through a stronger focus on debt sustainability and more effective enforcement measures.

01 Jan, 2011 Three new European authorities are established to supervise financial activities: European Banking Authority, European Securities and Markets Authority, European Insurance and Occupational Pensions Authority.

25 Jan The debut €5bn bond issue from the EFSF is oversubscribed nine times, with an order book of €44.5bn. Asia dominates demand.

Spain

29 Jan, 2010 Spain announces plan to save €50bn, including government spending cuts totalling 4% of GDP. The plan includes 4% cuts in public sector pay.

05 Feb Spain attempts to raise retirement age from 65 to 67 years, which prompts a mass union demonstration against the government.

28 Apr S&P cuts its long-term sovereign credit rating from AA+ to AA, saying the country is likely to see an extended period of subdued economic growth.

12 May Spain unveils measures to cut its deficit and ease concerns that the problems afflicting Greece may spread. PM Zapatero announces cuts in civil service wages, pensions, social welfare spending and investment.

27 May Spain wins parliamentary approval for its €1bn austerity package by just one vote.

28 May Fitch cuts its rating on Spain's sovereign debt by one notch to AA+ from the highest possible rating of AAA.

Greece

05 Nov, 2009 PM Papandreou's new socialist government says the 2009 budget deficit will be 12.7% of GDP – over double the previously published figure.

08 Dec Fitch cut Greek debt to A- when the higher deficit figure was revealed, and now cuts it to BBB+; the first time in ten years it has been rated below investment grade.

16 Dec S&P cuts rating from A- to BBB+, stating the austerity programme is unlikely to produce a sustainable reduction in public debt.

22 Dec Moody's cuts Greek debt to A2 from A1 over soaring deficits - the third rating agency to downgrade Greece in December 2009.

11 Jan, 2010 IMF announces plans to send a mission to Athens to advise the government on pension reform, tax policies and budget management.

14 Jan Greece unveils a stability programme, aiming to cut its deficit to 2.8% of GDP by 2012. Greece prepares to refinance €54bn in debt in 2010, including €20bn in the second quarter.

10 Feb Moody's and S&P warn that Greece could see its long-term credit rating downgraded if budget reforms are only partially implemented, re-stating the importance of differentiating the credit profiles of Greece, Spain and Portugal.

11 Feb Eurozone leaders promise to help Greece if the country slashes its budget deficit, saying they would provide "determined and co-ordinated action if needed to safeguard stability."

05 Mar A new package of public sector pay cuts and tax increases is passed in Greece to save an extra €4.8bn. State-funded pensions are frozen in 2010.

22 Apr Eurostat says Greece's 2009 budget deficit was 13.6% of GDP, not the 12.7% it had reported, casting further doubt on the quality of Greek data, which could push the deficit over 14%. Moody's cuts Greece's sovereign debt rating and warns of further possible downgrades.

27 Apr Greece's credit rating is downgraded to junk by S&P.

02 May Details of the EU/IMF aid package for Greece: a €110bn loan package over three years, with €80bn of that coming from the EU (Germany approves a €22.4bn share) and the remainder from the IMF, in exchange for extra budget cuts of €30bn over three years. It is the first rescue of a member of the eurozone.

04 May Public workers in Greece stage a 48-hour strike and 50,000 protest in Athens. Three people are killed when a bank is set on fire by protestors fighting austerity measures.

06 May Greece's parliament approves (by 172 votes out of 300) the controversial austerity plan forced on it to receive a €110bn EU/IMF bail-out.

01 Jun Greek private sector unions and employers' associations agree to hold more talks on a new collective labour agreement, seen as crucial to ensuring pay restraint.

01 Aug Greece moves closer to securing a €9bn aid package as EU and IMF inspectors praise the country's progress.

03 Dec S&P puts Greece on downgrade watch in response to eurozone proposals to give preferred status to government bondholders.

11 Jan, 2011 Greece's first debt sales of the year raise €1.95bn in 26-week Treasury bills at yields of 4.9% – marginally higher than the last sale of similar debt in November 2010, with foreign investors buying 40% of the debt issue.

Portugal

01 Mar, 2010 Portugal's credit rating is downgraded from AA to A- by Fitch.

27 Apr Credit rating downgraded from A+ to A- by S&P.

13 May Portugal unveils measures to slash its deficit, including public sector pay cuts. PM Sócrates says income tax will increase between 1% and 1.5% and VAT will be upped to 21%. The deficit is targeted to fall to 4.6% of GDP in 2011, down from 9.4% in 2009.

29 May Thousands march in Lisbon against the government's austerity measures.

09 Jun Portugal's parliament approves the country's austerity package.

13 Jul Moody's downgrades Portugal's long-term debt to A1 from Aa2, but says the outlook is now stable.

12 Jan, 2011 Portugal conducts debt auction, selling more than €1.2bn in long-term debt, amid speculation that the country may soon follow Greece and Ireland and accept a financial bail-out. China buys €1bn of Portuguese debt. PM Sócrates rejects the need for funding from the EFSF.

Ireland

25 Aug, 2010 S&P downgrade credit rating to AA-.

30 Sep Support for Ireland's banks is estimated to be up to €50bn, 32% of GDP.

21 Nov Irish government applies for assistance from the IMF and the EU.

22 Nov S&P downgrade credit rating to A.

23 Nov Irish government announces its National Recovery Plan 2011-14 - an additional €15bn package of measures intended to reduce the budget deficit to below 3% of GDP by 2014 (€ expenditure reductions; € revenue increases).

28 Nov An €85bn rescue package agreed: €35bn to support the Irish banking system; (€10bn for the immediate recapitalisation and the remaining €25bn will be provided on a contingency basis); €50bn to finance the government's budget. It is the second bail-out of a eurozone country.

Italy

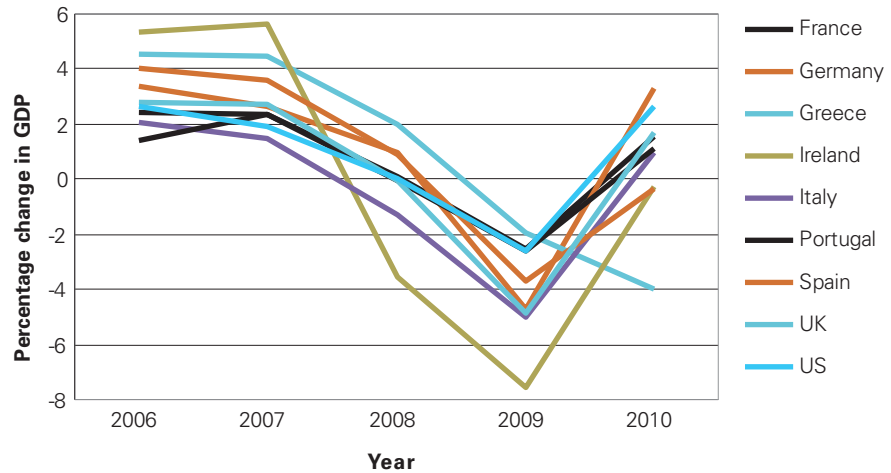
25 May, 2010 Italy's cabinet approves a 24bn austerity package the aim of cutting the deficit to 2.7% of GDP in 2012 from 5.3% in 2009.

13 Jan, 2011 Italy sells €6bn of five-year and 15-year debt, paying elevated yields.

A comparison of the strength of eurozone economies, and the US and UK

There has been widespread decline in GDP since 2007

The percentage change in GDP for selected countries, 2006-2010



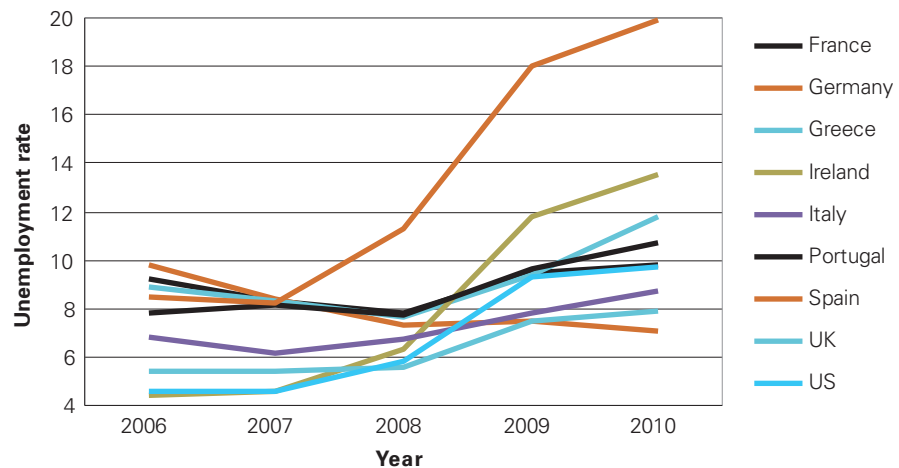
Source: IMF Note: 2010 estimate

There have been falling rates of GDP growth in the eurozone countries since 2007, with spectacular falls on the part of Greece and Ireland in particular, as the fallout from global recession impacted severely on the economies of those countries. Some improvement was forecast by the IMF for the 2010 year, but overall the economic situation is one of quite divergent rates of growth in the eurozone.

These growth discrepancies between countries need to be addressed in order to meet one of Mundell's key criteria for an OCA. The widening in rates of growth in the eurozone means that the ECB faces the difficult challenge of setting interest rates to accommodate half the eurozone economies experiencing economic growth and the other half at the periphery facing economic contraction, with rising unemployment and harsh austerity measures.

There have been rising and diverging rates of unemployment since 2007










The rate of unemployment for selected countries, 2006-2010



Source: IMF Note: 2010 estimate

There has been growing unemployment in Europe since 2007. The impact of recession has been particularly marked in Spain, Ireland, Greece and Portugal, all of which have unemployment rates over 10%. Spain's rate of unemployment approached 20% in 2010, while Ireland registered a rate of unemployment representing over 13% of the available workforce. Greater labour market flexibility including reforms to encourage labour mobility (be it geographical, industrial or occupational) and changes to the benefit system, would help adjustment to economic shock in these countries.

Key economic indicators for selected countries, 2010 (estimate)

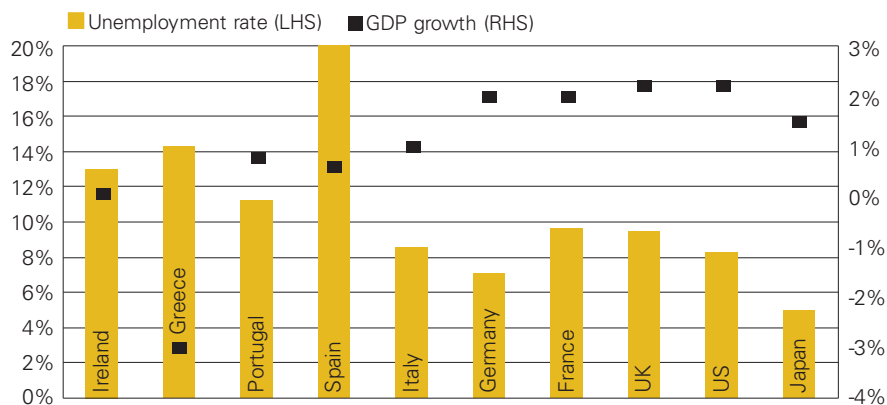
	2010 (est)	GDP, % chg	Unemployment rate, %	Fiscal surplus/deficit, % of GDP	Debt ratio
	France	1.6	9.8	-5.8	84.2
	Germany	3.3	7.1	-2.2	75.3
	Greece	-4.0	11.8	-2.2	130.2
	Ireland	-0.3	13.5	-15.0	93.6
	Italy	1.0	8.7	-0.8	118.4
	Portugal	1.1	10.7	n/a	83.1
	Spain	-0.3	19.9	-7.5	63.5
	UK	1.7	7.9	-7.6	76.7
	US	2.6	9.7	-9.5	92.7

Source: IMF World Economic Outlook 2010. For other historic and forecast data, please refer to the Appendix.

Divergence will continue to blight the eurozone in 2011

Forecasts for 2011 in Europe continue to show a fractured continent, with some of the better performing European economies having expected GDP growth and unemployment rates in line with those of the US and Japan. The peripheral economies of Europe will continue to lag behind, with lower rates of growth and higher unemployment expected in 2011 and beyond.

The change in GDP and rate of unemployment, 2011 (estimate)








Source: IMF

The problems of divergence among the eurozone countries could not be ignored when the periphery countries were hit so hard by the recent global economic and financial crisis. However, the underlying systemic issues have always been present and need to be addressed for the eurozone to become stronger and surmount the sovereign debt crisis.

All the countries of Europe are inextricably linked over the debt crisis

Since the introduction of the euro in 1999, EU countries have become increasingly bound together by very large international transfers. With cross-border banking and borrowing, many countries on the periphery of Europe owe significant sums to one another, as well as to their wealthier allies such as Germany, France and the UK. The rising cost of sovereign debt is inevitably putting significant stress on the euro countries and the table below shows the ease with which euro contagion could occur. For the eurozone, a bail-out is not simply a matter of a problem with Greece or Ireland, but a matter of sustaining the entire eurozone system.

	Country below owes:	Italy	Spain	Ireland	Portugal	Greece	France	Germany	UK	Total €bn
	Italy		32.8	32.1	3.6	0.5	356.5	132.5	53.7	976.6
	Spain	21.6		20.9	19.5	0.3	0.0	166.0	79.5	767.3
	Ireland	12.6	11.2		15.3	0.6	41.9	128.4	131.1	604.8
	Portugal	4.7	60.0	3.8		0.1	31.4	32.8	16.7	199.5
	Greece	4.8	0.9	5.9	6.8		52.3	31.4	10.5	164.6

Note: This table represents transfers as at 31 December 2009 and therefore is net of the very significant transfers that occurred during 2010. These latter have only increased the financial interdependence of countries within Europe.

The experience of Greece illustrates the limits of the EMU structure

The financial crisis in Greece provides a significant illustration of how things have gone wrong for the eurozone. From the outset Greece's economy had significant problems and the country was not a fitting candidate to join the euro – indeed it was initially turned down as a candidate. Two years later, on the basis of fabricated accounts, Greece joined the euro. Greece's cost of borrowing immediately fell and the country – rather than spending money to propel economic growth – ran up government debt by providing excessive benefits and permitting widespread tax evasion.

Although private debt had been rising, the country's overall debt-to-GDP ratio did not balloon because the Greek economy was growing. But that growth proved unsustainable. When the global economic crisis hit, Greece's deficit more than doubled. The problem was compounded by revelations that the government had falsified its budget in the run up to the 2009 parliamentary elections.

Unlike countries with national currencies, Greece could not address its problems through monetary policy. It could neither print money to inflate its debt away nor depreciate its currency to recover international competitiveness and grow the economy out of debt. And unlike a sub-national federal region with difficulties, Greece, as a sovereign country, could not have its falling revenues and rising social expenditures offset through simple fiscal transfers from the rest of Europe. Its labour force, moreover, is not mobile enough for excess to be exported elsewhere in the eurozone.

The Stability and Growth Pact provides a fiscal framework but deficit and debt levels have been ignored

The Stability and Growth Pact (SGP) is intended to co-ordinate the fiscal policies of EU member states by monitoring fiscal deficit and debt ratios to determine whether they threaten to exceed the Maastricht Treaty limits of 3% and 60% respectively, and through imposing sanctions on members who break the rules. The SGP contains a no bail-out clause, while no exit and no default clauses are also enshrined in the Maastricht Treaty. There is an inconsistency in having no bail-out, no exit and no default clauses – an inconsistency recognised during the 2010 European sovereign debt crisis, when the no bail-out clause was de facto abandoned in April 2010. This particular inconsistency is now in the process of being resolved – through a permanent mechanism for crisis resolution that will allow default. But the attempt to resolve one inconsistency has given rise to another: the possibility of default, persistent imbalances and lack of a fiscal union.¹¹

If the principles of the Maastricht Treaty were adhered to, European financial markets should have put pressure on countries with excessive debt-to-GDP ratios, such as Greece, by charging them higher interest rates for loans. ECB rules prohibit the monetisation of governments' debts and its no-bail-out clause should similarly have discouraged overspending. In addition, the SGP should have constrained Greek politicians. In fact, it did not constrain Germany and France either, both of which ran up successive budget deficits earlier on in the life of the euro. At that time, recession in Germany and France meant that income received from taxes by their governments declined, while their high unemployment levels required greater spending on benefits. In order to help boost their economies, both governments decided to cut taxes.

At the World Economic Forum Annual Meeting in Davos in January 2011, ECB President, Jean-Claude Trichet commented: "In the euro area, we really have to improve governance. With the benefit of hindsight, the major countries in the euro area wanted to blow up the pact."¹²

The EU did a u-turn on its no bail-out rule

Faced with the risk of a default in Greece and other countries, eurozone leaders agreed to provisions for loans to member states that could not raise funds. Accusations that this was a u-turn on EU rules, which prohibit any bail-out of a euro member in order to encourage them to manage their finances efficiently, were countered by the argument that these were loans, not grants, and that neither the EU nor other member states assumed any liabilities for the debts of the aided countries. Moreover, the ECB claimed that the move was justified "because of government promises to meet strict budget targets and step up consolidation efforts."

Faced with Greece struggling to restore its finances, other member states also at risk, and the repercussions this would have on the rest of the eurozone economy, a loan mechanism was agreed. The European Financial Stability Facility (EFSF) was set up to provide for swift and effective liquidity assistance, alongside the European Financial Stabilisation Mechanism (EFSM) and the International Monetary Fund. And then in October 2010 the eurogroup agreed to establish a permanent stability mechanism to safeguard the financial stability of the euro area as a whole. The European Stability Mechanism (ESM) will come into force in 2013 when the EFSF is due to expire.

Although little has yet been set out for the terms of operation of the ESM, it has been agreed that the mechanism will be like a permanent version of the existing EFSF. In particular, the ESM will only be used to bail-out governments, at punitive interest rates. It will require seniority for itself, increasing the likelihood that other claims will have to be restructured, and the ESM will provide assistance only if the country passes a “rigorous debt sustainability analysis conducted by the European Commission and the IMF, in liaison with the ECB”. This sends out rather an alarming message to potential investors in the public debt of the periphery countries, according to Daniel Gros, Director of the Centre for European Policy Studies, in Brussels:

“Before you buy the debt of these countries please be aware that we (the EU and the IMF) might find later that the country needs a reduction in debt to become sustainable again and the only ones to take a cut are private investors.”¹³

The ECB has had to resort to purchasing government bonds

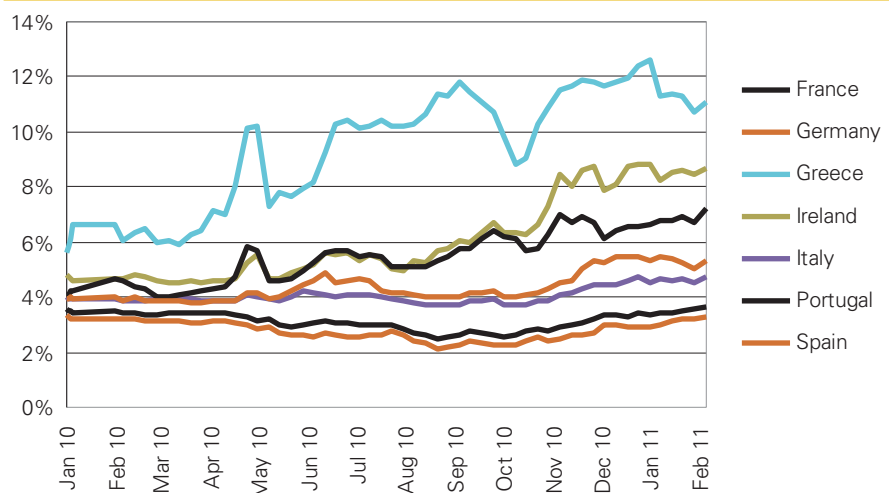
European laws prevent the ECB from buying debt directly from governments on the so-called primary market in the way the US Treasury has done during the financial crisis, but not on the secondary market. (These markets are deemed less volatile than the primary market because it is easier to determine the underlying value of a security after it has already begun trading.)

Nonetheless, the fact that the ECB has been willing to purchase government bonds in the secondary bond markets rather than directly is further evidence that the original no bail-out of insolvent governments has been suspended. This glaring dichotomy only serves to further highlight the flawed architecture of the Maastricht Treaty. In the absence of a common fiscal regime, analogous to the US Treasury, the European banking system is exposed to the risk of defaults by sovereign states. The potential “moral hazard” risks invoked by this scenario, compels the ECB to incur the ultimate risks by purchasing these bonds in the secondary bond markets.

Bond yields have risen for all the periphery countries

The bail-outs of Greece in May and then Ireland in November 2010 have dragged down other eurozone countries. Bond markets have not offered much solace to the beleaguered eurozone countries or their bloc allies, with yields rising not just for Ireland but for Portugal, Spain, Italy and other euro states.

Ten-year government bond yields in selected eurozone countries, Jan 2010-Feb 2011



Source: Datastream

Although the market has for some time remained unconvinced European debt problems have gone away, there are signs of rebound in the periphery. The debut bond issue from the EFSE, in January 2011, was oversubscribed nine times, with demand from Asia, and Japan in particular, being robust. This will have done a great deal to assuage investor uncertainty about the future of the eurozone. Investors have been heavily underweight in their exposure to these peripheral markets, yet have begun to rebalance portfolios substantially toward non-core markets going into 2011.

There have been a number of proposals for reform from within the eurozone

Beyond the problems in the Greek economy, the crisis exposed weaknesses in the euro's institutional framework. Strengthening that framework is required to restore confidence as well as to strengthen the eurozone as a union. In June 2010, the ECB released a number of recommendations revolving around strengthening the SGP: stronger independent surveillance of the budgetary policies of the member states with more automatic implementation of sanctions; improved surveillance of country competitiveness to ensure that member states continue to converge economically; and a crisis management structure with strong conditionality to support countries that implement adjustment programs.

The EC and the European Parliament have also called for the creation of three financial supervisory authorities (the European Banking Authority, the European Insurance and Occupational Pensions Authority, and the European Securities and Markets Authority) and a regulatory authority (the European Systemic Risk Board). Eurozone-wide supervisory and regulatory authorities would have the discretion to press national governments to remedy problems and would be independent enough to act pre-emptively, without having to wait for a crisis to galvanize politicians to action. Although some may dislike the idea of giving international bodies the power to constrain national economic policy, it has been demonstrated that financial contagion spreads too quickly, and European taxpayers have had to pay for the failures of other countries too often, for the current system to remain.

Such proposals may have some impact, but the lessons of history and economic theory suggest that unless the eurozone moves a lot more in the direction of fiscal federation, it might not survive the next global crisis. Members need to be willing to give up fiscal authority to the central EU government and accept the inevitability that membership in an effective monetary / fiscal union requires adherence to credible eurozone-wide fiscal rules such as no bail-outs and budget balance over the business cycle.

“Sentiment towards the eurozone’s peripheral countries certainly improved markedly toward the end of 2010, a trend that appears to have continued into 2011... This largely reflects the view that peripheral economies will get the support they need in 2011...”

**William Davies,
Head of European Equities
Threadneedle**

Issues to address to ensure a secure eurozone

The costs of breaking up the eurozone are enormous

The exit of a member country or countries remains a possibility, but the cost of such action would be significant. The immediate costs in time and money needed for the technical aspects of reverting to domestic currency – reprogramming computers, minting coins and printing notes – are immediate and can be estimated. Other implications of a split may take longer to play out and their full impact is incalculable.

Both the strong and the weak stand to lose by a euro split

The periphery countries currently face the greatest challenges to their debt dynamics, growth outcomes and competitiveness, and exit of the eurozone would afford the opportunity to escape the austerity measures imposed by their euro partners. Weaker members might leave to devalue their new currency in order to gain competitiveness. Although this would carry the cost of an increased debt burden, given that sovereign debt is denominated in euros, the increased competitiveness brought about by a devalued currency would help the economy grow its way out of debt.

But any rumour that a weak country could be about to exit would lead to runs on deposits, further weakening troubled banks. The result would likely be the implementation of capital controls, possibly with limits on bank withdrawals, which in turn would stifle commerce. Any country abandoning the zone would be excluded from foreign finance, further disabling their economies. Moreover, with capital controls in place, Europe's financial markets would be threatened and it would be difficult to preserve cross-border European trade. The entire European Union project would be in doubt.

An alternative scenario could be the departure of one of the zone's stronger members, such as Germany. "Wherever there's a fire in the eurozone, the financial firefighters rush to the scene. That's us," is how the German comedian, Oliver Welke, interpreted a German perception of the eurozone.¹⁴ Although there exists a desire to stop paying for other countries' recklessness, there would be substantial costs to Germany exiting the eurozone. Again, there would be bank runs in Europe as depositors fled weaker countries, leading to the reintroduction of capital controls. The Maastricht Treaty allows for this possibility: "Should extremely disturbing capital movements endanger the operation of economic and monetary union, Article 59 EC (Maastricht) provides for the possibility to adopt restrictive measures for a period not exceeding six months."

While German banks would probably gain deposits, their significant eurozone assets would be marked down significantly. German exporters have been among the principal beneficiaries of a more stable single currency, and would not enjoy being landed once again with a sharply rising deutsche mark. It is in Germany's best interest to remain with its euro partners and ensure that the bloc survives and that no country defaults.

If the economics of pulling apart the euro are doubtful, the political risks are insurmountable, threatening not just the single market, but the EU itself. At the World Economic Forum in Davos, in January 2011, President Nicolas Sarkozy of France forcefully defended the single currency:

"To those who would bet against the euro, watch out for your money because we are fully determined to defend the euro... Mrs Merkel and I will never – do you hear me, never – let the euro fall... The euro is Europe. And Europe spells 60 years of peace. Therefore we will never let the euro go or be destroyed... It is not simply a monetary or an economic issue. It has to do with our identity as Europeans."

Fiscal stress at the periphery requires bold leadership

If the force of political will prevails, the eurozone will undoubtedly stay intact, but it will be a weaker entity unless substantive moves are made towards addressing some of the key shortfalls that this crisis has brought to the fore. In the absence of automatic adjusters in the eurozone, a co-ordinated approach is required by political and economic leaders to manage the situation to the benefit of the union as a whole. Thus far, the leadership has tended to be reactive rather than proactive, frequently held back by political differences in desired approach, while the problem grew bigger – from liquidity concerns to matters of solvency. By the time European leaders agreed a large stability programme, it was apparent that the massive structural challenges faced by Europe needed addressing not just in terms of the long-term economic development, but in the presence of asymmetric shocks. Bringing about a more lasting resolution to the crisis in the eurozone, and avoiding spiralling market uncertainty, requires strong and innovative European economic governance.

The three key issues facing the eurozone in 2011 and beyond

- European sovereign debt will be a key driver for all markets and needs to be tackled.
- Market reform is required to be undertaken by weakened deficit countries.
- Fiscal capacity is needed to overcome inadequacies in the eurozone.

The debt issue in the periphery countries needs to be tackled efficiently

The greatest threat to the eurozone has been sovereign debt issues. With two European countries, Greece and Ireland, requiring bail-out in 2010 and 2011 still marking an uncertain future, there is little doubt that sovereign debt will continue to be a key market issue throughout 2011. It is critical, given the interrelationship of markets, that the European sovereign debt problem be tackled with the greatest efficiency to limit its impact on the global economy.

Extensive fiscal adjustment in Greece and other peripheral countries has been imposed by European and IMF creditors. Nevertheless, some governments have been slow to respond, suggesting a lack of appreciation for the severity of the problem and the challenges facing them. The discrepancy in responses has highlighted the issue of assessing countries on a standalone basis rather than as a member of the eurozone club.

Subsidised lending is a less disruptive approach to overcoming fiscal stress in the EMU

Given the extent of fiscal stress at the periphery of Europe, it is inevitable that new measures will need to be adopted. But to avoid intensifying market uncertainty, there needs to be clarity in decision-making. Over the coming months sovereign nations in the periphery are going to be allowed to restructure debt or otherwise the eurozone will move toward greater fiscal integration. These paths have different implications for stability within the eurozone:

- Restructure debt – this is likely to be financially, economically and politically disruptive given the magnitude of the shock, the size of the government debt outstanding, the size of the banking sector relative to the rest of the economy in indebted countries and the degree of cross-border integration.
- Fiscal integration – the region's fiscal capacity has to be shared in a way that enables debt sustainability in the periphery to be achieved without debt restructuring.

As the second option has less disruptive financial, economic and political consequences, it is more advantageous to share the region's fiscal capacity in a way that enables countries at the

“This volatility should create opportunities for nimble, experienced investors with a proven ability to look through short-term noise and identify long-term winners.”

**Mark Burgess,
CIO, Threadneedle**

periphery to have access to subsidised borrowing. A decrease in the punitive interest rates currently being charged would have a strong enabling impact on the debt dynamics of countries dependent on this mechanism.

Enabling subsidised borrowing is effectively a fiscal transfer from the core to the periphery, but this should be politically achievable, while the eurozone moves toward more integrated debt measures, such as the issuance of common area bonds, and then ultimately, the more politically sensitive issue of explicit transfers between member states. This sort of fiscal union involving transfers among member states is discussed as a separate issue later, because it is a more profound challenge for the eurozone in terms of fiscal federation, than either the issuance of joint bonds or improved governance to prevent further destabilisation.

The President of the ECB, Jean-Claude Trichet, argues that at the fiscal aggregate, Europe is in better shape than either the US or Japan. But this assessment only has credence if fiscal capacity can be shared. Reducing the costs of borrowing may be politically more palatable than either lump-sum payments or ongoing permanent transfers. Liquidity support at competitive rates is the most effective way out of the European sovereign debt crisis.

Market reforms are required to strengthen the eurozone

The crisis should have made it clear to weak deficit countries the high cost of their failure to make the necessary reforms to labour and product markets, and to welfare systems, to restore the competitiveness of those countries. Clear and unwavering leadership is required to see the structural reforms through, enabling countries at the periphery to grow towards convergence with other European states.

The crisis in Greece is being tackled by implementing fiscal and structural reform to bring its debt and deficit under control. Greece, the IMF, the European Commission and the ECB negotiated a plan in June 2010, with the aim of turning Greece's deficit of 9% of GDP into a surplus of 6% by 2015. The plan rests on standard IMF reforms: substantial expenditure cuts, increases in revenue creation and improvements in tax collection. It also includes important structural reforms, such as pension reform and privatisation, which are aimed at improving long-run debt sustainability and the performance of Greece's labour and manufacturing sectors. The plan is accompanied by financing from the IMF and loans from the rest of the eurozone worth €110 billion, representing 46% of Greece's 2010 GDP.

In the IMF's November 2010 report on the Greek programme, the organisation acknowledged that Greece was broadly on track with its economic reform programme. Fiscal adjustment in particular was progressing in line with expectations, although additional moves were being taken to broaden the tax base and eliminate wasteful spending given lower than projected revenue collection. In particular, health spending was deemed inefficient relative to other eurozone countries, while state enterprises were too heavy a burden on the economy and tax compliance measures are being strengthened.¹⁵

But for adjustment to be sustainable in the long-term, structural reforms are required to deal with the root causes of the problems. These reforms are aimed at improving Greece's

competitiveness and increasing both output and employment. Thus far Greece has introduced pension reform, including raising the retirement age to 65, with the necessary contribution years for a full pension set higher to 40. Two extra pensions which Greeks received have been replaced with a flat payment for retirees at the lower end of the scale. The IMF recognises that the reforms are now at a “critical juncture”, requiring adroit politics and economics. The next stage of reforms outlined by the IMF includes:

- Aligning wages more closely with firm-level productivity, including through reform of arbitration and collective bargaining systems.
- Opening up access to services, trades and professions.
- Unlocking the potential of Greek industries by cutting red tape and barriers to entry, and privatising state assets.¹⁶

There has been scepticism about the IMF plan, with fears that it is too harsh, imposes too many restrictions and would ultimately be politically unsustainable. The programme essentially carries two types of risk: that the reforms are not economically sustainable and might create a debt spiral; that austerity fatigue creeps in, making the reforms politically unsustainable, so the government instead undertakes debt restructuring or abandons the euro. Political resolve is needed in the absence of a constituency for budget discipline: entitlements need to be reconsidered in a fractured economy.

Fiscal capability is needed to overcome divergence in the eurozone

Without fiscal capability, the ECB will remain challenged by setting interest rates to accommodate the different macroeconomic environments faced by member countries. Differences in economic development and diverging business cycles contributed to the impact the crisis has had on member countries. A system of fiscal transfers between member states would reduce the impact of asymmetric shocks and strengthen the eurozone.

Not being a fiscal union means that euro members retain full sovereignty and conduct their own fiscal policy. The EU’s budget is 1% of the EU 27’s GDP and is not used as a fiscal stabilisation policy instrument. Although the SGP monitors the fiscal positions of members, there are no fiscal transfers between members in the presence of asymmetric shocks. Fiscal capacity – beyond post-crisis subsidised loans - is required to overcome institutional weaknesses in the eurozone, given the differing levels of economic development and differing business cycles within the union.

“We believe that the eurozone will continue to comprise a three-speed economy over the coming year and beyond. Interest rates are probably too low for the most dynamic group and are certainly too high for the most sluggish.”

**Quentin Fitzsimmons,
Head of Government
Bonds, Threadneedle**

Economies at different levels of development benefit from a fiscal union

Since the extent of the debt crisis in Europe became apparent, the governments of the European Union countries, the ECB and the IMF have taken unprecedented action. This includes aid packages, policy directives, and the establishment of the EFSF and, subsequently, the ESM. Although these actions will undoubtedly affect the longer-term viability of the EMU, the crises of the peripheral economies of Europe are a particular challenge to the EMU as it is a monetary union but not a fiscal one. In the absence of a federal system the EMU faces significant co-ordination problems as countries in the euro area do not benefit from automatic stabilisers to cushion the impact of asymmetric shocks.

The eurozone contains a mix of countries at different levels of economic development (both financial development and productivity). With a common currency and a monetary policy devoted to price stability across the eurozone, wide current account imbalances have opened up between the advanced countries of northern Europe and the periphery. In the absence of the monetary union, adjustment would occur via floating exchange rates. In the presence of an effective fiscal federal state, adjustment would occur via labour (and capital) mobility and fiscal transfers.

Alternatively, the crisis of the past years would have played out very differently if the eurozone had had a fiscal union in place. The financial crisis was precipitated by events in the US which spread to Europe via banks holding US mortgage-backed securities, and exacerbated by reduced demand for imports from Europe as a result of the US recession. European countries at the periphery, already at a competitive disadvantage to the rest of the eurozone, were hit hard by the global recession. Had an effective fiscal union been in place the recession would have been less severe as, although tax revenues would have declined in the periphery states, transfers would have lowered their fiscal deficits and debt ratios.

It should not be forgotten that the current economic out-performance of the core relative to the periphery is the opposite of the environment of the early 1990s. Assuming the euro survives and appropriate reforms are implemented in the periphery countries, changes in relative growth can be expected to continue, albeit with decreasing amplitude. Fiscal transfers would ease the process of adjustment.

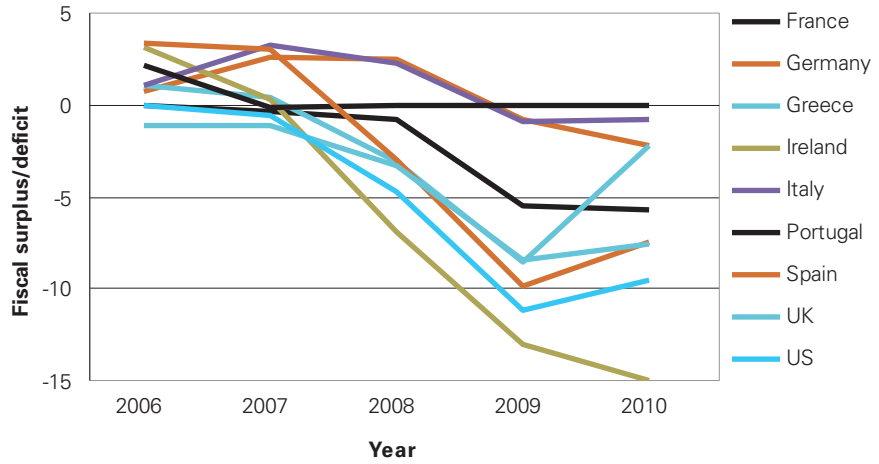
Conclusion

Threadneedle thinks that the euro will survive – markets are already seeing the effects of a commitment to this outcome. With strong leadership confronting the very real challenges which exist for the EMU, there is no reason why the eurozone cannot emerge as a stronger force in international political economy. Investors will continue to seek reassurance that the authorities have the wherewithal to allow peripheral member to overcome their short-term financing difficulties. But they will also be expecting the implementation of measures that will allow the eurozone not just to survive but to flourish. In the meantime, there remains the issue of different groups of member states having different business cycles. Ongoing volatility in financial markets will continue over matters of sovereign debt and potential problems with continental banks. Both these factors give rise to exciting investment opportunities which Threadneedle will continue to evaluate. Watch out for our regular 'Threadneedle Thinks' market commentaries throughout the year.

Appendix

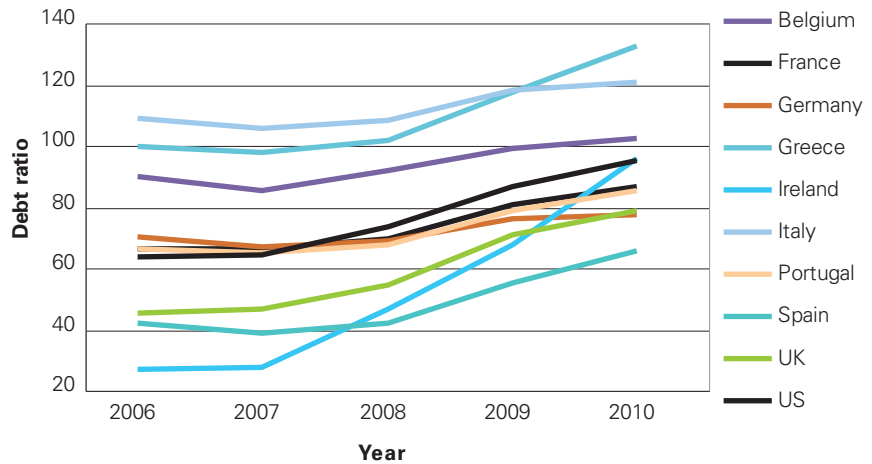
Historic and forecast economic data for selected eurozone countries, the UK and the US.

All eurozone countries have experienced increasingly larger fiscal deficits since 2007, although 2010 has seen some pickup



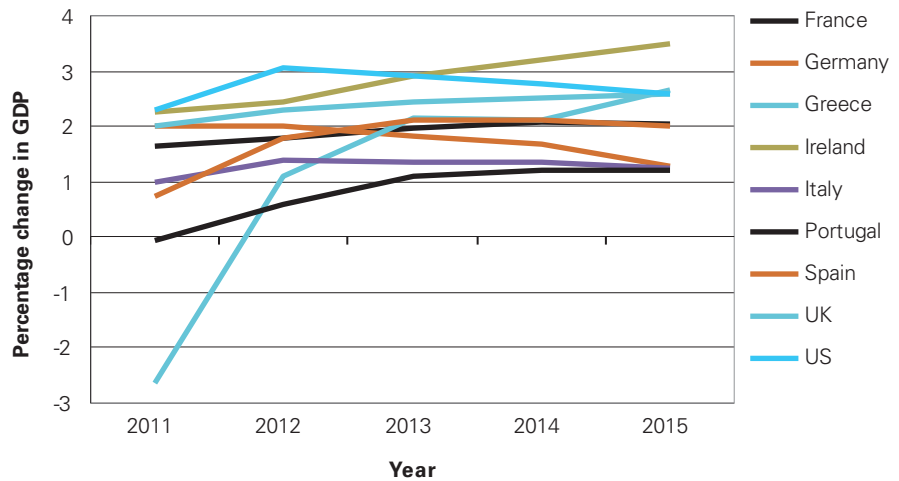
Source: IMF Note: 2010 estimate

Italy and Greece have government debt ratios over 100% since 2008



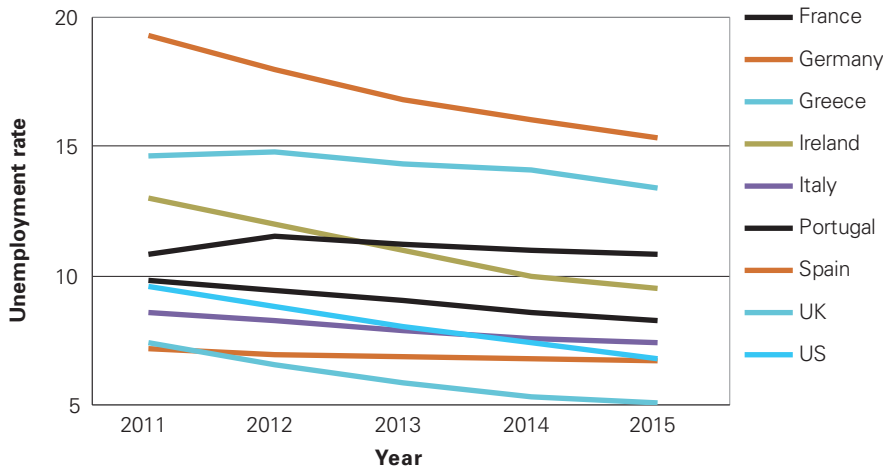
Source: IMF Note: 2010 estimate

A comparison of the forecast growth of eurozone economies, 2011-2015



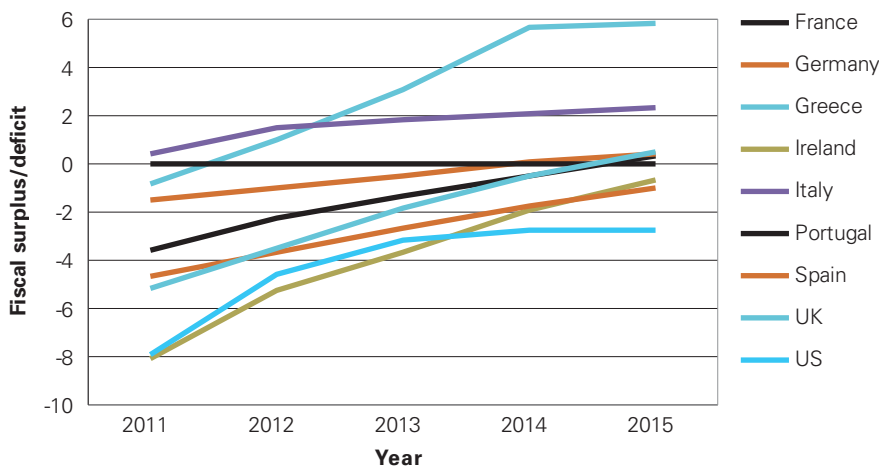
Source: IMF

Unemployment rates will fall for all countries over the forecast period, 2011-2015



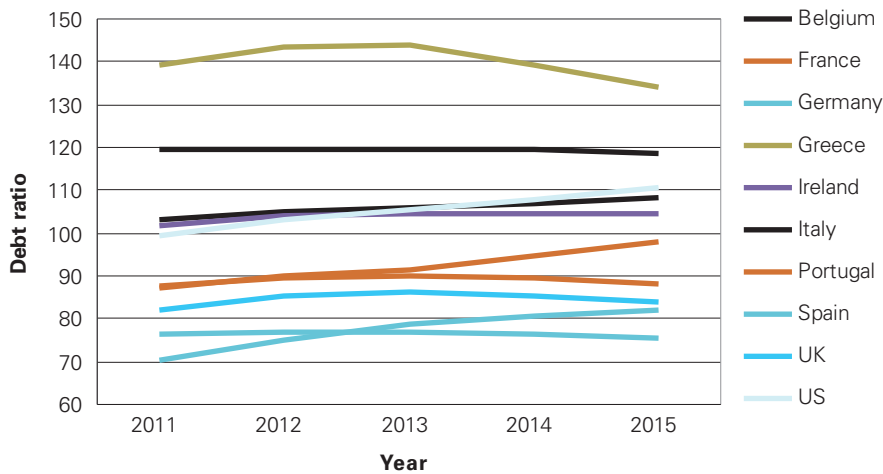
Source: IMF

Fiscal balances will improve, particularly from 2012



Source: IMF

Belgium, Greece, Italy and Ireland will continue to have debt ratios over 100%



Source: IMF

References

- 1 Lars Jonung and Eoin Drea. The euro: It can't happen, It's a bad idea, It won't last. US economists on the EMU, 1989 – 2002. 10 November 2009.
- 2 European Central Bank. Statistics: Banknotes and coins circulation. 19 January 2011.
- 3 IMF. World Economic Outlook. 2010.
- 4 Michael Bordo. The United States as a Monetary Union and the Euro: A Historical Perspective. Cato Journal. Spring / Summer 2004.
- 5 Richard Grossman, US Banking History, Civil War to World War II. 01 February 2010.
- 6 Bunker Hill Rare Coin. Gold in the American Civil War.
- 7 Marco Pagano. Measuring Financial Integration.
- 8 Paul Krugman. Lessons of Massachusetts for EMU. In F Torres and F Giavassi (eds) Adjustment and growth in the European monetary union. 1993.
- 9 Jamus Lim. What makes a Successful Currency Union? blogs.worldbank.org. 09 May 2010.
- 10 Zsolt Darvas. Fiscal Federalism In Crisis: Lessons For Europe From The US. Bruegel Policy Contribution. 12 July 2010.
- 11 Wolfgang Münchau. Fiscal union is crucial to the euro's survival. Financial Times. 14 November 2010.
- 12 ECB Trichet: Eurozone In Better Shape Than US, Japan. [Imarketnews.com](http://marketnews.com). 27 January 2011.
- 13 Daniel Gros. Eurozone crises left to fester. 21 December 2010.
- 14 The Economist. We don't want no transfer union. 02 December 2010.
- 15 IMF. Greek Program Broadly on Track But Structural Reforms Remain. 23 November 2010.
- 16 IMF. Greek Program Broadly on Track But Structural Reforms Remain. 23 November 2010.

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