

Investment Themes

Global Strategy

Contributors

Christel Aranda-Hassel
 Director, European Economics
 +44 20 7888 1383
christel.aranda-hassel@credit-suisse.com

Robert Barrie
 Managing Director, European Economics
 +44 20 7888 7536
robert.barrie@credit-suisse.com

Violante Di Canossa
 Associate, European Economics
 +44 20 7883 4192
violante.dicanossa@credit-suisse.com

Neville Hill
 Director, European Economics
 +44 20 7888 1334
neville.hill@credit-suisse.com

Thushka Maharaj
 Associate, Interest Rate Strategy
 +44 20 7883 0211
thushka.maharaj@credit-suisse.com

Amlan Roy
 Director, Demographics
 +44 20 7888 1501
amlan.roy@credit-suisse.com

Sean Shepley
 Managing Director, Global Strategy
 +44 20 7888 1333
sean.shepley@credit-suisse.com

Stuart Sparks
 Director, Interest Rate Strategy
 +44 20 7888 6687
stuart.sparks@credit-suisse.com

James Sweeney
 Director, Global Strategy
 +1 212 538 4648
james.sweeney@credit-suisse.com

Giovanni Zanni
 Director, European Economics
 +33 1 7039 0132
giovanni.zanni@credit-suisse.com

Greece: Debt financing and a strategy for recovery

- Greece's acute problem is the need to raise financing to allow it to roll over maturing debt in April and May, while preserving sufficient cash to fund current expenditure. We estimate an additional funding need of at least €30bn by May.
- The concentration of maturing debt is unusual, but even if this immediate source of stress can be overcome, the funding profile for coming years remains demanding. The next three months will have a heavy bearing on the profile that is followed, but whatever happens, Greece and other peripheral euro area countries will still suffer from a chronic need to improve productivity, raise national savings and cut government borrowing.
- Since Eurostat said that its public account data could not be relied upon at the beginning of this year, the new Greek government has been at pains to underscore its intention to cut spending, hold down public sector wages and enact reforms to statistics, pensions and the tax system. Even though there is very little time available, making good on these promises in some form will be critical in affirming institutional funding support in the event that market financing is unavailable in the scale required.
- There is no accepted institutional response for an EMU/EU country that runs into financing problems. The absence of an agreed mechanism means that many options are currently discussed, ranging across the ECB, the EU Commission, bilateral loans and the IMF. Given the scope of its resources, our base case is that the latter will provide a short-term backstop in the event that no EU solution is forthcoming.
- Greece has seen its spread volatility decouple from the rest of the EUR sovereign market, but it nonetheless acts as a magnet for Spain, Portugal, Ireland and Italy in varying degrees. Contagion is a reality and US history points to clusters of defaults at the state level in the period when the structure of the national government was not set up to help states that could not pay their creditors. This tail risk (potentially extending back into the banking system) is one reason why we would expect official intervention in the short term.
- The long haul of re-establishing competitiveness is almost guaranteed to be painful. Real wages have to fall relative to a euro area benchmark (Germany) that is unlikely to be increasing quickly while Germany is constitutionally committed to fiscal contraction. The degree of credit stress and economic depressants at work underpins our expectation of very low interest rates in coming years.

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How we got here: Greece's debt dynamics

Giovanni Zanni
+33 1 7039 0132
giovanni.zanni@credit-suisse.com

Greece benefited in the 2000s – together with other fast-growing EMU members – from a very favourable backdrop for debt reduction. Nominal GDP growth was systematically higher than the average rate of interest paid on the government's debt. The implication was that the government could run significant fiscal deficits and still reduce the debt-to-GDP ratio. It did not exploit that advantage significantly, however, and the Greek government's debt ratio fell only slightly over the period.

Things have changed drastically since last year. Nominal growth fell to 0% in 2009. Although it should recover from 2009 lows, we think it will remain subdued relative to the recent past. Even if Greek sovereign credit spreads versus Germany fall back somewhat from the peaks reached last week, it seems extremely unlikely that the favourable dynamics of the past will reappear anytime soon. As such, there are few options open to the government other than to move the primary balance into surplus – a surplus that is sufficient to first stabilise the debt-to-GDP ratio and then push it downwards.

With respect to external influences on the country's growth, Greece might be in a slightly less negative position than other countries that need to restructure their finances in the euro area, as some of its main export markets are likely to see dynamic growth in the coming years. A rebound in shipping-related revenues is likely given the significant rebound in global trade already in the making, and Greece's GDP per capita is still significantly lower than the euro area average. Greece's potential GDP growth is expected to be amongst the highest in the euro area, although much lower than in the past – the European Commission and the IMF, for example, expect nominal GDP growth to be between 3% and 4% on average over the next five years, versus 7.3% in 2000-08. They expect Greece's real annual GDP growth to be between -0.3% and +2.0% over the next five years. However, the need for fiscal consolidation may in itself keep real GDP growth substantially below these rates.

The interest payments side of the equation is daunting. The initial level of the debt, the high deficit and the credibility issue with Greek statistics have instead increased greatly the cost of financing. For example, the current yield on seven-year government debt (the maturity of the government debt is about seven years) is about 2pp above the average interest rate paid by the government on its debt over the past decade. While the increase in government debt yields will not affect the cost to the government on the totality of its debt immediately (because of the mentioned seven-year maturity and the duration of four years on the Greek government's debt), it will eventually do so, and it may also lead to a shortening of the duration of new debt issues. **For these reasons, we believe it is paramount that actions are taken to reverse as much as possible the recent increase in rates.**

Exhibit 1: Selected macro forecasts

	2009	2010F	2010F	2010F
		Credit Suisse	Greek Government	European Commission
GDP growth	-1.2	-1	-0.3	-0.3
Inflation	1.2	1.4	1.4	1.4
Deficit/GDP	12.7	10	8.7	12.2
Debt/GDP	113	122	120	125
Current account/GDP	-8.8	-6	-6.6	-6.8

Source: Ministry of Finance, EU Commission November 2009 (i.e., pre-Greek stability plan); Credit Suisse

An ambitious fiscal plan

The Greek government's Stability and Growth Programme for 2010-13, presented in January to the European Commission, outlines a 4pp cut this year in the fiscal deficit-to-GDP ratio. This would take the deficit to 8.7% in 2010 from 12.7% estimated for last year. The plan also provides for further large falls in the deficit-to-GDP ratio of around 3pp in 2011 and 3pp again in 2012, and an additional 0.8pp in 2013 (Exhibit 2). The plan is very ambitious, in our view, and aims at getting the deficit back below 3% of GDP in just three years.

Exhibit 2: Medium-term fiscal consolidation plan 2010-13

% of GDP	2010F	2011F	2012F	2013F
General government deficit	8.7%	5.6%	2.8%	2.0%

Source: Ministry of Finance, Credit Suisse

2010 measures

On the revenue front, the Greek government expects to increase the revenue-to-GDP ratio by 2.6pp to 41.9% (the euro area average is around 44%). Measures include the following:

- A permanent increase in taxes (e.g., elimination of several tax exemptions, higher property taxes, excise taxes on alcohol and cigarettes) estimated at €2.6bn (1.1% of GDP).
- One-off increases in tax on profitable firms, high value real estate and revenues from the banks' liquidity scheme during the financial crisis. These measures are expected to bring €1.3bn (0.5% of GDP) into the states' coffers.
- Tax evasion fight: the Greek government expects to recoup €1.2bn (0.5% of GDP), which it views as a conservative estimate in light of an expected thorough reform of the tax system later this year.
- Accelerated EU fund transfers: Greece has been late in absorbing EU funds –around €25bn (or 10% of GDP) of funds are still to be absorbed under the 2007-13 spending plan.

On the expenditure side, the aim is to lower the expenditure ratio by 1.4pp to 50.6%. The key measures are:

- A 10% reduction in expenditure on civil servants' salary allowances.
- A hiring freeze in 2010 (to be followed by a one-for-five replacement rule from 2011).
- A cut in procurement costs.

Exhibit 3: Upcoming events in Greece and reform timetable

Date	Event	Legislation	Status
15-16 Feb 2010	Council (EcoFin) decision on the Greek fiscal plan		
Jan 2010	Legislation to render the Statistic Service independent to be submitted to parliament		
Q1 2010	Introduction of reporting requirements from each line ministry on a monthly basis	Ministerial decision	In progress
Q1 2010	Introduce three-year budget plans for each ministry incorporating cost cutting, in line with PM's instruction	MoF to produce instructions	In progress
Q1 2010	Creation of a contingency reserve by setting an upper 90% limit on all budgetary appropriations	MoF decision	In progress
Q1 2010	Introduce unified progressive tax scale for income from all sources	Legislation	In progress
Q1 2010	Abolish autonomous taxation and most tax exemptions in personal income and corporate profits	Legislation	In progress
Q1 2010	Freeze hiring in 2010	Legislation	In progress

Source: Credit Suisse

Overall, the planned expenditure cuts are worth an estimated €1.8bn (0.8% of GDP). In addition, the government banks on the non-recurrence of one-off expenditures that took place in 2009 – the costs of calling elections twice last year, some support to the economy during the financial crisis and the inclusion in the general government's liabilities of public hospitals' arrears to suppliers. **Overall, this would amount to around 2% of GDP.**

Clearly, revenues and expenditure will be affected by the cycle as well, and by the decision to increase somewhat public investment spending. The government estimates that growth will be a below potential -0.3% for this year. That explains why the measures are worth, according to the government's estimates, more than the projected 4pp reduction of the deficit.

Other key aspects of the government plan

The deficit target is not conditional on the growth or interest rate scenarios. If there is deterioration in the fiscal balances, the plan states that the government will introduce a supplementary budget or adopt additional measures in order to ensure that the adjustment path is followed. An increase in indirect taxes is quoted as a possibility.

Ministries have been asked to submit by the end of February 2010 three-year budget proposals incorporating overall expenditure reduction plans. This submission will also serve as the basis for supplemental cost-cutting measures in the event of a significant deterioration in the fiscal balance due to unforeseen circumstances.

A contingency reserve is planned. An upper 90% limit on all budgeted expenditure (other than wages, pensions and interest payments) will be imposed from Q1 2010. Depending on the expenditure outturn of the first six months, the blocked sums may not be reallocated among the spending ministries, allowing for a buffer and for possible further reductions in spending for the year.

In addition, moving the statistical institute towards full independence, reforming taxes and pensions, as well as periodic reports to the European Commission are imminent, according to the SGP.

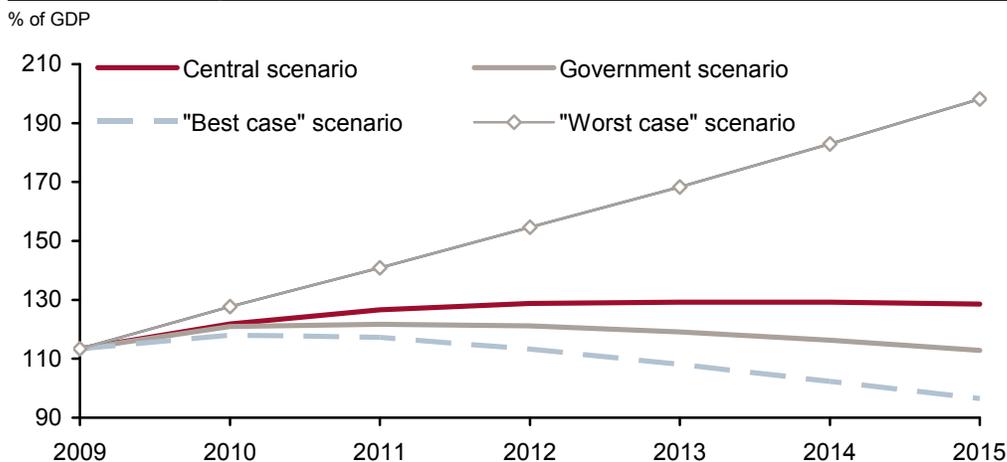
Can it be done?

Overall, the reform package of the Greek government goes in the right direction, in our view. However, the number of reforms and the legislative work they imply in the next few months look particularly ambitious to us. The Greek government is supported by a large parliamentary majority, and the opposition appears to be not particularly obstructive at the moment. Also, polls suggest majority support for the government and the measures, for now. However, the lack of credibility of Greek institutions, reflected by Eurostat's report on Greek statistics, and the unprecedented effort needed to rein in the deficit justify the current market scepticism, in our view. Given the large number of measures the Greek government has promised to take over the next couple of months, we should soon know the likely path of the debt ratio. For now, we present and discuss possible scenarios.

Debt dynamics scenarios

In this section, we look at government debt dynamics in Greece on the back of the recently presented 2010-13 Stability and Growth Programme (SGP) and the significant government bond yield spread widening of recent weeks. We simulate the evolution of the debt dynamics under different assumptions.

Our first scenario is based on the government's assumptions, according to which nominal GDP grows at around 3½% per annum on average over 2010-13, after rising at an annual rate of 7.4% in 2000-08. The assumptions for real GDP growth are -0.3% for 2010 and 1-2% per year for 2011-13. The Greek government's plan aims for a peak in the debt-to-GDP ratio of 120.6% in 2011, followed by a fall to 113% in 2013 (Exhibit 4).

Exhibit 4: Debt dynamics in Greece

Source: Credit Suisse

On the assumption that the government achieves its targets for the narrowing of the fiscal deficit, this is a largely credible scenario, in our view, and is also consistent with estimates from the European Commission and the IMF – provided that the fiscal retrenchment increases confidence in the Greek economy, and assuming that the private sector reacts with some decrease in precautionary savings.

However, the government's assumption for the average interest rate paid on the government's debt, at 4.6% for 2010-13, appears to us optimistic, especially given recent market movements. A rate between 5% and 5.5% seems more realistic, in our view, given the current state of affairs. Recall that higher rates will trickle only progressively into a higher overall cost of financing given the long maturity of the Greek debt.

Although the government assumes full implementation of its deficit reduction plan, we project, in our central forecasting scenario, a 75% implementation rate.

The second scenario in Exhibit 4 is our "central forecasting scenario". It is based on our somewhat more cautious (than the government's) assumptions. Our central forecasting scenario sees the debt-to-GDP ratio peaking at 129% in 2013.

Clearly a lot of factors can go wrong from here. Market dynamics could deteriorate further; and the fiscal retrenchment could lead to serious social unrest, with negative implications for economic growth and for the implementation of reforms.

For this reason, we also present in Exhibit 4 a "worst case scenario", which assumes low nominal growth (just 1¼% per year on average), high interest costs (6% on average) and no change in the primary balance from its estimated 2009 level (-7.7% of GDP). This scenario is clearly unsustainable. The debt ratio would reach close to 200% by 2015 (and continue to rise from there).

A rosy scenario is also displayed in Exhibit 4, which would result in the debt-to-GDP ratio falling to just under 100% by 2015. In this scenario, we allow for 5¼% growth in nominal GDP per year, 2pp lower than in the 2000s but still consistent with further convergence in Greece's GDP per capita towards average levels in the euro area. This could be the result of a strong rebound in the economies of southern Europe, a strong contribution from shipping and a continuation of relatively strong productivity growth in the country. Regained credibility, through the strict and successful achievement of the targets set in the SGP, could have a strong impact on government bond spreads. The average cost of financing would fall to 4.5% in this scenario. Finally, full compliance with the deficit targets would be achieved.

Debt dynamics arithmetic

Changes in a country's debt ratio are determined by the following formula:

$$\Delta D_t = D_{t-1} * (i_t - y_t) + PB_t + SF_t$$

where D is the debt-to-GDP ratio; i the average interest rate paid on the debt; y is nominal GDP growth; PB is the government primary balance (i.e., the deficit minus interest payments, expressed as a percentage of GDP); and SF is the so-called stock-flow adjustment (to take into account the items that affect the debt but not the deficit, e.g., bank rescue packages, privatisations). Greece has included some privatisation measures that should reduce the debt-to-GDP ratio by a few percentage points over the next two or three years.

If we exclude stock-flow adjustments that have only a one-off impact on the debt, we can see that the debt ratio stabilises (i.e., $\Delta D_t = 0$) when $PB_t = (y_t - i_t) * D_{t-1}$. In other words, the country needs a primary surplus whenever the interest rate exceeds the rate of nominal GDP growth. When that is the case, the larger the initial debt ratio, the larger the primary surplus required.

Funding the debt

Thushka Maharaj
+44 20 7883 0211
thushka.maharaj@credit-suisse.com

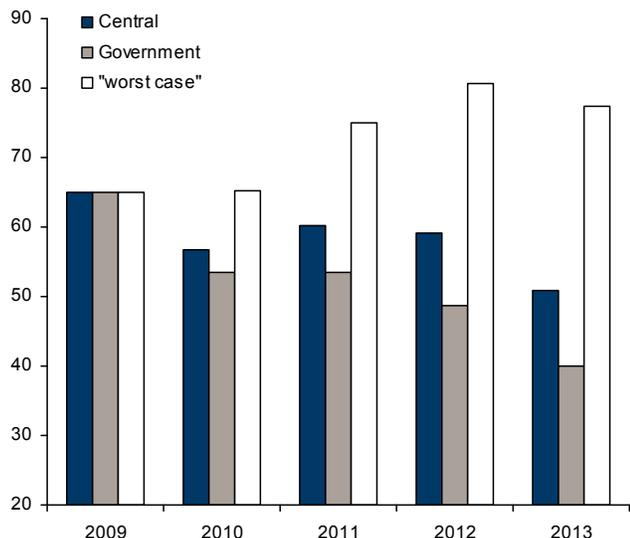
Giovanni Zanni
+33 1 7039 0132
giovanni.zanni@credit-suisse.com

Greece's acute problem is financing large debt maturities annually in April and May. On our analysis, this is accentuated by the seasonal pattern of the government's deficit, which tends to amplify the need for cash in the second quarter. We run through potential sources for funding the debt and how potential ratings changes could undermine some of them.

Looking further ahead, we make a projection for the coming years based on the government's deficit projections and known redemptions.¹ In making these projections, we are implicitly assuming that the market will remain open for the level of funding required to finance the government's deficit and also that there are no significant changes in the average maturity of the debt. We assume the existing bill stock is rolled. In our central scenario, funding requirements will remain close to €60bn over the next couple of years – after having reached €65bn in 2009, falling below that level in 2012-13. Under our "worst case" scenario, borrowing would increase towards €70bn; it would fall below €40bn in 2012-13 if the government's assumptions are realised.

Exhibit 5: Funding needs, different scenarios

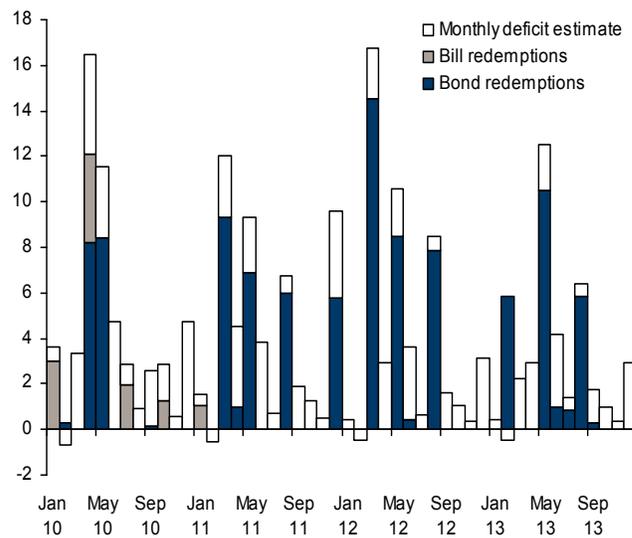
€bn; assumes current stock of bills rolled



Source: Credit Suisse

Exhibit 6: Funding requirements, central scenario

€bn; shows expiries for current bills but not possible future issues



Source: Credit Suisse

The key stress point for the financing needs of the Greek government is in the first half of the year and in particular April and May 2010 (Exhibit 7), when several securities mature and in light of the heavy deficit normally recorded in those months – over the past three years, nearly half of Greece's yearly deficit financing needs were concentrated in the second quarter. If we assume that similar rules will apply this year, then Greece's financing needs in Q2 will amount to around €32bn.

Funding so far

In total, Greece raised financing via private placement late last year, bill issuance and a 5yr bond syndication; overall, that represents around €13bn, or 20% of total needs. Recent announcements also indicate that a 10yr bond syndication may occur at the end of February. If the subscription is in the range of €8-10bn, this would allow Greece to raise

¹ For a monthly breakdown of the deficit estimates, we have taken the average monthly profile of the borrowing requirement on a cash basis over the past three years as a benchmark.

cumulative funding to €23bn, thereby reaching 40% of its borrowing needs for the year. However, borrowing has been heavily concentrated in the second quarter in recent years and, on our estimates, the country would still need to issue at least an additional €15-20bn by April to keep ahead of the debt redemption schedule given its cash funding needs.

Exhibit 7: Forecast schedule of Greece’s estimated 2010 funding requirements

€bn

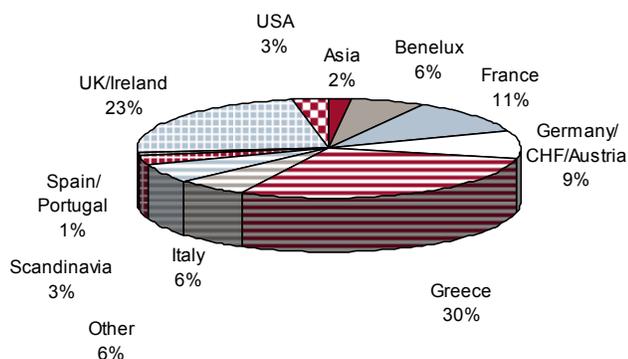
Month	Expected issuance	Cumulative issuance	Cumulative cash requirement	Of which: Debt maturing	Of which: Deficit requirement
January	10.8*	10.8	6.6	6.0	0.6
February	10.0	20.8	6.2	0.3	-0.7
March	12.5	33.3	9.6	0.0	3.4
April	7.5	40.8	26.1	12.1	4.4
May	4.5	45.3	37.6	8.4	3.1
June			42.4	0.0	4.8
July			45.2	2.0	0.9
August			46.1	0.0	0.9
September			48.7	0.2	2.4
October			51.5	1.3	1.6
November			52.1	0.0	0.6
December			56.9	0.0	4.7
Total	56.9			30.2	26.6

*Completed.
Source: Credit Suisse estimates

Sources of financing

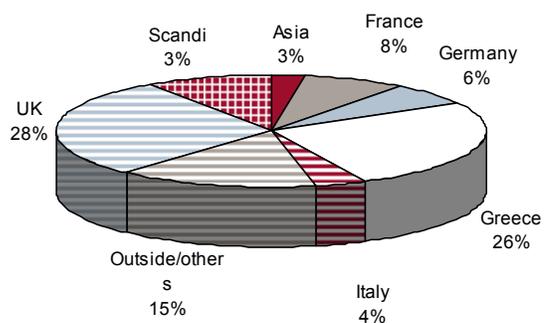
Foreign investors are dominant in the Greek government bond market. Using syndicate allocations for the past five years (Exhibit 8) shows that Greek investors bought less than 30% of the total, according to the Greek debt agency. The latest bond allocation was no different in that respect (Exhibit 9).

Exhibit 8: Greek bond allocation by country, 2005-09



Source: Credit Suisse, PDMA

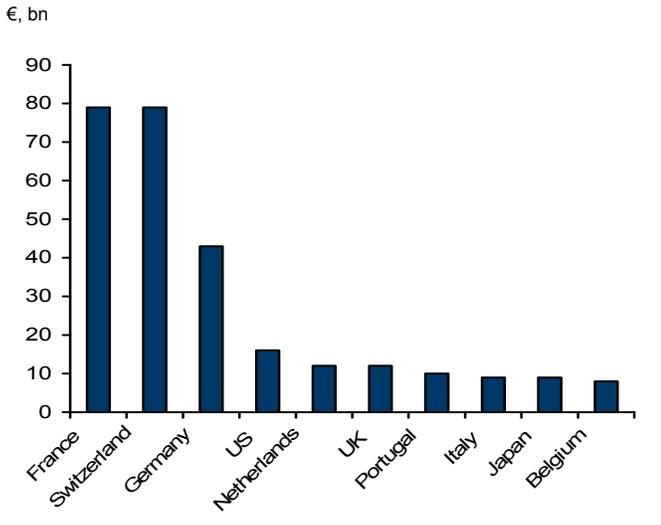
Exhibit 9: Subscription at the January 2010 5yr syndicated deal



Source: Credit Suisse, PDMA

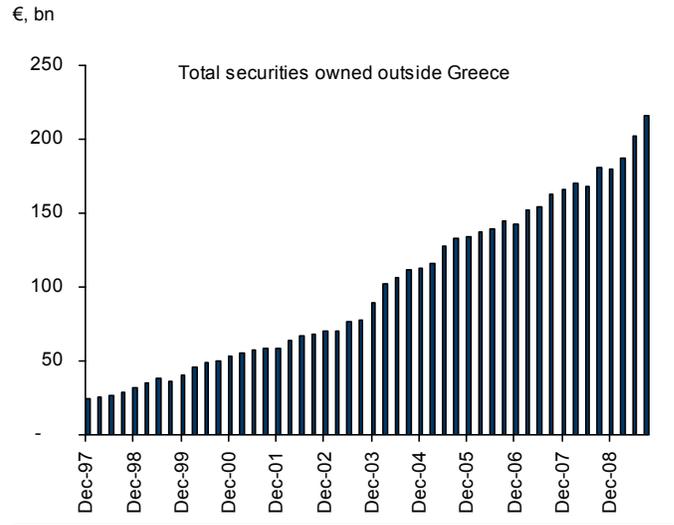
European banks in particular are exposed to Greece. Of the total €300bn foreign claims of banks vis-à-vis Greek assets (including corporate and bank debt), European banks represent around 90% of the total, with France, Switzerland and Germany the countries most exposed to the country (Exhibit 10).

Exhibit 10: Bank claims vis-à-vis Greece



Source: BIS, Credit Suisse

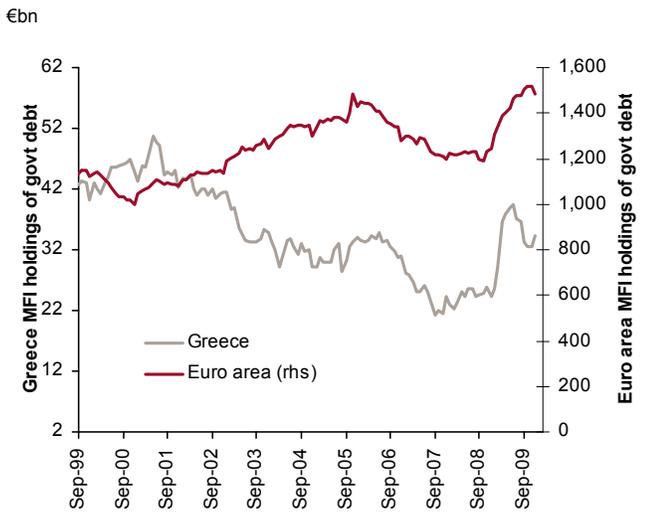
Exhibit 11: Greek government debt owned outside of Greece



Source: Bank of Greece, Credit Suisse

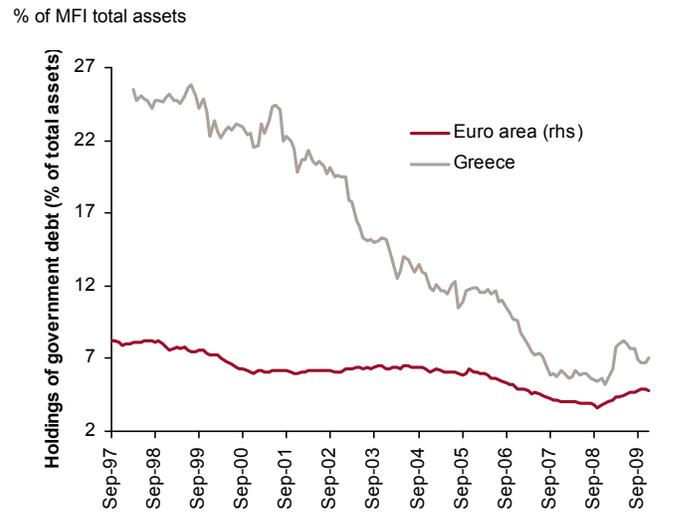
Greek banks are not significantly invested in the Greek government bond market. Holdings of government bonds are around €30bn according to the financial accounts, and lower than that if we look at the ECB's bank statistics – Greek banks hold around €30bn of government bonds as of December 2009, and clearly not all these bonds are Greek. As a share of total assets, Greek banks have a relatively higher share of government bonds than euro area banks in aggregate, although from a historical perspective, Greek banks' holdings of government bonds are close to the lows of the time series (Exhibits 12 and 13).

Exhibit 12: Banks' holdings of government debt



Source: Credit Suisse, ECB

Exhibit 13: Banks' holdings of government debt

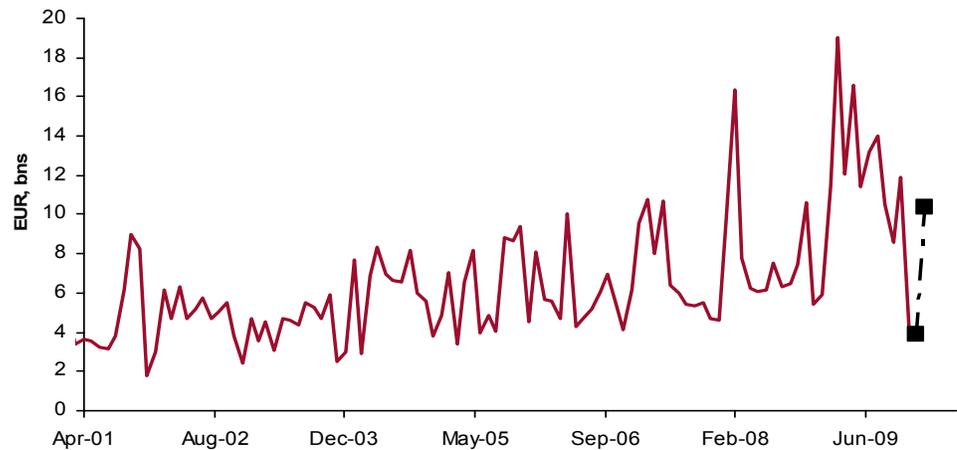


Source: Credit Suisse, ECB

Greece cannot rely on cash in the state's coffers. Financial data suggest that the Greek government had only a small cushion in terms of cash available at the end of last year. This is a seasonal dynamic as cash is generally low in December and is generally increased in Q1 to face the heavier financing needs. Given the higher issuance in January relative to the funding need, we estimate that the government currently has €10bn in its current account.

Exhibit 14: Government cash deposit

January 2010 is an estimate based on already issued securities and our monthly deficit estimates for that month



Source: Credit Suisse, Bank of Greece

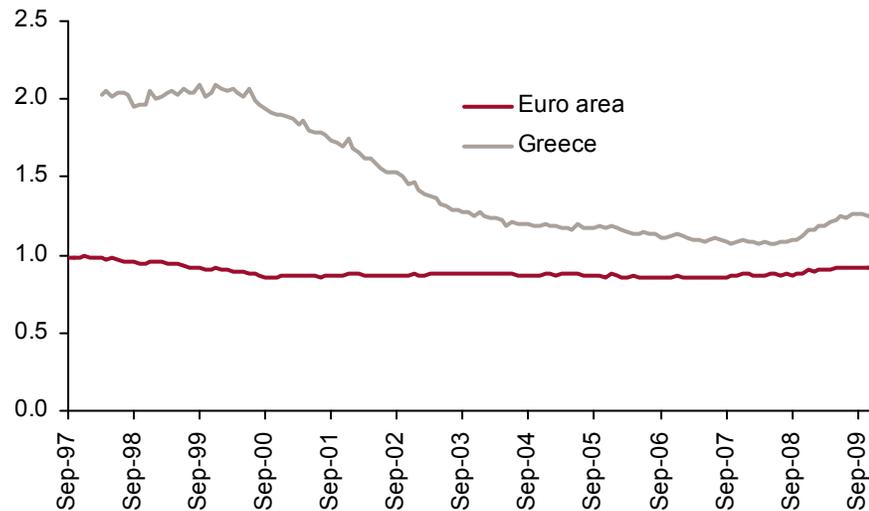
Funding risks

International appetite could dry up. This is not the evidence from the latest syndication, which was oversubscribed and had a very large presence of foreign investors, but things could change. A withdrawal of funds at some point in the future prompted by a loss of confidence or regulatory issues that oblige some investors to liquidate their positions (or prevent them from adding more) cannot be ruled out, in our view.

ECB's collateral policy and Greece. In late 2008, the ECB expanded the list of assets eligible as collateral in credit operations and lowered the credit threshold from A- to BBB-. At the time, it said that this temporary rule would expire at the end of 2009. On 7 May 2009, the ECB extended it until the end of 2010, but has recently announced that at the end of the year, it will revert to the previous credit requirement. The ECB considers all four external credit assessment institutions (DBRS, Fitch, Moody's and S&P) but the rating of only one – at the level required for eligibility – is sufficient. Greece currently complies with the temporary eligibility criteria through its BBB+ ratings from Fitch and S&P and even more so with its Moody's rating, at A2 (A equivalent). However, with a negative outlook on all ratings, we see a clear risk that failure to execute its deficit reduction plan could produce ratings downgrades. Assuming the ECB follows its policy intention, Greece would need a two-notch downgrade from Moody's to lose eligibility in that context. We would anticipate that falling out of the eligible collateral basket would produce a significant reduction in the pool of investors willing and able to buy Greek debt.

Greek banks could pick up some of the demand, but not all of it. As we state above, there is room in the Greek banks' balance sheets to engineer an increase in the domestic demand of government bonds. Moreover, Greek banks appear still quite liquid, with deposit-to-loans ratios currently at 120% and well above the euro area average.

Exhibit 15: Greek deposit-loan ratio still remains higher than euro area average



Source: Credit Suisse

However, it is unlikely that Greek banks could fund the total borrowing requirements of the government. Just for this year, this would mean more than doubling their current holdings of bonds. Moreover, having recently been forced by the authorities to fund government debt holdings through the market rather than the central bank, it is not clear that they would want to.

The “*in extremis*” solutions. A major funding crisis would lead to the direct involvement of the European Commission, other European institutions such as the EIB, or even the IMF, in our view. We look at the institutional challenges and potential solutions to any such involvement in the Appendix.

Analysing the spread of contagion: relationships between European sovereigns' debt

Thushka Maharaj
+44 20 7883 0211
thushka.maharaj@credit-suisse.com

Stuart Sparks
+44 20 7888 6687
stuart.sparks@credit-suisse.com

In this section, we look at two separate ways to track changes in the behaviour of European sovereigns, enabling us both to identify the extent to which spread curves have been driven by common factors and whether spreads themselves have shifted their correlation structure. Our primary findings are that:

- The severe widening in Greek spreads has seen its spread volatility decouple from all other euro area sovereigns.
- However, correlations between the euro area sovereigns have remained high and have indeed become stronger than any correlation with the level of spreads to Germany, an indication that an independent source of risk has been introduced to euro area sovereign spreads.
- Spread curves have become more heavily influenced by a 'twist' dynamic that has caused CDS curves to flatten independent of the level of spreads. This has been most extreme in Greece, but is apparent in the other sovereign markets as well.
- Finally, we perform 'cluster' analysis on sovereign spreads, which points to a change in groupings both at the wider end of the range (Spain has been shifted into a wide spread category) and in traditionally core markets (e.g., France has been shifted into a medium category).

European CDS spread curve dynamics

We utilize principal component analysis to examine the dynamics of the front ten years of the sovereign CDS curves of Greece, Spain, Italy, Ireland and Portugal. Common themes across all these sovereigns have been wider CDS spreads generally and CDS spread curve flattening. Greece is highlighted below as the sovereign exhibiting a sharp inversion of the CDS curve – a dynamic consistent with a classic credit event.

The first factor represents the tendency of the CDS curve to rise and flatten as it rises. The second factor illustrates changes in the CDS curve slope that are independent of the CDS level. A negative shock to this factor is a flattening of the CDS curve and is normally coincident with "end-game" CDS curve dynamics.

Exhibit 16: Explanatory power of first two PCA factors

Proportion of variance explained by first two factors of sovereign CDS curves

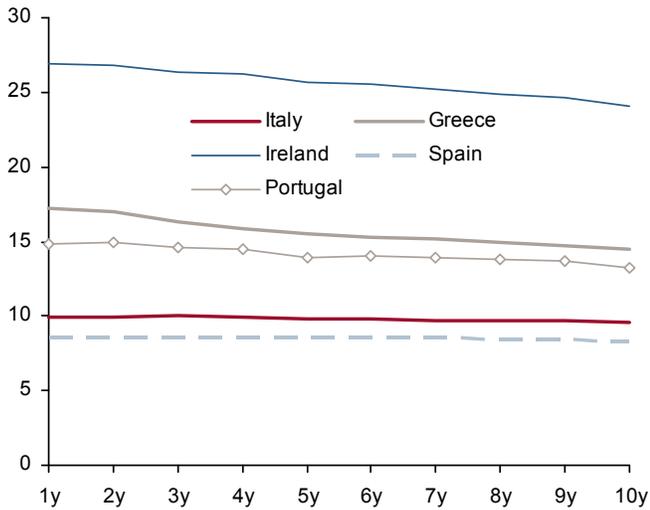
	Factor 1	Factor 2
Greece	97.5%	2.1%
Spain	99.0%	0.7%
Ireland	99.6%	0.3%
Italy	98.4%	1.3%
Portugal	99.3%	0.6%

Source: Credit Suisse

As we show in Exhibit 16, the first factor captures more than 95% of the variance in the underlying series. Exhibits 17 and 18 illustrate the factor weights for the five sovereigns. As shown, the first factor captures the parallel shifts in the CDS curves and the second factor captures changes in slope. For example, a one standard deviation shock to the second factor biases the spread curves to steepen.

Exhibit 17: PCA factor 1 loadings

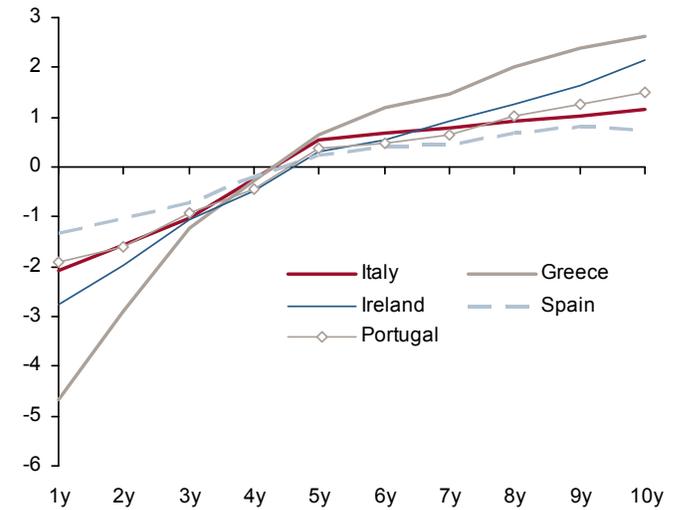
Calculated from weekly changes, 1 Aug 2007 to present



Source: Credit Suisse

Exhibit 18: PCA factor 2 loadings

Calculated from weekly changes, 1 Aug 2007 to present

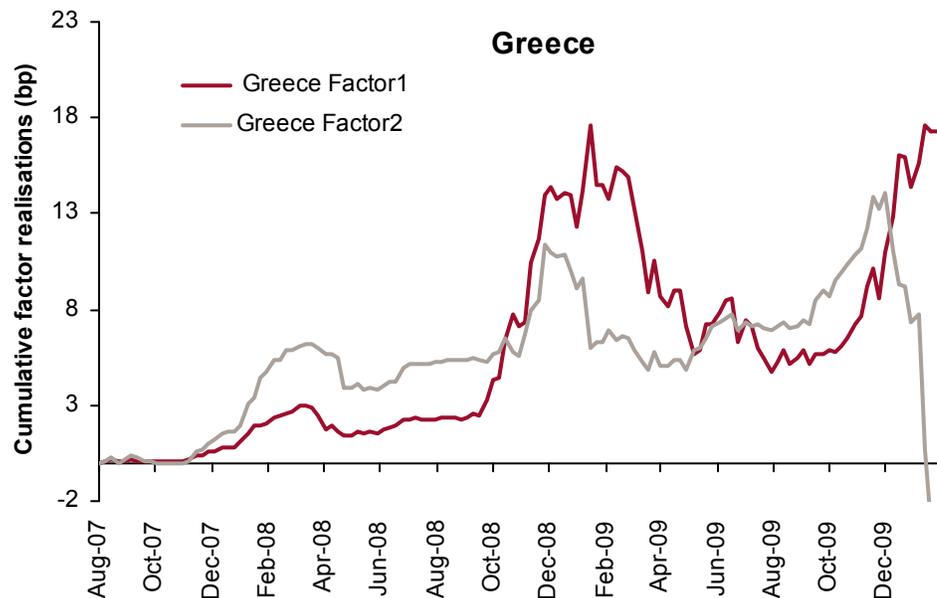


Source: Credit Suisse

For Greece, the main dynamic over the past month has been the sharp flattening of the CDS curve as the fiscal situation deteriorated.

Exhibit 19: Significant CDS curve flattening since the start of the year

Calculated from weekly changes, 1 Aug 2007 to present

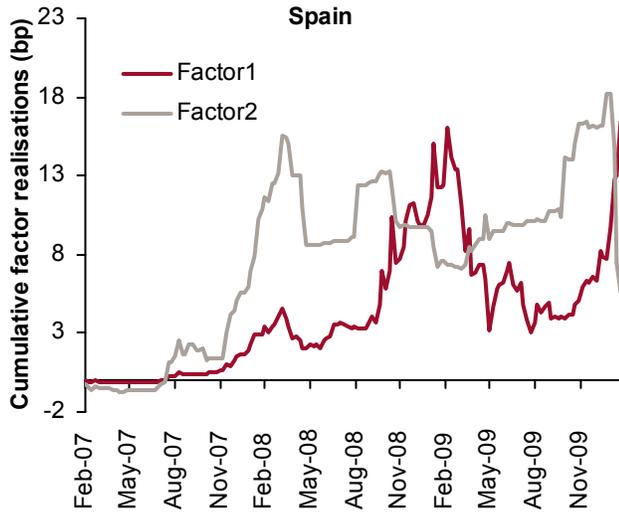


Source: Credit Suisse

The same CDS curve flattening dynamic is evident for Spain, Portugal, Italy and Ireland, albeit the magnitude of the move is less drastic for these sovereigns.

Exhibit 20: Spain CDS curve dynamics

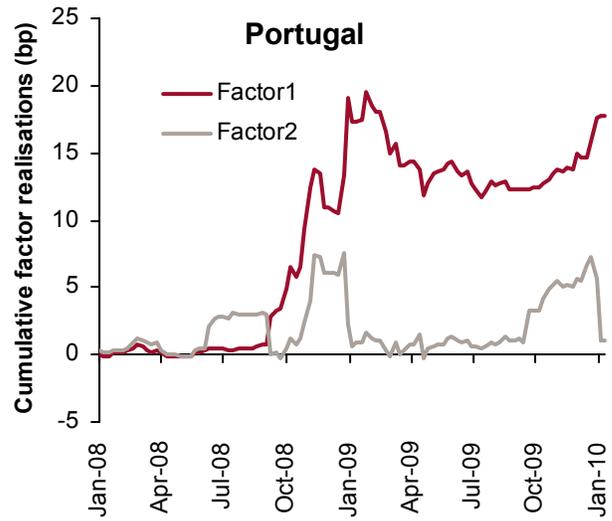
Calculated from weekly changes, 1 Aug 2007 to present



Source: Credit Suisse

Exhibit 21: Portugal CDS curve dynamics

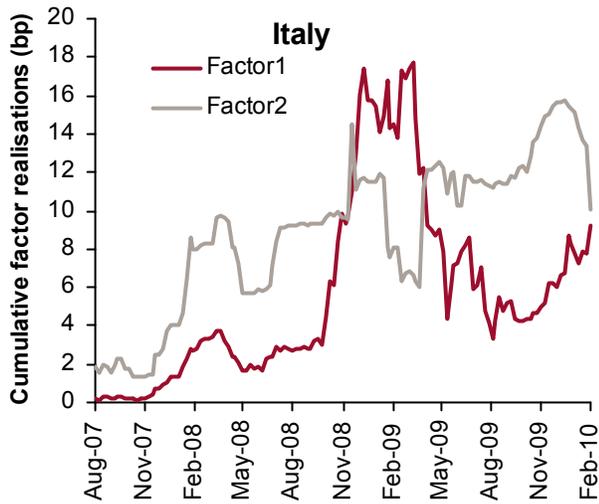
Calculated from weekly changes, 1 Aug 2007 to present



Source: Credit Suisse

Exhibit 22: Italy CDS curve dynamics

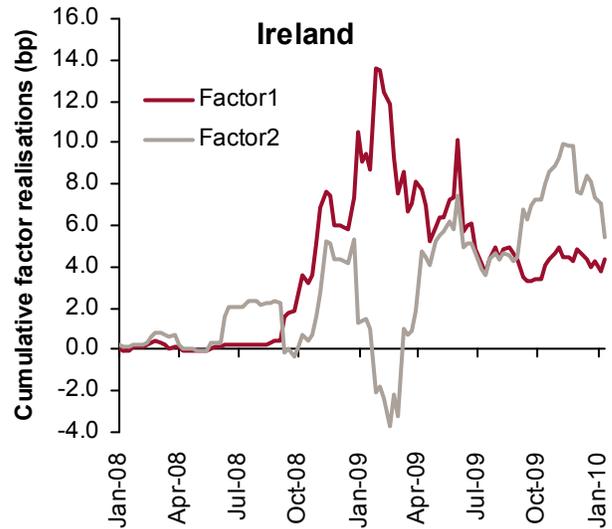
Calculated from weekly changes, 1 Aug 2007 to present



Source: Credit Suisse

Exhibit 23: Ireland CDS curve dynamics

Calculated from weekly changes, 1 Aug 2007 to present



Source: Credit Suisse

Decoupling between core and non-core performance

The ongoing pressure on Greece and concerns on its fiscal financing programme have led to a breakdown in the correlation of Greece bonds and the core sovereign debt market. As shown in Exhibit 24, the correlation between the performance of 10yr peripheral yield spreads and the level of German 10yr yields has fallen steadily over the past three months.

Exhibit 24: Decoupling in the performance of peripheral sovereigns relative to core

60-day rolling window



Source: Credit Suisse

In contrast however, the correlation between GGB-DEM 10yr yield spreads and 10yr Spain, Italy and Portugal yields has steadily risen over the past few months (Exhibit 25). This points to the credit tiering effect that has been prevalent during the crisis and the strong dichotomy between core and peripheral euro area sovereigns.

Exhibit 25: Greece continues to affect other peripheral sovereigns

60-day rolling window



Source: Credit Suisse

As markets focus on the financing requirements of Greece, peripheral spread volatility continues to rise. Although volatility has increased generally across all sovereigns, Greek debt is highlighted and appears to perform independently from the rest of Europe (Exhibit 26).

Exhibit 26: Realised spread volatility on peripheral 10yr spreads to Germany

40-day rolling window



Source: Credit Suisse

Cluster analysis of European sovereign spreads²

Stuart Sparks
+44 20 7888 6687
stuart.sparks@credit-suisse.com

Thushka Maharaj
+44 20 7883 0211
thushka.maharaj@credit-suisse.com

The acute widening of Greece’s sovereign debt has led investors to look for potential candidates for contagion if governments do not improve their fiscal position and if the ECB were to begin to withdraw liquidity support. We use four metrics to rate European sovereigns: gross debt (percentage of GDP), net borrowing by the general government (percentage of GDP), nominal growth (year-on-year percentage change) and the current account balance (percentage of GDP). In the analysis, we use a clustering algorithm to classify the sovereigns according to these metrics. This analysis points to several potential dislocations within the sovereign market.

Exhibit 27: European Commission 2010 forecasts

	Gross debt, general government (% GDP)	Net lending general government (% GDP)	Nominal GDP (yoy)	Current account balance (% GDP)	Current 10yr yield spread to Germany (bps)
Belgium	101.2	-5.8	1.9	0.9	60.5
Germany	76.7	-5	1.8	3.8	-
Netherlands	65.6	-6.1	1.3	3.1	21.1
Portugal	84.6	-8	1.1	-10.2	108.5
Greece	124.9	-12.2	1.1	-7.9	298.0
Spain	66.3	-10.1	-0.3	-4.6	81.1
France	82.5	-8.2	2.4	-2.2	24.8
Italy	116.7	-5.3	2.5	-2.4	86.2
Austria	73.9	-5.5	2	1.4	44.7
Finland	47.4	-4.5	2.4	1.2	21.4
Ireland	82.9	-14.7	-2.3	-1.8	156.8

Source: Credit Suisse, European Commission

Cluster analysis is a statistical method to allocate objects into subsets that share similar characteristics in some predefined sense. In our analysis, we use the four metrics, tabulated in Exhibit 27, to measure similarity between sovereigns. In the algorithm, we predefine the number of clusters (k) we would like the data sample to be classified into. Given prior knowledge of spreads and other metrics by which we can preliminarily sort the sovereigns into “categories”, we choose four clusters. We sort these sovereigns into clusters according to yield spreads to Germany – which we stress were not a criterion included in the analysis.

² Previously published in *European Strategy and Trades*, 25 January 2010.

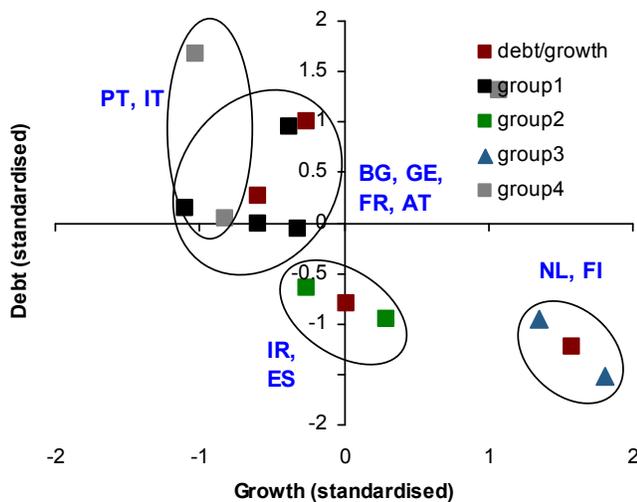
The first group has a yield spread less than 40bp (obviously zero for Germany). The second group includes yield spreads lower than 100bp but higher than 40bp, while the third group runs from 101bp to 150bp, with higher spreads in the fourth group. From this categorization, cluster analysis then uses the criteria in Exhibit 27 to group sovereign issuers.

The centres are at first chosen at random and thereafter chosen as the point with minimum distance from each other point in the cluster. The method then produces groups that share similar features and can thus be thought of as a means of classifying the respective sovereigns using a pre-specified set of criteria.

For clarity, we compare the results obtained for 2006 (pre-crisis) with the sample from 2010 European Commission forecasts. As we show in Exhibits 28 and 29, France has moved from the group with medium debt ratios and low growth in 2006 to a group with a higher debt ratio in 2010, and is now categorized into the same group as Italy and Belgium. Interestingly, France trades at a spread to Germany of roughly 25bp, while Italy trades at a spread of 86bp.

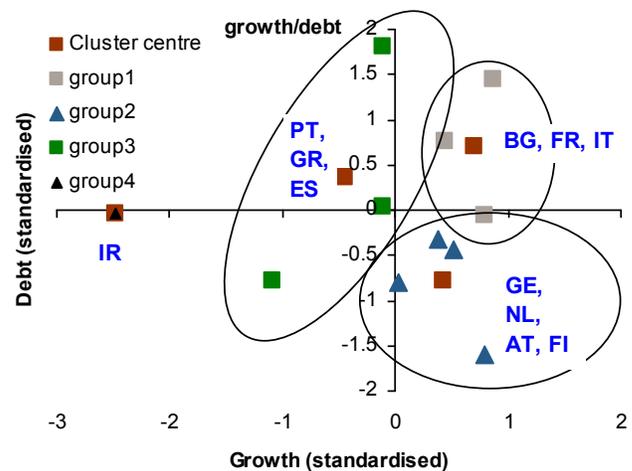
Spain has also been downgraded from a group with low debt to the same group as Portugal, which has a high debt ratio and low growth prospects in 2010. Germany and Austria have joined the Netherlands and Finland in the classification of those with low debt-to-GDP ratios and high forecast growth.

Exhibit 28: The 2006 distribution: Italy was in a lower-rated group with lower growth and high debt ratios ...



Source: Credit Suisse

Exhibit 29: ... however, the 2010 forecast distribution shows a better grouping for Italy



Source: Credit Suisse

We find the cluster analysis consistent with the macroeconomic environment, where, for example, Spain and Ireland were considered to be low debt countries and are now downgraded to a group with low growth and higher debt. Both countries have seen sharp corrections in their construction and property sectors, which has dampened growth prospects for 2010.

Moreover, this analysis puts Portugal, Spain and Greece in a single group. **This offers more formal support for our previous argument that Spain, as a country with banks that have significantly increased their reliance on ECB funding, faces greater sovereign widening as its banks are forced to fund in the private market upon ECB withdrawal.**

Another example is the French downgrade from a better-rated group with other AAA-rated countries to the group with non-AAA rated sovereigns. We find this consistent with deterioration in the French fiscal budget and an expected 20% rise in the 2010 general government debt-to-GDP ratio relative to 2006.

Greek state debt – reference points from US history

James Sweeney
+212 538 4648
james.sweeney@credit-suisse.com

Greece lacks key weapons small countries have historically used during debt crises. Having ceded monetary sovereignty to the ECB, it has almost no control over its exchange rate, interest rates or money supply. In many respects, its debt dynamics are more like those of a US state rather than a sovereign country.

US history illustrates the risks faced by investors in Greek bonds. Historical experience of default goes up for lower levels of government. Federal defaults have only occurred twice³, both during extreme circumstances. By contrast, there have been two major waves of state defaults, not including the Great Depression. Defaults on general obligation municipal bonds have been more common. And of course, defaults on municipal revenue bonds are common.

In 1841 and 1842, Florida, Mississippi, Arkansas, Indiana, Illinois, Maryland, Michigan, Pennsylvania and Louisiana defaulted on interest payments. Alabama, New York, Ohio and Tennessee almost defaulted. Most of the debt had been raised to build canals and railroads, supposedly to bring fees and dividends. Optimistic states lowered property taxes, but revenues collapsed during the depression and deflation of the late 1830s.

The major depression and deflation of the 1870s also caused a wave of defaults. Many states and local governments defaulted in 1873-1884. West Virginia did not settle its debts from this period until 1919.

There was no US central bank in the 1840s or 1870s. The US Treasury performed functions now done by the Fed, but evidently not bailouts or discretionary monetary policy. In the 1870s the US was not under the gold standard, so theoretically dollars could have been printed to raise inflation and help those crippled by debt. In practice though, the US Treasury followed a tight money policy in order to return the economy to the gold standard. In fact, interest on US Treasury debt was being paid in gold, even when this was probably not legally necessary.

The structure and norms of the national government were not set up to help states which could not pay their creditors. There are echoes here of the current situation in Europe in that the structure and norms of the European Monetary Union are not set up to bail out Greece. We provide a discussion of the institutional arrangements for providing support and also for leaving EMU (and the EU) in the Appendix. Prior to that, aggressive fiscal retrenchment and searching for alternative sources of funds are the order of the day.⁴

Despite the lack of structural support, a bailout, if needed, may yet occur. But investors are reminded of a fact evident from US history: governments without printing presses are not sovereign in the sense that should matter most to bondholders.⁵

³ The (brand new) federal government rescheduled its debt in 1790 and a portion of interest owed was deferred for ten years. In 1933 the gold clause on all US government debt and much private debt was abrogated. This eliminated the requirement that US government creditors be owed the gold value of bonds at issue, not the dollar value. The change made gold payment illegal, essentially devaluing all bonds (and defaulting on prior obligations).

⁴ Conceivably, options might include issuing scrip, as US local and state government have done under extreme circumstances. <http://www.ft.com/cms/s/0/2074e990-0952-11df-ba88-00144feabdc0.html>

⁵ Sources:

Debt, Default, and Revenue Structure: The American State Debt Crisis In The Early 1840s by Grinath III, Wallis, and Sylla.

<http://www.nber.org/tmp/41473-h0097.pdf>

This Time It's Different: Eight Centuries of Financial Folly by Carmen Reinhart and Kenneth Rogoff.

The economics of surviving in a monetary union

Christel Aranda-Hassel
+44 20 7888 1383
christel.aranda-hassel@credit-suisse.com

Robert Barrie
+44 20 7888 7536
robert.barrie@credit-suisse.com

Violante Di Canossa
+44 20 7883 4192
violante.dicanossa@credit-suisse.com

Neville Hill
+44 20 7888 1334
neville.hill@credit-suisse.com

Giovanni Zanni
+33 1 7039 0132
giovanni.zanni@credit-suisse.com

Fiscal imbalances and large current account deficits – the so-called twin deficit problem – are plaguing many euro area peripheral countries at present. Within this section, we examine the current account dynamics – which, after having drifted for several years, are seeing some correction towards more sustainable levels.

The large widening of current account imbalances in the euro area in the 2000s was not only due to a loss of competitiveness, in the same way that the reduction in the deficit over the past two years cannot only be interpreted as a sign of regained competitiveness. The latter has been achieved through a moderation in domestic demand, which we expect to continue during the following years.

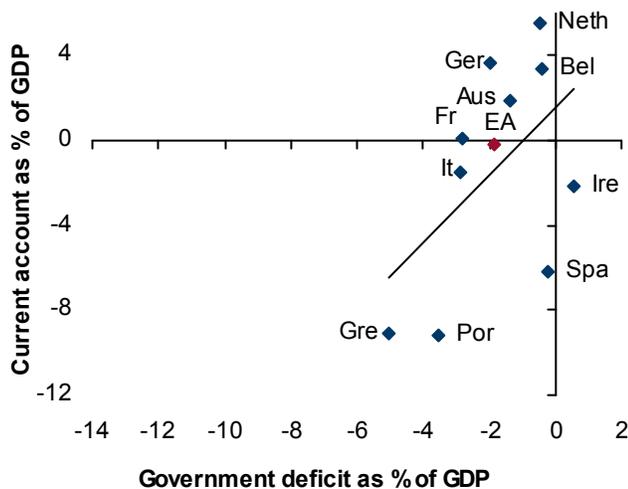
That said, **a better export performance must be part of the solution too** for most of the countries we analyse. Although the loss of market share has been a generalised phenomenon for the euro area economies, the need to regain some of the lost ground is more acute for Spain, Ireland, Greece and Portugal, on the back of their twin deficits and structural issues. In this respect, measures to curb wage growth have been presented in this year's budget.

Other “solutions” include higher savings and more productive investments, policy coordination within the euro area, and possibly some support from the currency. We address all these issues below.

Twin deficits – a dangerous mix. Greece and Portugal have been in a twin deficit situation for many years. More recently, Spain and Ireland joined the club (Exhibits 30 and 31). A large twin deficit is an issue as it means that the authorities have a large financing requirement and so does the economy more generally.

Exhibit 30: The twin deficit in the 2000s ...

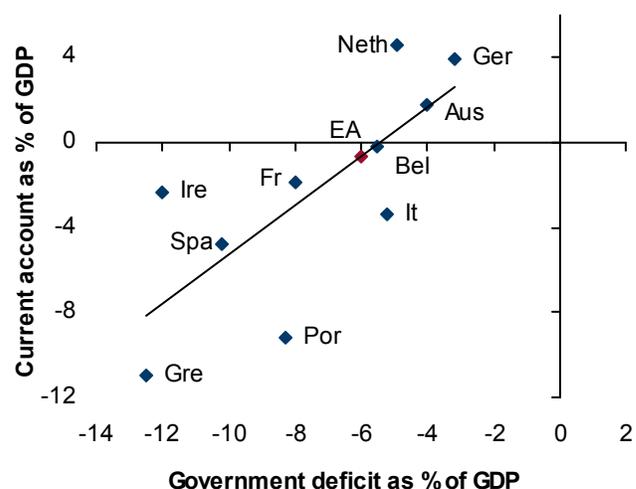
2000-07 average



Source: Credit Suisse

Exhibit 31: ... and in the past couple of years

2008-09 average



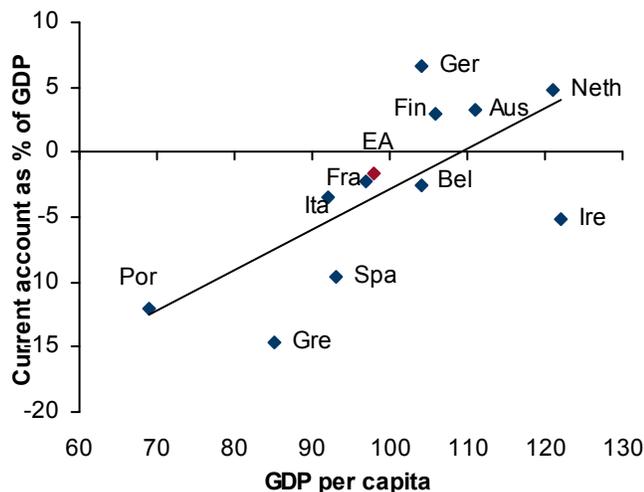
Source: Credit Suisse

Dissecting the current account. While government deficits are increasing everywhere, current account imbalances are narrowing. The current account records the difference between a country's savings and investments. Net capital inflows finance current account deficits in an *ex-post* sense. It is sometimes more correct to say that capital inflows “cause” the current account deficit by making external finance available in addition to domestic savings, boosting demand in the recipient country. A current account deficit is, as a consequence, not always a symptom of lack of competitiveness, as we discuss more in detail below.

In an integrated monetary union such as the euro area, a member country that is expected to grow more than its peers will tend to use external finance to smooth its consumption over time and to finance investment. Similarly, countries with relatively lower growth expectations lend their money to fast growing countries. The prospect of higher rates of return attracts foreign lending. And indeed, a country's average GDP per capita has been positively correlated with the current account balance (Exhibit 32).

Exhibit 32: Current accounts vs. GDP per capita

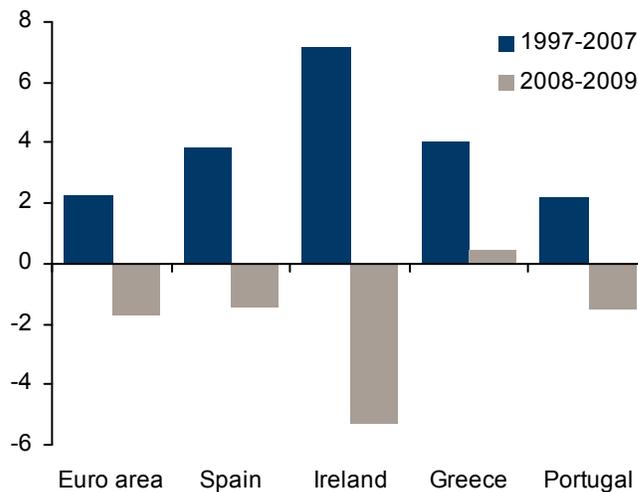
2008 data



Source: © Datastream International Limited ALL RIGHTS RESERVED, Credit Suisse

Exhibit 33: Relative GDP growth performance

Average GDP growth, %



Source: © Datastream International Limited ALL RIGHTS RESERVED, Credit Suisse

The drawback to this scenario is that the current account deficit might instead indicate capital misallocation in the euro area, with a country attracting savings to finance insufficiently productive investments or excess consumption. The low GDP growth experienced, e.g., by Portugal in recent years (Exhibit 33), suggests that a problem of this nature might have appeared in that country – and that the return to competitiveness can be long and difficult. The process of convergence can go through long periods of slow advances or even setbacks. With this in mind, we look at the details of current account dynamics in Spain, Ireland, Portugal and Greece (Exhibit 34).

Exhibit 34: Current account details and dynamics

As % of GDP

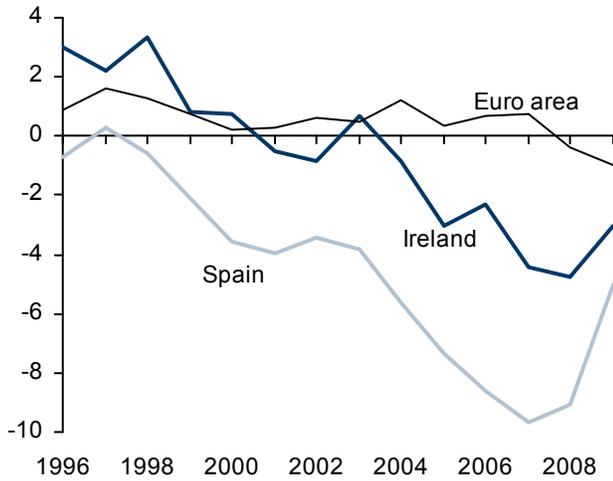
	Euro area			Spain			Ireland			Greece			Portugal		
	'96-'00	'01-'07	'08-'09	'96-'00	'01-'07	'08-'09	'96-'00	'01-'07	'08-'09	'96-'00	'01-'07	'08-'09	'96-'00	'01-'07	'08-'09
Average years															
GFCF	20.6	20.7	20.7	23.5	28.3	26.5	21.6	24.3	18.6	20.7	21.9	17.8	25.9	23.2	20.0
Public sector	2.5	2.5	2.7	3.2	3.6	4.2	2.9	4.0	4.8	3.3	3.3	3.1	4.1	3.0	2.4
Private sector	18.1	18.3	18.0	20.3	24.7	22.2	18.7	20.4	13.7	17.3	18.5	14.7	21.7	20.2	17.5
Mach. & Equip.	7.7	7.4	7.0	7.4	7.2	6.5	7.4	5.4	4.3	6.8	8.3	8.3	9.0	7.5	6.4
Other (construc.)	12.8	13.3	13.6	16.1	21.1	20.0	14.1	18.9	14.2	13.9	13.6	9.5	16.9	15.8	13.5
Gross nat. saving	21.5	21.4	20.0	22.2	22.2	19.4	23.6	22.7	14.7	14.8	10.2	7.4	18.9	14.6	9.2
Private sector	20.7	20.3	20.6	21.0	17.4	21.7	18.8	18.0	19.4	16.1	12.0	13.7	18.3	16.0	12.3
Public sector	0.8	1.1	-0.6	1.1	4.8	-2.3	4.8	4.7	-4.7	-1.4	-1.8	-6.3	0.6	-1.4	-3.1
C/A balance	1.0	0.6	-0.7	-1.3	-6.1	-7.0	2.0	-1.6	-3.9	-5.9	-11.6	-10.3	-6.9	-8.7	-10.8

Source: © Datastream International Limited ALL RIGHTS RESERVED, Credit Suisse

Current account deficits started to deteriorate in the late 1990s (Exhibits 35 and 36), partly as a consequence of EMU accession. The increase in the current account deficit was generally driven by a sharp increase in investment (Exhibits 37 and 38) – especially in construction – and by a fall in domestic savings, particularly in Portugal and Greece (Exhibits 39 and 40). The saving ratio remained sustained in Spain and to some extent in Ireland, thanks mainly to the public sector component, while private savings fell broadly (Exhibits 41 and 42).

Exhibit 35: Current account developments

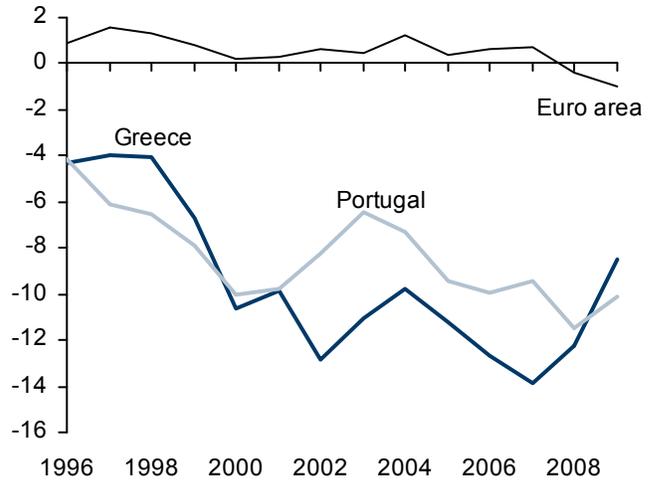
As a % of GDP



Source: Credit Suisse

Exhibit 36: Current account developments

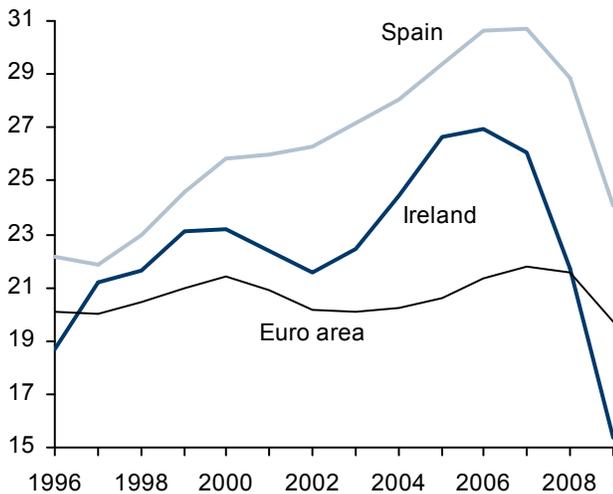
As a % of GDP



Source: Credit Suisse

Exhibit 37: Investment developments

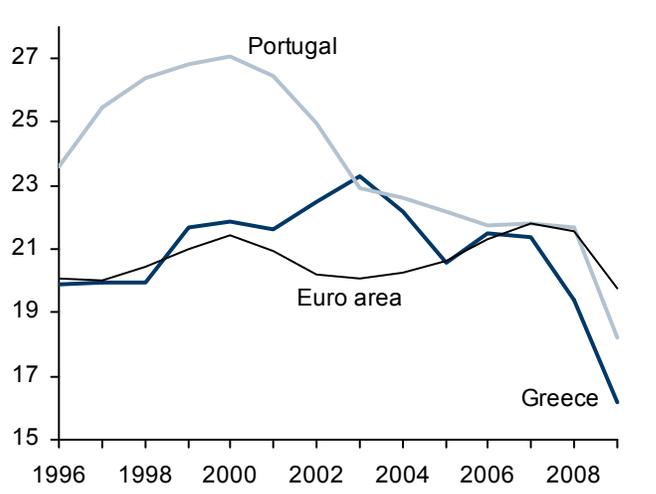
As a % of GDP



Source: Credit Suisse

Exhibit 38: Investment developments

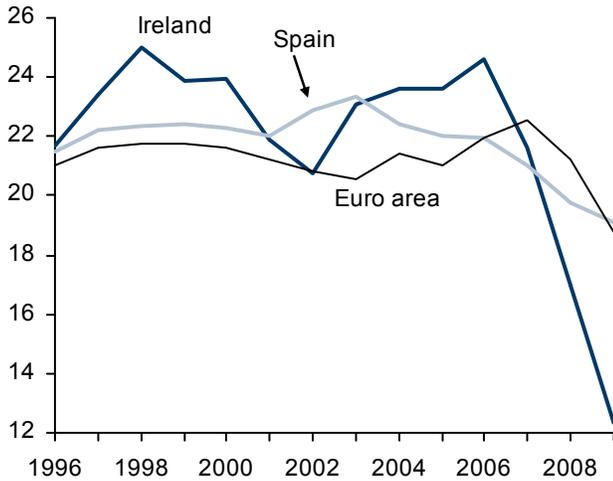
As a % of GDP



Source: Credit Suisse

Exhibit 39: ... and savings developments

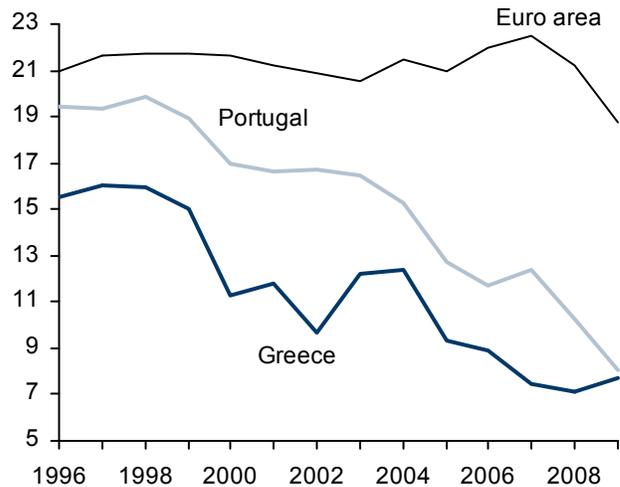
Gross national saving, as % of GDP



Source: Credit Suisse

Exhibit 40: ... and savings developments

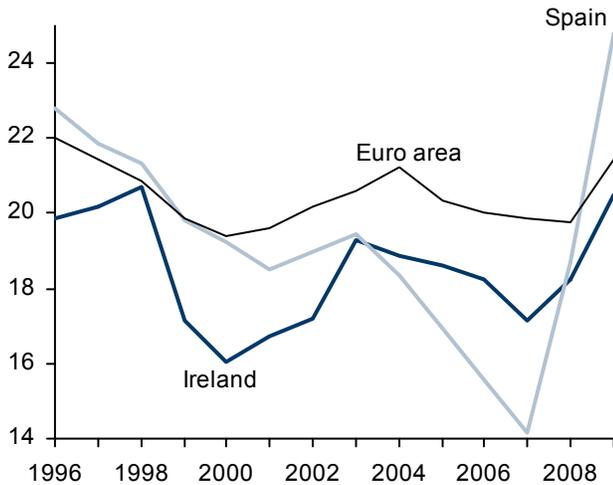
Gross national saving, as % of GDP



Source: Credit Suisse

Exhibit 41: Private sector savings developments

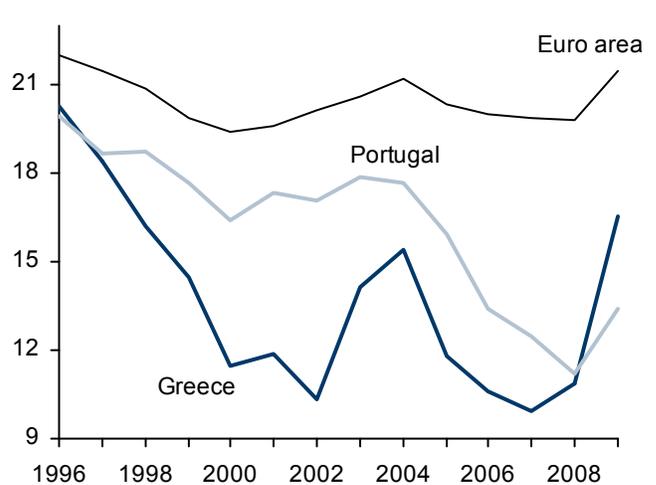
Private sector savings as a % of GDP



Source: Credit Suisse

Exhibit 42: Private sector savings developments

Private sector savings as a % of GDP



Source: Credit Suisse

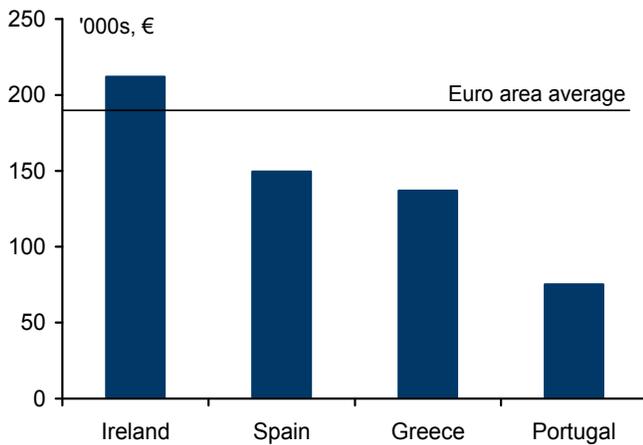
The deterioration of the current account accelerated in the mid-2000s during the phase of particularly low interest rates – a phenomenon that led to large current account imbalances across the globe. The low volatility backdrop also contributed to provide large capital inflows towards countries with higher – effective or potential – growth and higher yields. Spain and Ireland were booming and had their public finances in order, Portugal was not booming but had growth potential and a broadly average fiscal position. Greece was booming and had further growth potential, despite a high debt ratio.

Over the past two years, current account imbalances have corrected significantly, although the process is far from complete. Spain, for example, is seeing its current account fall from 10% to 5% of GDP. However, the process of normalization has still further to go. First of all, deficits are still large: eventually, incomes and spending need to

be aligned. Second, the adjustment has come with a significant fall in investment. A healthier dynamic would probably involve a further increase in savings (and thus a reduction in the consumption-to-GDP ratio), and a rebound in investment growth. A new phase of sustained investment would make sense in most of the euro peripheral countries, we believe, provided it is better allocated than in the past (i.e., possibly away from construction). Data on capital stocks per capita in the periphery are still lower than in the average of the euro area (except in Ireland), and that is true also for GDP per capita (Exhibits 43 and 44). In other words, there are still potential margins of EMU convergence – led by productivity growth.

Exhibit 43: Net capital stock per person employed

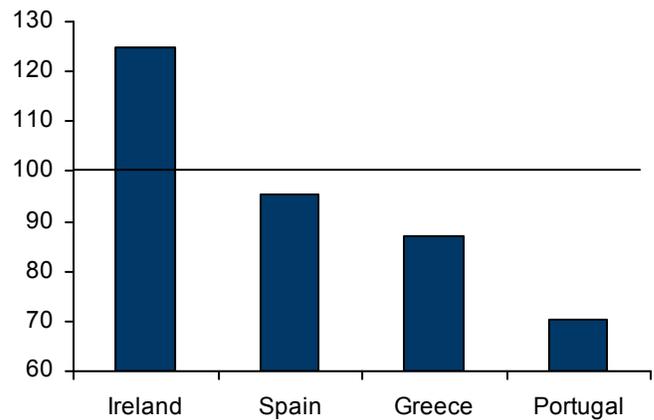
2009 estimates, at constant prices



Source: European Commission, Credit Suisse

Exhibit 44: relative GDP per capita

GDP per capita, 2008 (euro area=100)

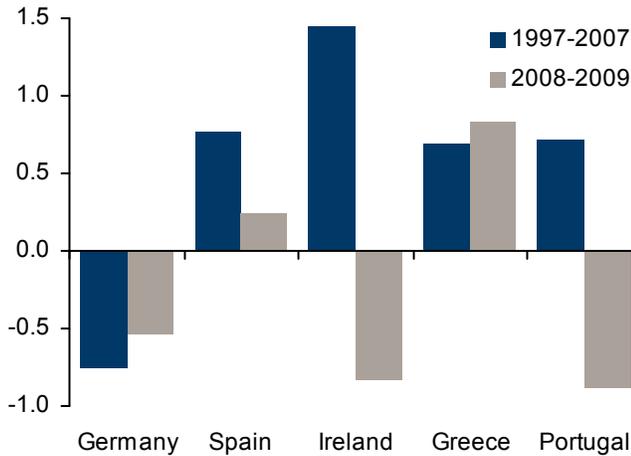


Source: Eurostat, Credit Suisse

Competitiveness is key, but it is just part of the story. Indeed, the large current account deficits are not just a reflection of a competitiveness problem (similarly, the reduction of the current account deficits over the past two years is not a sign of regained competitiveness). They foremost reflect, as we suggest above, a sudden cutback in the supply of and demand for external financing. Moreover, while inflation indices clearly suggest a loss of price competitiveness over the past decade in the four countries under examination (Exhibit 45), other measures of competitiveness show a more blurred picture. Similarly, measures of export market performance, based on the actual growth of exports relative to the growth of the export markets of each country, suggest that the loss of market share is a common feature of the euro area, rather than a peculiarity of the countries with a large current account deficit in the area (Exhibit 47). Finally, price levels are still lower in Spain, Greece and Portugal, but not in Ireland (Exhibit 48).

Exhibit 45: Relative HICP developments

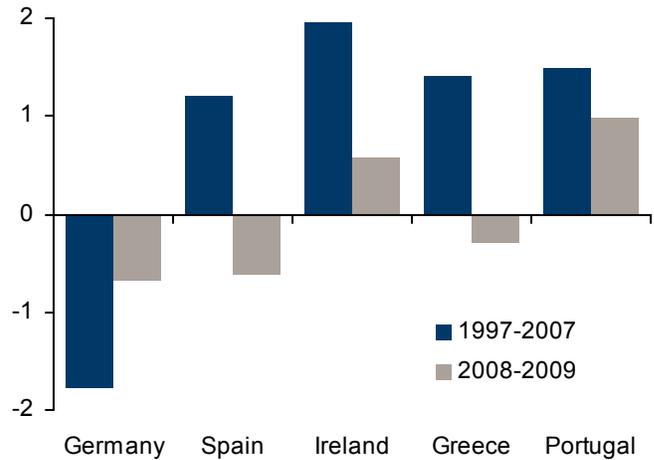
Average HICP deflator



Source: European Commission, Credit Suisse

Exhibit 46: Change in competitiveness

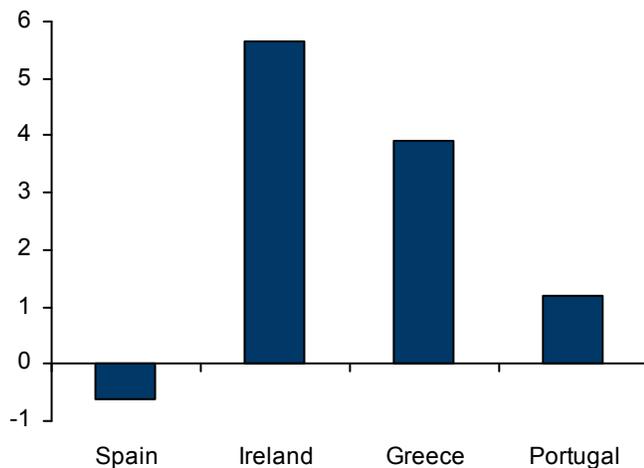
Average relative unit labour costs



Source: European Commission, Credit Suisse

Exhibit 47: Export performance

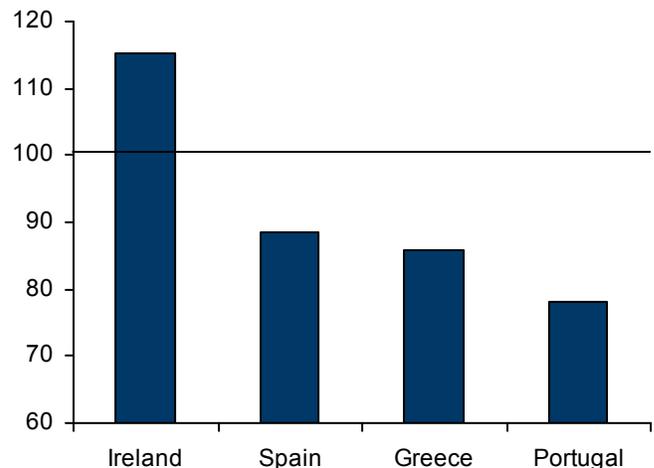
2009-2004 gain/loss in export performance compared with the euro area



Source: European Commission, Credit Suisse

Exhibit 48: Price levels

Comparative price levels, 2008 (euro area=100)



Source: Eurostat, Credit Suisse

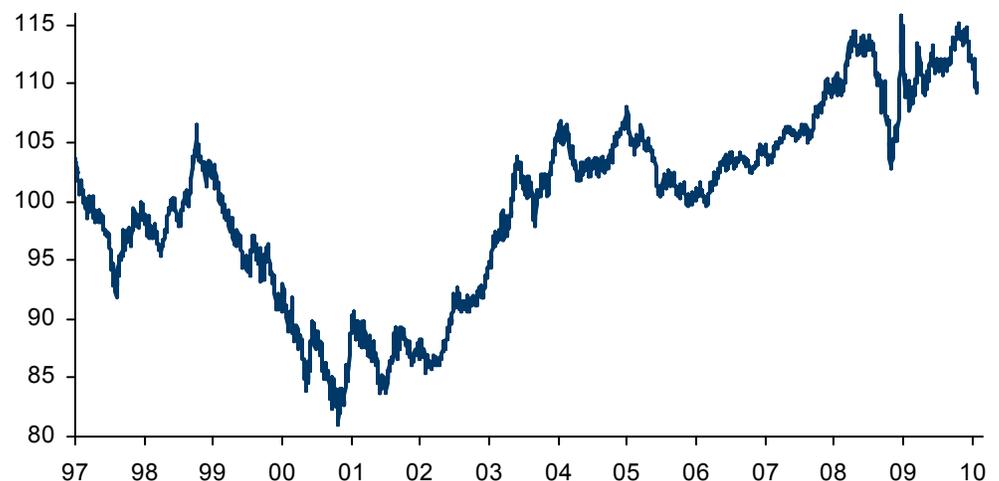
How to depreciate in a currency union? Given that devaluation is not an option in EMU, countries that need a real depreciation can try to decrease wages and prices, lower non-wage labour costs through tax and social contributions cuts, and foster productivity increases through structural measures and investment. Measures of this nature are part of the economic and financial plans unveiled by Ireland, Greece, Portugal and Spain. Ireland is already seeing an absolute, as well as, relative decline in its price level.

The other solutions. Fiscal transfers from the central state is another key way to deal with asymmetric shocks, according to economic theory. The federal budget of the European Union is, however, small at present (1% of GDP), and the current crisis might act as a catalyst for further political/federal integration of the European Union – see section on institutional arrangements *in extremis* below.

In the absence of a strong federal state, policy coordination could be part of the solution. Indeed, “excess competitiveness” and under-consumption in Germany and some other current account surplus countries is also part of the problem and reducing it could help the area as a whole. A cooperative policy would include incentives for higher wages in Germany, a degree of fiscal loosening to boost depressed levels of consumption in that country. This is happening, to some extent, with Germany one of the only countries in the area projecting a rise in its public deficit-to-GDP ratio this year, against a stabilisation or a reduction in most other euro area countries. A somewhat higher inflation rate in Germany, as a result of these policies, would help twin deficit countries by providing a boost to their exports and their relative competitiveness position. It would also allow Germany to do what the peripheral countries were doing during 2000s, i.e., benefiting from lower real rates to finance higher consumption and investment.

The problem with the euro. The question is of course to find the right policy mix that would allow a balancing of the different competitive positions while keeping the area’s wide competitiveness unchanged. However, given the rich valuation of the euro, a depreciation of the currency would also facilitate the task of the periphery, especially for those countries with the largest exposure outside the euro area. Our FX strategists highlight several factors that should keep the euro supported over the next year. That said, any further depreciation of the euro in a trade-weighted basis would clearly help.

Exhibit 49: Euro trade-weighted index



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Demographics: The scale of the long-term challenge

Amlan Roy
+44 20 7888 1501
amlan.roy@credit-suisse.com

In this section, we focus on the demographic landscape in Greece, in particular its expenditure pattern in comparison to other countries. Exhibit 50 highlights that Greece has had the highest pensions expenditure as a ratio of GDP of any European country, other than Italy. This reflects a relatively more generous pensions system as it has a lower age dependency ratio than most other countries.

However, it is not the current level but the projected increase in pensions to more than 24% by 2060 that would further exacerbate the current pressures. The EU Aging Report (*April 2009*) acknowledges that the largest influence on government expenditure is old-age dependency ratios. In terms of healthcare expenditure, Greece is lower than EU average levels but in terms of long-term care has a higher level as well as higher projected increase in 2007-60.

Exhibit 50: Age-Related Expenditure (% of GDP)

Country	Pensions			Healthcare			Long-term care		
	Level	Change from 2007 to:		Level	Change from 2007 to:		Level	Change from 2007 to:	
	2007	2035F	2060F	2007	2035F	2060F	2007	2035F	2060F
EU27	10.2	1.7	2.4	6.7	1	1.5	1.2	0.6	1.1
UK	6.6	1.3	2.7	7.5	1.2	1.9	0.8	0.3	0.5
Germany	10.4	1.4	2.3	7.4	1.4	1.8	0.9	0.7	1.4
France	13	1.4	1	8.1	1	1.2	1.4	0.5	0.8
Italy	14	1.2	-0.4	5.9	0.9	1.1	1.7	0.5	1.3
Norway	8.9	4.3	4.7	5.6	1	1.3	2.2	1.2	2.7
Denmark	9.1	1.4	0.1	5.9	0.8	1	1.7	1.1	1.5
Finland	10	3.9	3.3	5.5	0.9	1	1.8	1.7	2.6
Sweden	9.5	-0.1	-0.1	7.2	0.6	0.8	3.5	1.3	2.3
Greece	11.7	7.7	12.4	5	0.9	1.4	1.4	0.8	2.2

Source: Credit Suisse, EPC

As we show in Exhibit 50, on the basis of current policies, age-related public expenditure in EU27 is projected to increase from 2007 levels by 3.3-5.0 percent of GDP over the next 25-50 years. Most of the projected increase in public spending over the period 2007-35 will be on pensions.

We expect the market to focus much more closely on these contingent and long-term liabilities in assessing fiscal sustainability. For a summary of them, please see our section, "Demographics & Fiscal Sustainability", in the Credit Suisse Research Institute Report (January 2010) *Country Indebtedness Part 1*. In addition, we demonstrated the critical influence of Demographics on Current Accounts in earlier Credit Suisse Demographics Research (2007), *Demographics, Capital Flows and Exchange Rates* which links in with our European Economics team's findings earlier on the current account deficit.

Institutional arrangements *in extremis*

Christel Aranda-Hassel
+44 20 7888 1383
christel.aranda-hassel@credit-suisse.com

Robert Barrie
+44 20 7888 7536
robert.barrie@credit-suisse.com

Violante Di Canossa
+44 20 7883 4192
violante.dicanossa@credit-suisse.com

Neville Hill
+44 20 7888 1334
neville.hill@credit-suisse.com

Giovanni Zanni
+33 1 7039 0132
giovanni.zanni@credit-suisse.com

In this section, we review the legal, political and economic considerations for a country considering leaving EMU. We also look at what the Treaty provisions are regarding possible financial assistance.

On EMU break-up and sovereign default risk within EMU

I. Leaving E(M)U

Leaving EMU is now an officially available option. The recently approved new version of the EU Treaty includes a specific article on the procedure for a voluntary exit from the Union (see Appendix). Clearly, leaving was a practical possibility in the past as well, even if not officially codified.

But it is worth noting that any withdrawal from EMU would automatically lead to an exit from the EU as well from a legal standpoint. This is important as it has far-reaching implications: leaving EMU is not only an issue of competitiveness, it also implies losing political weight and potentially the benefits of EU (not just EMU) membership.

Also, the withdrawal must in principle be agreed upon with the other members and cannot happen overnight, reducing the benefits of any devaluation. Indeed, the new article 50 states that the member state would cease to be bound by the Treaty when an agreement is reached *or two years* after notification. In other words, leaving EMU cannot be a quick fix for a competitiveness problem, with the leaving country re-entering the area soon after at a new – lower – exchange rate. In any case, the latter would be difficult since after leaving EMU the former member would have to follow the same admission procedure as any new candidate, which involves belonging to ERMII for two years.

A devaluation and a unilateral exit from EMU could, in theory, still happen in a relatively short period of time, but it would face significant technical issues. Leaving the Union will presumably have to be voted democratically by the parliament of the leaving country and by a qualified majority in the European Council. There are also practical difficulties linked to the absence of a currency to revert to (there are no “lira” or “drachma” or “pesetas” around). As for the introduction of the euro, the introduction of a new currency would need time and careful planning. Also, it is not certain that the leaving country’s citizens would accept a replacement of the euro with a currency that is bound to be weaker. While the new currency could be enforced through imposed measures and particularly restrictive capital controls, it would likely isolate the country’s financial system, with significant costs for the economy. Loose capital controls would instead imply potential capital flight and/or citizens holding on to their euros.

Political hurdles. A unilateral exit from EMU would be a breach of the Union Treaty. If it involves repudiating the debt or any negative consequences for the remaining members’ economies, the latter could retaliate: they could, for example, withhold monies and benefits due to the departing state under other treaties, and could even refuse to recognize the new currency.

In sum, the new article is there to allow a country to orderly leave the European Union project if the nation is no longer attuned to the European project. It is not there for a quick fix for the competitiveness or fiscal problems of a country. Please see Appendix 1 for the legal aspects related to a voluntary exit and expulsion from E(M)U.

The mixed economic benefits of leaving EMU. The considerations above come before any analysis of the actual economic benefits of leaving EMU. Evidence on the latter front is mixed:

- First, **interest rates are likely to go up sharply** in the exiting country. New funding through issuance of bonds in the new currency would be subject to an exchange rate risk premium, on top of the lower liquidity and a still remaining default risk premium.
- Second, **there is no certainty that even a large depreciation vis-à-vis the euro could improve the competitive position of the exiting nation for more than a short period.** Indeed, if there are real rigidities (e.g., wage-bargaining rigidities) in the economy the benefits from a nominal exchange rate depreciation would be quickly eroded. Only if the reasons behind the weak competitive position of a country are due to non-recurring factors would the depreciation be effective.
- Third, **a new currency, especially of an independent small country would probably be a source of economic noise** (and stress) rather than a boost for competitiveness.
- **A further argument that would negate the benefits of devaluation is economic retaliation:** A country that leaves the E(M)U would potentially be denied the privileges of the single market. This could negate any benefits from a devaluation, and even oblige the exiting country to redirect its exports to other markets – which would imply further strains on the economy, especially considering that economic integration has accelerated greatly over the past two decades.

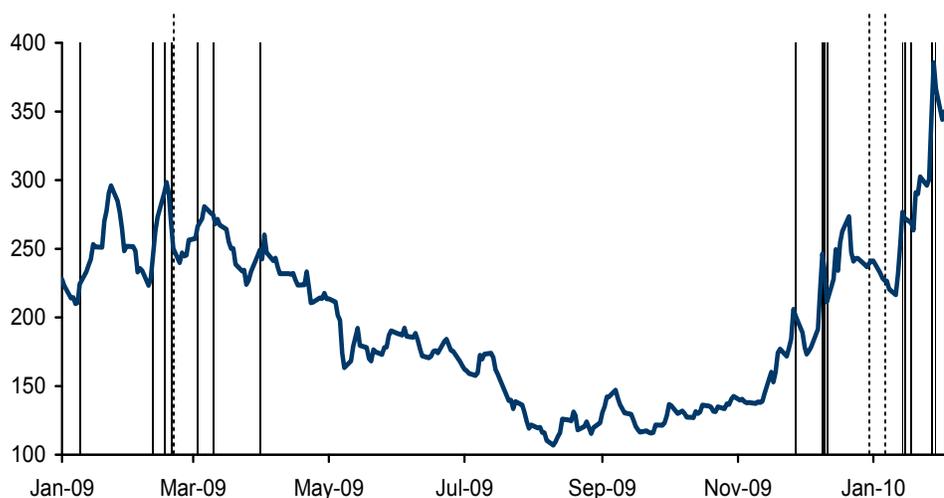
Exhibit 51: Comments on the risk of default / EMU break-up from EMU members

When?	Who?	What?
9 Jan 2009	Commissioner Almunia	Does not believe the risk of default on debt is significant in euro area
11 Feb 2009	Commissioner Almunia	There is a zero probability for euro area to break up. Bond spreads today exaggerate credit risks
16 Feb 2009	German finmin Steinbrück	On the possibility of a bailout, he states that although under the EU Treaty member states are not liable for other members' obligations, in reality states would have to rescue those running into difficulty
19 Feb 2009	Ger Chanc. Merkel	The euro zone is strong
20 Feb 2009	ECB Stark	He opposes a bailout for a EMU member in fiscal difficulty
3 Mar 2009	Commissioner Almunia	"If a crisis emerges in one euro area country, there is a solution ... Before visiting the IMF, you can be sure there is a solution and you can be sure that it is not clever to talk in public about this solution ... But this solution exists. Don't fear for this moment – we are equipped intellectually, politically and economically to face this crisis scenario, but by definition these kinds of things should not be explained in public"
10 Mar 2009	Ger Chancellor Merkel, Fin Minister Steinbrueck	They are both very reticent on bilateral support on other euro countries
31 Mar 2009	Luxembourg Fin Min Juncker	No EMU member will leave the euro and no country is facing funding difficulties
27 Nov 2009	ECB Nowotny	"We certainly won't see a state bankruptcy in Greece ..."
9 Dec 2009	Commissioner Almunia	The European Commission "stands ready to assist the Greek government in setting out the comprehensive consolidation and reform program, in the framework of the treaty provisions for euro-area member states"
10 Dec 2009	Ger Chancellor Merkel	"What happens in one member state affects all others, especially as we have a common currency, which means we have a common responsibility"
10 Dec 2009	ECB Nowotny	He sees no risk of euro area break-up because of Greece. For Greece leaving the euro would be unrealistic and expensive. The ECB won't bail out high-deficit countries
11 Dec 2009	France Fin Minister Lagarde	The euro area is a "monetary zone of complete solidarity"
30 Dec 2009	Ger Fin Minister Schaeuble	"Misplaced solidarity" to help Greece with financial aid
6 Jan 2010	ECB Stark	The EU will not save Greece
14 Jan 2010	Ger Fin Minister Schaeuble	The IMF is not needed in Greece, "we have to solve the problems with our own fortitude"
14 Jan 2010	IMF Strauss-Khan	The European Commission is capable of providing financial aid to Greece if it were needed
27 Jan 2010	Juncker	Greece making serious efforts
29 Jan 2010	French Econ Min Lagarde	No member state is alone
2 Feb 2010	EC President Barroso	Fiscal correction is feasible
3 Feb 2010	EU Commission	Endorses Greek Stability Plan

Source: Credit Suisse

Exhibit 52: Greek bond spreads and comments

Solid lines are positive comments, broken lines are negative comments



Source: Locus, Credit Suisse

II. Solidarity instruments: existing and potential new ones

“Solidarity” is a broad concept: It does not automatically imply the transfer of taxpayers’ money from one country to the other, as it could take the form of loans that will be repaid with interest, or even of simple policy coordination. Indeed, the more proactive fiscal stance expected in Germany this year as well as the very generous German car incentives last year provide some indirect source of economic growth for the area as a whole. If this is coupled with more cautious fiscal policies elsewhere, as appears to be the case looking at 2010 budgets, the euro area could have a correct amount of stimulus while reducing existing imbalances and facilitating the task of the more fiscally strained countries in the area. See Appendix 3 for excerpts from the Consolidated EU Treaty.

A. Existing instruments. The European Union and other international bodies such as the IMF could provide direct financing while the crisis country embarks on an exercise of spending cuts and/or tax increases – like they did last year with several Eastern European countries. 2010 budgets in most of the countries under extreme fiscal strain are already particularly restrictive, even without the financial support from the institutions mentioned above. However, direct support would become necessary if the confidence crisis were to worsen further to levels that even borrowing at higher spreads would become a problem. Support would be conditional on the acceptance from the recipient of an austerity plan, to reduce moral hazard.

The European Union already has a financial assistance facility, which was used for Hungary (see Appendix 4), Latvia and Romania last year. In response to the crisis, the lending ceiling was increased from €12bn to €25bn in November 2008, and then to €50bn in May 2009. While this facility is available for non-EMU EU members only at present, we believe that nothing prevents modifying the rules at the margin or creating a similar facility for euro area members as well in the future.

Other possible vehicles to channel aid include **the European Investment Bank (EIB)**. Its annual lending ceiling has been raised from €45bn to €70bn over the past year. The EIB could partially transform its mission and provide direct support to governments, in our opinion, even beyond the financing of infrastructures. The EIB can already issue bonds and lend money on more favourable terms than markets to governments, even if only to finance specific investment projects. Nothing, in practice, prevents a broadening of the definition of expenditures that could be financed.

The ECB is already providing support in the current setting, having extended the list of accepted collateral and through lower rates. An additional step would be to buy government bonds outright. Again, nothing prevents the ECB from doing so within the current institutional framework. The Treaty (see Appendix) prevents the ECB from buying bonds directly from the issuer, but not bonds on the secondary market. The issue would be mainly political (buying the bonds of a country instead of another), but not insurmountable in case of a further intensification of the crisis, in our view – even if the evidence of recent months has shown a very clear reticence on the part of the ECB to take that way.

The IMF could also be involved – it has already been involved in Hungary and in Iceland. Its firing power has also been greatly increased last year, with the strong support of Germany. Clearly, a large IMF involvement in a EMU country would be politically sensitive, as the institution would not be able to recommend a devaluation or change in monetary policy. But the intervention of the latter should not be excluded in extreme circumstances, in our view, even if it is unlikely at this stage: indeed, the IMF brings know-how and conditionality to the loans, possibly making the needed fiscal restructuring more urgent and credible.

In terms of effective transfers, the **EU structural funds** (one-third of the EU budget, or roughly €35bn per year – the only real federal transfer facility in the EU) can be disbursed faster and also partially redirected to the countries in difficulty if needed. Although these funds are essentially for investment projects, the rules can be made more flexible in order to finance current expenditure to some extent.

B. Possible future innovations. Apart from broadening further the scope and firing power of the instruments above, additional innovations could include EMU member countries issuing bonds for the country under stress. The role of the EIB could be, for example, expanded to become the issuer of “European bonds” – or alternatively, an ad hoc institution could be created that would operate through the European Commission. Some governments (France, Italy) appear more inclined to this option than others (Germany).

An even bolder step, in our view, would be the creation of a EU contingency fund for crises like the current one. This crisis has clearly revealed that an accident can happen even in a country that was seen as a model of fiscal rectitude (e.g., Spain or Ireland). Enhanced “macroprudential” surveillance – when all economic and financial variables, not just narrow fiscal indicators, are assessed jointly – is an important step forward but might not suffice.

Coordination of a crisis response at the EU level would imply, we believe, an explicit political agreement on how article 122 of the Treaty on emergency financial support should be implemented.

Finally, if and when the European Union progresses into a full economic union, healthy divergences (through economic specialization) between nations should appear more clearly. For such persistent differences to be viable, a fully fledged ‘fiscal federalism’ might be needed. But that is probably not an issue for the 2010s.

Appendix 1: Legal aspects of voluntary exit and expulsion from E(M)U

Article 50 of the recently approved Lisbon Treaty explicitly makes provision – for the first time in the history of EU Treaties – for a voluntary exit of a member state from the EU⁶. Specifically, the exit clause provides that a member state wishing to withdraw from the EU must inform the European Council of its intention; the Council is to produce guidelines on the basis of which a withdrawal agreement is to be negotiated with the member state; and the Council, acting by a qualified majority and after obtaining the consent of the European Parliament, will conclude the agreement on behalf of the EU. The withdrawing member state would cease to be bound by the treaties *either* from the date provided for in the withdrawal agreement or, failing that, *two years* after notification of its intention to withdraw. A former member state seeking to rejoin the EU would have to follow the same admission procedure as any new candidate.

As ECB's Athanassiou notes, when reviewing the exit clause in a recent paper⁷, despite the references to a *negotiated* agreement on the details of the withdrawing member state's departure, the clause recognizes a *unilateral* right of withdrawal as well as a possibility for a member state to negotiate its agreed exit from the EU. It should be noted that a member state's withdrawal is *not* conditional on the conclusion of a withdrawal agreement, since a member state can withdraw even if negotiations with the Council break down, *provided two years have elapsed* since the notification to the Council of its decision to withdraw.

The importance of having adopted an exit clause, is that it prepares the ground. Should there be a unilateral withdrawal, it will not find the EU institutionally unprepared, bringing a semblance of order to what is bound to be a very messy event. The exit clause also recognizes the practical reality that, politically, a sovereign member state cannot be coerced into honoring commitments it no longer has an interest in.

Withdrawal from the EMU without a parallel withdrawal from the EU is, however, not conceivable legally. Athanassiou notes that, unlike EU participation, once in the European Union EMU participation is a legal *obligation* for all member states. While a member state may be free to denounce its EU participation and repudiate its treaty obligations, it would not be free to go back on its decision to join EMU without breaching a binding obligation, under the Union Treaty, unless it were also to withdraw from the EU. Note that EMU is a sub-set of the EU, which is why the Statue of the European System of Central Banks (ESCB) and of the ECB is annexed as a protocol to the Union Treaty. As a result, the only way to withdraw from EMU is to withdraw from the EU and a member state's exit from the EU would *automatically* mean its exit from EMU (and vice versa).

Legal, but also practical issues make a EMU/EU break-up almost unconceivable without a major political crisis. Exiting EMU and thus the EU is no mean feat, among other things, because of the complex network of rights and obligations that the EU and also EMU entails for its participating member states which cannot be easily unwound. Restoring a member state's old currency or adopting a new one involves substantial legal complications, including the validity and enforceability of outstanding re-denominated contracts between debtors in the withdrawing member state and its creditors.

⁶ Prior to the Lisbon Treaty, neither the founding treaties nor the successive amending ones made any provision for a member state's withdrawal. Despite the founding treaties' silence on the possibility of secession, no member state, however, contested the UK's threatened withdrawal in 1975. The government at the time demanded a renegotiation of its accession terms, followed by a referendum on whether the UK should remain in the EC. The very holding of this referendum postulated the existence of a right of withdrawal. And Greenland was allowed to leave the EC in 1982, following domestic opposition to the common fisheries policy. Greenland, however, is not a direct precedent since it was an overseas territory of Denmark rather than a member state.

⁷ This box on leaving EU and EMU is based on Phoebus Athanassiou, *Withdrawal and expulsion from the EU and EMU - Some reflections*, ECB Legal Working Paper Series No 10, December 2009.

If member states have the right to exit voluntarily, is there a possibility for their fellow member states to expel them from the EU? Unlike the Charter of the UN, where Article 6 expressly provides for the possibility of a UN member being expelled for persistently infringing the principles of the Charter, there is no treaty provision for a member state to be expelled from the EU or EMU. The closest that Community law comes to recognizing a right of expulsion is Article 7(2) and (3), allowing the Council to temporarily suspend some of a member state's rights (including its voting rights). This might be thought of as a preliminary step to the expulsion of a member state, but it is not the same as a definite expulsion.

The idea that the treaties should explicitly provide for a possibility of expulsion was discussed in the 2001-03 Intergovernmental Conference, but was abandoned. The idea resurfaced in the discussions on the Lisbon Treaty, but was once again abandoned.

The reason why expulsion has not been and may not be provided for in the treaties is not just political. It is most likely due to the tremendous legal complexities it would give rise to. While they might not differ qualitatively from those relating to a member state's voluntary withdrawal, their resolution would be even more complicated in the case of an expulsion. This is because of the risk of legal challenges by disgruntled natural persons, legal entities or even countries, objecting to the loss of the rights that they or their nationals may have acquired from membership of the EU and invoking their legitimate expectation of maintaining these in perpetuity as an obstacle to expulsion. Erasing rights such as those of residence and free movement at a stroke is hardly straightforward.

If expulsion from the EU is not an option under the treaties, does that mean that leaving the obstructive member state behind would be impossible? The focus here is on indirect avenues for achieving a similar result. One possibility would be to use the 'enhanced cooperation procedure', which allows the asymmetric participation of a group of no fewer than eight member states to increase cooperation, leaving the recalcitrant member state behind. But enhanced cooperation is not available in all areas of EU policy-making, with Common Foreign and Security Policy being excluded, for example.

On balance, marginalizing a member state, even if not formally expelling it, is not impossible but it certainly is not easy. Persuading the member state to withdraw, by making use of the proposed exit clause, may be the better option.

Appendix 2: Greece and the Excessive Deficit Procedure

Greece and the Excessive Deficit Procedure. The excessive deficit procedure (EDP) is the dissuasive arm in the Stability and Growth Pact. The EDP is triggered when the deficit of a country breaches the 3% of GDP threshold. If it is decided that the deficit is “excessive” and that corrective actions are needed to bring it back below 3%, the Council issues recommendations to the Member State(s) concerned to correct the excessive deficit and gives a time frame for doing so. Non compliance with the recommendations triggers further steps in the procedures. Greece is currently at the last stage of the EDP procedure (according to art. 126.9 of the European Union Treaty) before the final step that may include sanctions (art 126.11) of various nature including a fine of up to 0.5pp of GDP. The current stage of the procedure includes recommending specific policies and close monitoring of Greece’s economic policy decisions.

Article 126 of the European Union Treaty on the Excessive Deficit Procedure – key paragraphs:

1. Member States shall avoid excessive government deficits.

(...)

5. If the Commission considers that an excessive deficit in a Member State exists or may occur, it shall address an opinion to the Member State concerned and shall inform the Council accordingly.

6. The Council shall, on a proposal from the Commission, and having considered any observations which the Member State concerned may wish to make, decide after an overall assessment whether an excessive deficit exists.

7. Where the Council decides, in accordance with paragraph 6, that an excessive deficit exists, it shall adopt, without undue delay, on a recommendation from the Commission, recommendations addressed to the Member State concerned with a view to bringing that situation to an end within a given period. Subject to the provisions of paragraph 8, these recommendations shall not be made public.

(...)

9. If a Member State persists in failing to put into practice the recommendations of the Council, the Council may decide to give notice to the Member State to take, within a specified time limit, measures for the deficit reduction which is judged necessary by the Council in order to remedy the situation. In such a case, the Council may request the Member State concerned to submit reports in accordance with a specific timetable in order to examine the adjustment efforts of that Member State.

(...)

11. As long as a Member State fails to comply with a decision taken in accordance with paragraph 9, the Council may decide to apply or, as the case may be, intensify one or more of the following measures:

- to require the Member State concerned to publish additional information, to be specified by the Council, before issuing bonds and securities,
- to invite the European Investment Bank to reconsider its lending policy towards the Member State concerned,
- to require the Member State concerned to make a non-interest-bearing deposit of an appropriate size with the Union until the excessive deficit has, in the view of the Council, been corrected,
- to impose fines of an appropriate size.

Appendix 3: Excerpts from the Consolidated EU Treaty

From Article 121 (ex Article 99 TEC):

Member States shall regard their economic policies as a matter of common concern (...)

From Article 122 (ex Article 100 TEC), on financial emergency support:

(...) 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.

From Article 123 (ex Article 101 TEC) on the inability of the ECB to buy bonds directly:

Overdraft facilities or any other type of credit facility with the European Central Bank or with the central banks of the Member States (hereinafter referred to as "national central banks") in favour of Union institutions, bodies, offices or agencies, central governments, regional, local or other public authorities, other bodies governed by public law, or public undertakings of Member States shall be prohibited, as shall the purchase directly from them by the European Central Bank or national central banks of debt instruments. (...)

From Article 125 (ex Article 103 TEC) on the no bailout clause:

1. The Union shall not be liable for or assume the commitments of central governments, regional, local or other public authorities, other bodies governed by public law, or public undertakings of any Member State, without prejudice to mutual financial guarantees for the joint execution of a specific project. A Member State shall not be liable for or assume the commitments of central governments, regional, local or other public authorities, other bodies governed by public law, or public undertakings of another Member State, without prejudice to mutual financial guarantees for the joint execution of a specific project.

Appendix 4: The EU-IMF rescue package for Hungary

In November 2008, the IMF's executive board approved a stand-by arrangement for Hungary of \$15.7bn and the European Commission approved a €6.5bn (\$8.3bn) loan under its balance of payments facility. About \$6.3bn (€4.9bn) of the IMF funds and €2bn of funds from the EU were available immediately to the Hungarian authorities in November. The remaining amount is being disbursed in quarterly installments dependent on the successful completion of quarterly reviews. The support of about \$25.8bn in total was to help augment Hungary's reserves to a level sufficient to fund its external financing needs "even in extreme market conditions". Under the stand-by arrangement, Hungary's fiscal consolidation was "accelerated", liquidity in the domestic financial markets was increased, the banks were ensured of high capital levels and the powers of the financial services supervisory agency were to be strengthened. The key conditionality related to fiscal program targets and notably excluded any explicit FX reserves targets. The 2009-10 fiscal targets were adjusted once in 2009 by about 1pp of GDP to accommodate the sharper-than-expected deterioration of the economy.

Funding from the package helped primarily by allaying concerns over Hungary's exceptionally large external funding needs – especially those of the banking sector, but also the government's funding needs. The government managed to meet the IMF's key fiscal targets for 2008 and 2009, leaving the fiscal deficit broadly unchanged in 2009 despite the global recession; this fiscal tightness in 2009 of course exacerbated the economic crisis and we estimate that the economy contracted by 6.5% in 2009 and will not grow at all in 2010.

The government has used the bulk of the funding that has been disbursed from the IMF and EU so far to fund the fiscal deficit and also to buy back some of its longer-term debt. The credit crisis meant that in Q4 2008, the government was relying increasingly on short-term funding to finance its fiscal operations (much like the rest of Eastern Europe). The IMF and EU funding replaced all medium- to long-term market financing last year. The government did restart its longer-tenor debt auctions by the second half of the year, but net bond issuance for the whole of 2009 was negative.

The government's success in meeting the targets has increased market confidence. Hungary was able to issue a well-received Eurobond in Q3 2009, although these funds were not needed (in light of IMF-EU support) and gradually ramped up its bond auction program through the end of 2009. Yields have fallen across the curve as the recession and investor sentiment toward Hungary have allowed the Monetary Council to continue to cut the policy rate to historical lows. Hungary can expect at least another €3.2bn from the IMF this year following the extension of its IMF programme last year to October 2010 (from February 2010), but the debt management agency expects Hungary will be able to fully return to market financing already in Q2.

This box was written by Jacqueline Madu from our Emerging Markets team.

Disclosure Appendix

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Emerging Markets Bond Recommendation Definitions

Buy: Indicates a recommended buy on our expectation that the issue will deliver a return higher than the risk-free rate.

Sell: Indicates a recommended sell on our expectation that the issue will deliver a return lower than the risk-free rate.

Corporate Bond Fundamental Recommendation Definitions

Buy: Indicates a recommended buy on our expectation that the issue will be a top performer in its sector.

Outperform: Indicates an above-average total return performer within its sector. Bonds in this category have stable or improving credit profiles and are undervalued, or they may be weaker credits that, we believe, are cheap relative to the sector and are expected to outperform on a total-return basis. These bonds may possess price risk in a volatile environment.

Market Perform: Indicates a bond that is expected to return average performance in its sector.

Underperform: Indicates a below-average total-return performer within its sector. Bonds in this category have weak or worsening credit trends, or they may be stable credits that, we believe, are overvalued or rich relative to the sector.

Sell: Indicates a recommended sell on the expectation that the issue will be among the poor performers in its sector.

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