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ECONOMIC AND MONETARY AFFAIRS

The Greek sovereign debt crisis and the Eurosystem

NOTE

Abstract

As a result of the current Greek sovereign debt crisis the ECB has announced its intention to purchase euro area government debt outright in secondary markets. This paper examines why the ECB felt it necessary to do this and the implications of this action for the euro area monetary policy stance and Eurosystem legitimacy.

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EXECUTIVE SUMMARY

- In early May CDS spreads on Greek sovereign debt rose to nearly 1000 basis points and the spreads on Greek sovereign debt over German sovereign debt rose to almost 10-1/2 basis points. Faced with prospect of Greek government illiquidity or insolvency, policy makers sprang into action. A key component of their resulting plan is the ECB's "security market program". Under this program, the ECB stands ready to intervene in dysfunctional sovereign debt markets.

- Greece is probably insolvent. Reducing its debt would require years of large primary surpluses and these would require savage spending cuts. Were Greece to start running surpluses, it would have an incentive to default by staging a pre-emptive rescheduling.

- French and German banks are heavily exposed to Greece. Faced with the choice between bailing out their banks right away, or keeping Greece from defaulting and delaying a bailout until the global economic situation has improved, Germany and France appear to view the latter action as preferable.

- There was some risk that contagion might lead to crises in Portugal, Ireland, Italy and Spain. However, the situation in Greece is far worse than in these economies.

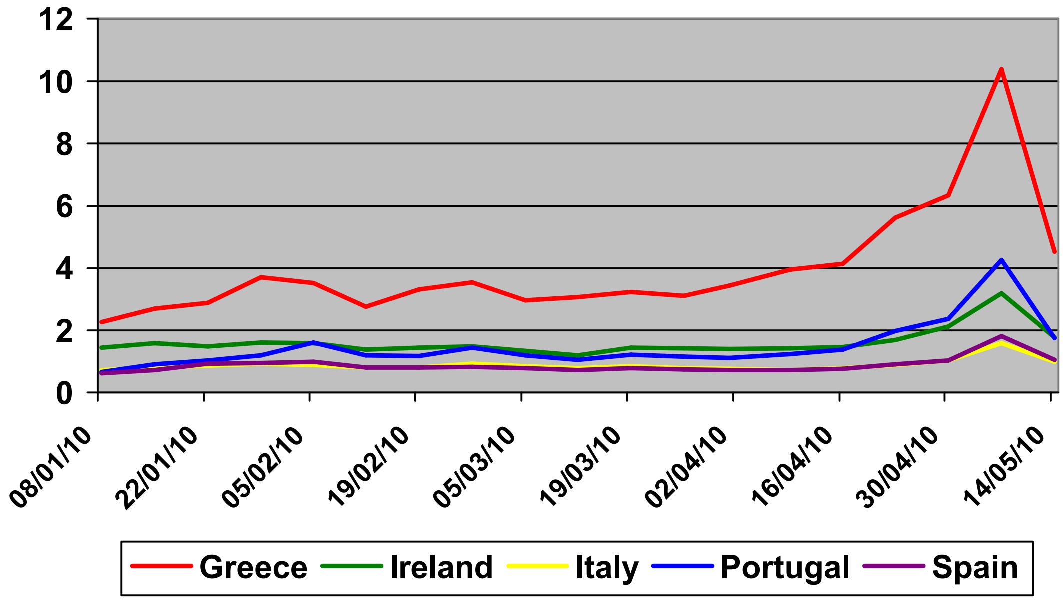
- A lack of sizable immediately available funding from other sources meant that the ECB felt forced to announce its decision to intervene. Unfortunately, the action is perceived by many to be a flouting of the spirit of the Treaty and this reduces the ECB's legitimacy.

- The ECB's policies regarding risky collateral are non-transparent sometimes difficult to explain. This, too, threatens the ECB's legitimacy.

1. THE GREEK RESCUE PACKAGE

In Oct 2009 George Papandreou's new socialist government confirmed suspicions that previous Greek fiscal data had been misreported. The government budget deficit for 2008 was actually 7.7 percent of GDP, and not five percent. The projected budget deficit for 2009 was amended to 12.5 percent of GDP from an earlier figure of 3.7 percent. Eurostat further changed this figure to 13.6 percent in April 2010. As the situation became more clear, the ratings agencies and the market responded. On 24 April, Standard & Poor's downgraded Greek sovereign debt to junk. The spreads on Greek government bonds over German government bonds, shown in Table 1, widened from about 2-1/4 percentage points at the start of the year to almost 10-1/2 percentage points in early May, while the five-year CDS spreads for Greek government debt rose from about 250 basis points to close to 1000 basis points.

Figure 1. Sovereign Interest Rate Differentials
(10-year government bond spreads vs. Germany)



Source: Financial Times

Faced with the prospect of Greek illiquidity and possible insolvency, policy makers sprang into action, creating a rescue plan over the weekend of 8-9 May. The plan consists of four components. The first is the European Stabilization Mechanism. A fund that was originally set up by Ecofin and administered by the European Commission to help Latvia, Hungary and Romania was increased by 60 billion euros and extended to the euro area countries. The EU budget is used as collateral and the money is available immediately. Second, to augment the Mechanism, it was decided that a special purpose vehicle would be set up to issue loans backed by a guarantee from euro area member states. Sweden and Poland have also agreed to join; the United Kingdom has declined, as has euro area member state Denmark. Loans under this scheme would be subject to IMF conditionality. Third, the IMF is to make 250 euros worth of additional funding available as part of IMF programs. Fourth, the ECB launched a "securities market program", announcing its intention to intervene in dysfunctional public and private debt markets.

2. GREECE IS PROBABLY INSOLVENT

Gross Greek government debt amounted to 115 percent of Greek GDP in 2009 and, with falling GDP growth, the IMF projects it to burgeon to nearly 150 percent by 2012. This is seen in Table 1 below.

Table 1. Actual and Forecasted GDP Growth, Debt and the Primary Balance for Greece

	2009	2010	2011	2012	2013	2014	2015
Real GDP Growth	-2.0	-4.0	-2.6	1.1	2.1	2.1	2.7
Gross Debt (% GDP)	115	133	145	149	149	146	140
Primary Balance	-8.6	-2.4	-0.9	1.0	3.1	5.9	6.0

Source: "Greece: Request for a Stand-By Agreement," International Monetary Fund, 5 May 2010.

The IMF "forecasts" the Greek debt-to-GDP ratio to begin to fall after 2014 under its IMF financing program, but this is under the assumption that Greece is able to run to run primary surpluses of about six percent of GDP. The Fund (2010) is not optimistic, saying "Risks to the program are high. The adjustment needs are unprecedented and will take time, so fatigue could set in. Any unforeseen shock could weigh on the economy and the banking system, even if the fiscal program is on track."

Even this gloomy IMF forecast is viewed as sanguine by some. Boone and Johnson (2010) think that Greek debt may rise to 155 percent of GDP. To see the implications of such a large debt burden, suppose that Greece were to experience constant real growth of γ and that it faced a constant real interest rate of r. Let Greek debt (as a percentage of GDP) be denoted by b. The primary surplus (as a percentage of GDP) necessary to maintain a constant level of debt is approximately

$$s = (r - \gamma)b.$$

As long as the real interest rate that Greece pays exceeds its growth rate, Greek debt will grow unless Greece runs a sufficiently large primary surplus. Boone and Johnson point out that if Greece has zero growth and pays a real interest rate of five percent, it would have to run primary surpluses of nearly eight percent of GDP each year, just to keep its debt from growing as a percentage of GDP.

Given the inefficiency of the Greek tax system, running sizable primary surpluses would require savage cuts in public spending. Even when the Greek economy was growing rapidly, Greece did not have the political will to run surpluses. Currently, Greece has a large budget deficit and is dependent on borrowing: it has an incentive to accept the IMF's conditionality and to promise reform in return for funding. However, as Buiter (2010) points out, were it to commence running primary surpluses, then Greece would not need current funding. At this point, default is likely to seem preferable to years of austerity. Thus, political considerations suggest that Greece is currently insolvent.

3. THE EUROSYSTEM HAD TO CHOOSE BETWEEN DEFAULT AND LENDING TO GREECE

Given the spike in the Greek – German government bond spread and short-term Greek borrowing needs, it was clear in early May that euro area governments were faced with a choice between immediate Greek default or a rescue package that might stave off the inevitable for a few years.

No advanced economy has defaulted in the last 50 years but transition and developing economies default fairly regularly.[1] Russia, Ukraine, Pakistan, Ecuador, Argentina and Uruguay have all defaulted since 1998, paying average haircuts of 13 – 73 percent in the resulting debt restructurings.[2] Eventually, Greece is likely to want to default with a pre-emptive restructuring of its government debt. Once it is no longer running a significant primary budget deficit, the cost of a default is likely to be less than the cost of years of running primary surpluses. The empirical evidence suggests that countries that default are not denied access to international financial markets, although they may pay a somewhat higher cost for borrowing than those that do not.[3]

In the short run, however, Greece is anxious to avoid default. With sizable government budget deficits planned for this year and next, default would lead to output losses and social unrest if the government were unable to borrow. Domestic banks are major creditors of the government and they would be threatened with insolvency. France and Germany are also especially interested in avoiding default for as long as possible. Their banks are heavily exposed to Greek debt. According to the BIS, French bank claims on Greece amount to nearly $80 billion; German bank claims amount to about $45 billion. In contrast, UK banks have claims of only around $15 billion. Faced with the choice between bailing out their banks right away, or keeping Greece solvent and delaying a bailout until the global economic situation has improved, Germany and France appear to view the latter action as preferable.

It is worth noting, as an aside, that French and German banks should not have been allowed to become so heavily exposed to Greek debt. This is a supervisory and regulatory failure on the parts of the French and German governments.

4. HOW IMPORTANT IS THE THREAT OF CONTAGION?

As seen in Figure 1, above, the rising spread between 10-year Greek government bonds and German government bonds was accompanied by smaller increases in the spreads associated with Irish, Italian, Portuguese and Spanish bonds. It is widely suggested that a Greek default might lead to contagion affecting one or more of these countries.

In general there may be multiple outcomes that are theoretically possible for any solvent borrower. In the first outcome, each creditor believes that all other creditors will continue to extend new loans and roll over existing loans and thus the borrower will remain liquid. Thus, each creditor finds it optimal to extend new loans or roll over existing loans. The borrower remains liquid and expectations are validated. In the second outcome, each creditor believes that all other creditors will fail to roll over their loans or extend new loans and that the borrower will become illiquid and unable to repay. Thus, each creditor fails to roll over his loans or extend new loans. In both scenarios, expectations are self-fulfilling.

The second scenario is not a usual one in normal times: why would all creditors coordinate on this outcome if they believed the borrower to be solvent when not threatened with a

[1] France defaulted eight times between 1500 and 1800; Spain defaulted 13 times between 1500 and 1900.
[2] See Sturzenegger and Zetteleyer (2005).
[3] See De Paoli et al (2005).

liquidity crisis? Some event needs to occur that makes coordination of expectations on the second scenario possible. A worry is that a run on Greek government debt might be such an event.

The question is however, do market participants view the Irish, Italian, Portuguese or Spanish economies as similar enough to the Greek economy for this to be likely? It is not clear that they do. First, the Greek fiscal situation is markedly different from those of these other countries, shown in Table 2 below. Ireland, Portugal and Spain are running large government budget deficits but their gross government debt is far smaller relative to GDP and Ireland's deficit is due to a one-off bank recapitalisation cost. Italy has a marginally larger debt-to-GDP ratio than Greece, but its budget deficit is below the euro area average of 6.3 percent. Moreover, its debt is mostly longer-term and its near-term financing needs are manageable.

Table 2. Deficits and Debt, 2009
(percent of GDP)

	Greece	Ireland	Italy	Portugal	Spain
budget deficit	13.6	14.3	5.3	9.4	11.2
Gross government debt	115.1	64.0	115.8	76.8	53.2

Source: Fitch

More importantly, perhaps, Greece is viewed as having a very different political culture and economy than those of the other countries. As seen in Table 3, Ireland is a flexible, modern economy, ranked number 7 in the World Bank's Ease of Doing Business Index. By the standards of advanced economies, Italy, Portugal and Spain are inflexible and hard to do business in: the World Bank ranks them 78th, 48th and 62nd, respectively. In the most recent concluding statements of their Article IV Consultations, the IMF missions refer to rigidities in the Italian economy, "anemic" productivity in Portugal and the "dysfunctional" Spanish labour market.

Greece, however, is in an *entirely* different category. Barely edging out Uganda, it ranks 109th in the world in terms of the ease of doing business: behind the likes of Yeman, Ethiopia and Lebanon. It has systematically failed to run primary surpluses in good times and is in no sense a modern European economy.

Table 3. Ease of Doing Business, 2009

Country	Ranking
Greece	109
Ireland	7
Italy	78
Portugal	48
Spain	62

Source: World Bank

5. THE PARTICIPATION OF THE ECB

The sharp rise in interest rate spreads in early May suggested that a Greek default would be imminent in the absence of government intervention. Unfortunately, without the ECB, the only immediately available funds were the extra 60 billion euros provided by the European Stabilization Mechanism: unlikely to be nearly enough to calm the markets. Thus, as the only entity with sufficient immediately available resources, the ECB was faced with the choice between a likely Greek default or stating an intention to take action. Thus, on 10 May the ECB announced that the Governing Council had decided on several measures to address the "severe tensions" in markets. The key measure was its decision to implement a Securities Market Programme, under which it would intervene in euro area public and private debt securities markets to ensure depth and liquidity in markets that had become dysfunctional. The ECB also announced its intention to sterilise these operations so that the monetary policy stance would be unaffected. On 17 May the ECB announced its intention to sterilise 16.5 billion euros worth of purchases; on 24 May it announced further purchases of 10 billion euros.

The action of the ECB was not, technically speaking, a violation of the Treaty. Article 21.1 of the consolidated version says:

> In accordance with Article 123 of the Treaty on the Functioning of the European Union, overdrafts or any other type of credit facility with the ECB or with the 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 ECB of national central banks of debt instruments.

Thus, the Treaty prohibits the ECB from purchasing government bonds *directly* from member state governments in the primary issuer market. It may well be a violation of the *spirit* of the treaty, but the ECB is not legally forbidden to purchase member states' bonds in secondary markets. While its decision to do so may have been the best under the circumstances, it may have some negative consequences.

First, if the ECB honours its commitment to sterilise its purchases, then monetary policy is unchanged by the Securities Market Programme. However, purchases of Greek (or perhaps Irish, Italian, Portuguese or Spanish) government bonds increase the riskiness of the Eurosystem's portfolio. If the Greek government were to default, the capital of the Eurosystem would be decreased.

Second, the interventions are specifically targeted at dysfunctional markets. These may be markets that are not clearing. Thus, the ECB may be making its counterparties, who may have been previously unable to trade at the price offered by the ECB, better off. If the ECB chooses with whom to trade, this could expose the ECB to a suspicion of corruption or of being politically influenced, even if these things are not true. This could be a threat to its legitimacy. However, if the ECB provides the details of its trades and counterparties – at least after some appropriate period of time – and is open and transparent about how the counterparties were chosen, this should reduce the problem.

Third, the decision to intervene raises questions about the ECB's independence. Was the ECB pressured by the French and German governments? Even if it was not, the suspicion that it might have been is damaging. Fortunately, it should be noted that the ECB was unusually transparent about its decision making in this instance. President Trichet admitted that the vote had not been unanimous and it appears that there were at least three dissenters. If one of the dissenters were to become the next President of the ECB, as appears possible, this might mitigate any reputational loss.

6. WHAT SHOULD THE ECB DO ABOUT COLLATERAL?

The Eurosystem's main monetary policy instruments are collateralised loans and repurchase agreements (repos). In the first of these transactions the Eurosystem lends money to a counterparty and receives securities as collateral. In the second, a counterparty sells securities to the Eurosystem, with a commitment to buy them back at a specified time and price. In both types of transactions, if the counterparty defaults and fails to complete the transaction, the Eurosystem keeps the securities.

Before accepting a security as collateral, the Eurosystem must value it. To value a marketable security, the ECB uses the most representative price from the previous business day. If the security has not traded in five days, the Eurosystem computes a "theoretical price". After valuing the security, the Eurosystem applies an additional "haircut" to compensate for the loss of liquidity. If a security that is used for collateral is valued at one million euros has a, say, ten percent haircut imposed on it, then it can be used as collateral against a loan with a euro value of one million minus ten percent of one million, or 900,000. The ECB groups acceptable marketable securities into five classes ranging from Eurosystem and euro area government debt (class I) to asset-backed securities (class V). Haircuts depend on the class and maturity: there are sharp haircuts on longer maturities.

On 15 Oct 2008, the Eurosystem lowered the credit threshold for marketable securities (other than asset-backed securities) to BBB$^-$, the lowest investment grade. To meet this criterion, at least one credit assessment of the security must comply with its threshold. An extra five percent haircut is imposed on all securities rated BBB$^-$. On 8 Apr 2010 the ECB announced that starting in January 2011, a graduated additional haircut for securities in the BBB$^-$ to BBB$^+$ range will replace the five percent extra haircut on imposed on all securities rated BBB$^-$. This change, however, will not apply to sovereigns. On 3 May 2010, it was announced that the application of a minimum credit threshold will no longer apply to Greece.[4]

These changes in the rules have yet to affect how Greece is treated. Currently, Greek sovereign debt is rated BBB$^-$ (minimum investment grade) by Fitch and BB$^+$ ("junk") by Standard & Poor's. Moody's gives it the highest rating: A3 (upper medium grade). Since it is the highest rating that applies, Greek sovereign debt continues to be subject to the same haircut as any other euro area sovereign debt. Should Moody's downgrade Greek sovereign debt to BBB$^-$, then Greek government debt would be subject to an extra five percent haircut. The ECB has not specified what the haircut on Greek debt would be should it sink into the junk category.

In taking on such a wide range of collateral the Eurosystem is taking on risk and transferring wealth. This is probably not posing a risk to its solvency or ability to maintain price stability.[5] However, this is a highly political activity for an unelected body. To maintain its legitimacy, the Eurosystem must be seen as accountable. Given that its independence precludes substantive accountability, this is only possible if the ECB behaves in a transparent fashion. Unfortunately, the ECB is displaying the same opacity in its collateralised lending activities that it does in its monetary policy role.

The ECB refuses to divulge either its actual theoretical prices for illiquid marketable securities or the model that it uses use to compute them. We are not told how the ECB chooses its haircuts. Why are there are sharp increases in haircuts on longer-maturity assets that are readily tradable in secondary markets at all maturities? Why are there no

[4] It is difficult to understand why, and perhaps politically unappealing that, Greece is the only sovereign that this measure was extended to.

[5] Following an analysis of the Eurosystem's balance sheets, Buiter (2010, p. 21) concludes that there is "no real risk to the ECB/Eurosystem of it being forced into inflationary money issuance because it needs to maintain its solvency following major capital losses on poor investments in high-risk private or sovereign instruments."

additional haircuts on Greek government debt over German government debt? There is a non-trivial probability that Greece will default. If banks that are heavily exposed to Greece borrow using Greek government debt as collateral, the default risks of the borrower and the Greek government are correlated and this should justify a further haircut.

A particularly egregious display of Eurosystem risk taking and subsequent lack of transparency is the case of the Icelandic love letters. By the end of June 2008, the Eurosystem, through the Central Bank of Luxembourg, had 4.5 billion euros of collateralised lending outstanding to subsidiaries of the three large Icelandic banks. A significant fraction of the collateral provided by these banks was the so-called *love letters*: unsecured debt of one of the other Icelandic banks! In the autumn of 2008, five counterparties defaulted on their Eurosystem loans and three of these were the subsidiaries of the Icelandic banks. At the March 2009 Quarterly Dialogue with the ECB, ECON committee member Astrid Lulling asked President Trichet about the loans of 800 million euros and and 1 billion euros to two of the Icelandic banks. Trichet responded with, "I do not know the details – you are very well informed: you are better informed than I am. I have to say, at the moment – but I have not doubt that the Luxembourg bank is complying precisely with the requirements imposed by its position as a member of the Eurosystem and is applying the Eurosystem rules to the banks that submit eligible collateral to it." As the March Dialogue was nearly six months after the Icelandic banks had failed, it is hard to see why the European Parliament could not have had a better answer to the question.[6]

[6] For more details on the escapades of Iceland and the CBL, see Sibert (2010a), (2010b).

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