

Agenda

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Stormy waters in the eurozone: how the debt crisis could dampen corporates

The eurozone crisis has re-intensified over the past few months, following a steady stream of negative news. Given the uncertainty about how recent events will unfold, what are the implications for the cost of raising finance for companies operating in the hardest-hit countries? As regulators face a delicate balancing act of ensuring that the regulated companies can continue to raise finance while minimising the impact on consumers, we also explore the options open to regulators

Although the market turmoil in the eurozone in late 2011 gave way to some respite in the early months of 2012, stresses have intensified once again following negative news in recent months—in particular, the inconclusive Greek election results in early May, and Spain's need to borrow €100 billion to recapitalise Spanish banks. These developments have affected already fragile investor confidence, reigniting fears of a risk of contagion to banks and a disorderly resolution of eurozone tensions.

The recent deterioration of public sector balance sheets in the worst-affected eurozone countries—Greece, Spain, Italy and Portugal—combined with the steep drop in investor confidence in the ability of these countries to fulfil their debt obligations, has resulted in a rise in yields on government bonds in these countries (see Figure 1 overleaf). This, in turn, increases the cost of refinancing sovereign debt for these same economies, potentially fuelling a spiral.¹

The crisis has also had a significant impact on equity markets. Although they rallied from December 2011 to mid-March 2012, a correction has taken place, with the Spanish, Portuguese, Greek and Italian equity markets falling by around 20% since mid-April.² The falls in equity prices have affected not only the eurozone countries worst hit by the crisis, but also countries such as Germany, the Netherlands and the UK.

The potential consequences of a disorderly default and exit by one or more Member States in the eurozone are highly unpredictable. For example, it is possible that other eurozone economies could come under severe pressure, potentially creating a panic in financial markets.³ In this case, a break-up of the eurozone

could not be ruled out, with potentially significant financial spillovers to other regions.

In light of this uncertainty about how events will unfold in the eurozone, it is important to consider the implications of recent developments for companies' costs of raising finance. This article discusses these implications, with a focus on regulated utilities, before considering how regulators can deal with the uncertainty surrounding future market conditions in the eurozone.

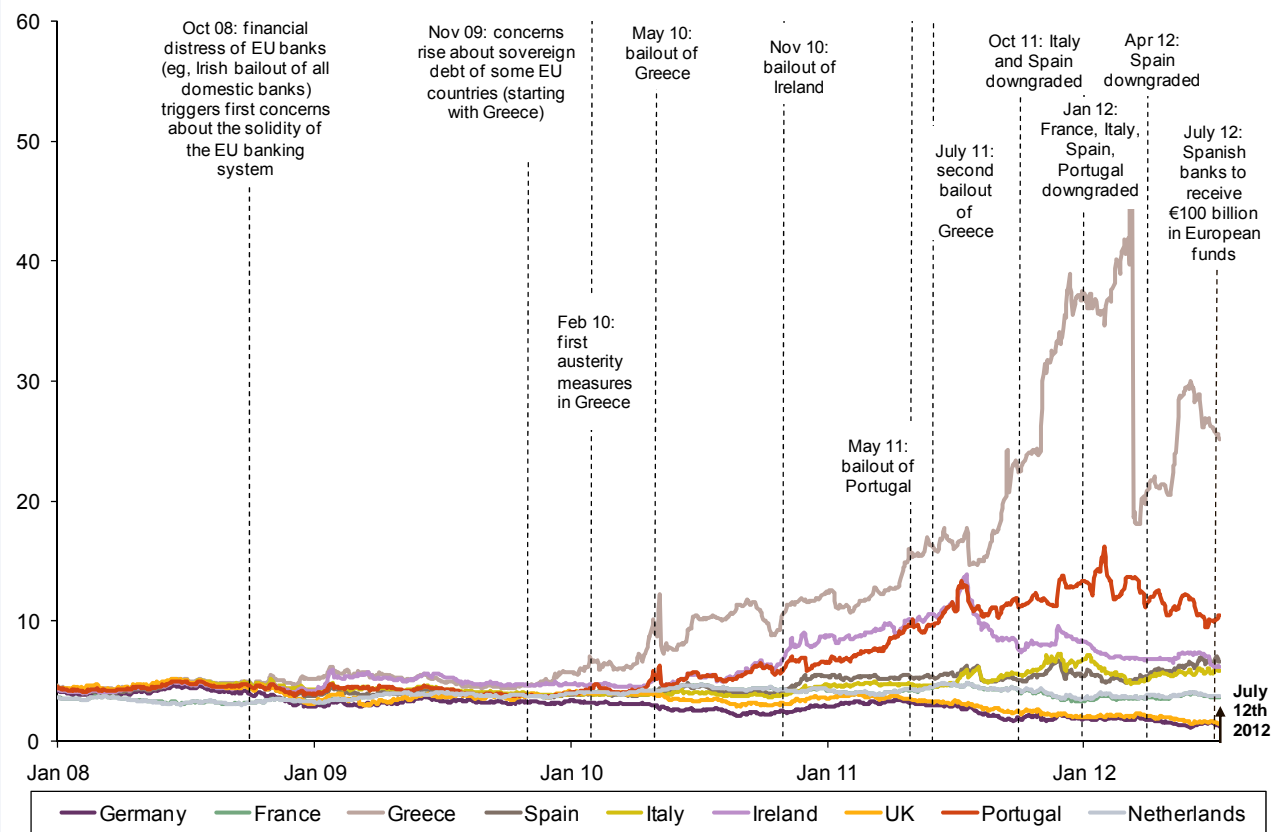
What is the impact of the crisis on the cost of raising finance?

For companies operating in the countries worst affected by the crisis, their ability to continue to service debt levels, while experiencing sharp falls in earnings, will leave some companies increasingly financially vulnerable in the face of a protracted economic downturn. Regulators therefore face a delicate balancing act of trying to ensure that the regulated company can continue to raise finance while minimising the impact on consumers. This raises two questions that are considered below: what is the impact of the sovereign debt crisis on investors' required returns (ie, the cost of capital⁴)?; and how can regulators deal with the greater uncertainty about future conditions?

What is the impact on investors' required returns?

The eurozone crisis has increased the cost of raising capital for both governments and companies, and, in some cases, has affected the availability and cost of

Figure 1 Rise in yields on government bonds in selected European countries (%)



Note: Yields on ten-year bonds presented.
Source: Oxera analysis, based on Datastream.

finance for European companies operating in those countries that are worst affected.

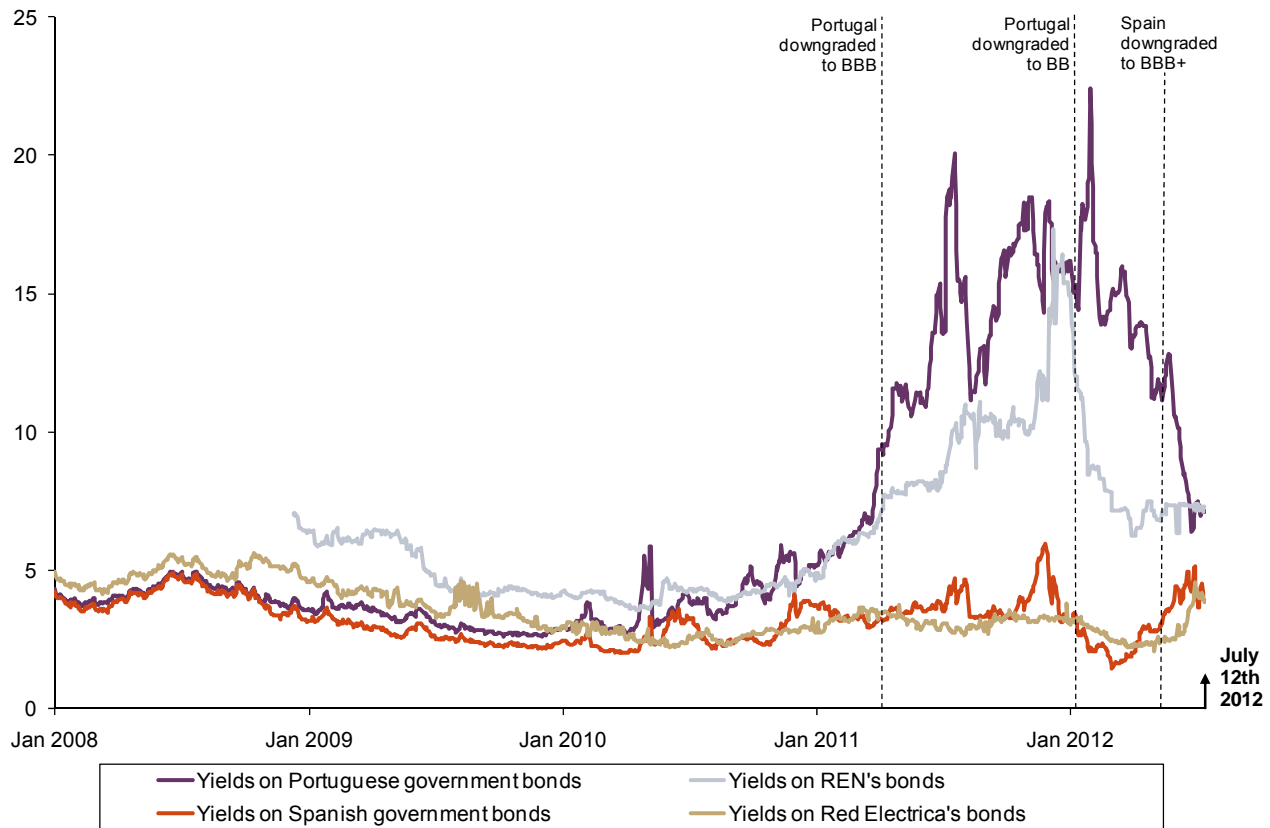
There are two main reasons why the deterioration in the creditworthiness of governments in the countries worst affected—particularly Greece, Portugal, Italy and Spain—may affect the cost of financing for companies operating in these countries.

- First, credit rating agencies explicitly link sovereign and corporate credit ratings, with company downgrades typically occurring at a similar time to downgrades of the sovereign. For example, Standard & Poor’s (S&P) has tied the credit rating of Red Eléctrica, the operator of Spain’s electricity transmission networks, directly to the Group’s exposure to increased sovereign and economic risks in Spain.⁵ In the past, S&P has also highlighted the possibility of a further downgrade in the credit rating of REN, the operator of Portugal’s electricity and gas transmission networks, if sovereign ratings are subsequently lowered.⁶ The deterioration in governments’ creditworthiness is therefore likely to affect the costs of raising finance for companies operating in those countries.

- Second, companies operating in the worst-affected countries will be increasingly exposed to the wider economic climate, through higher demand risk and bad debt risk, as well as the potential tax consequences of a sovereign default.

Although rating agencies have tended to link corporate downgrades directly to the creditworthiness of the sovereign, in practice there is no direct one-to-one relationship between changes in the creditworthiness of the sovereign and that of corporates operating in the same country, particularly for regulated networks (see Figure 2 overleaf). The impact on companies’ required returns may well be smaller than that on government borrowing costs, considering the low-risk nature of regulated networks and the essential nature of their services. For example, average yields on bonds issued by REN have doubled since 2010, while yields on Portuguese government debt have more than tripled over the same period. Similarly, yields on bonds issued by Red Eléctrica have almost tripled since S&P’s downgrade of the Spanish government to BBB+ on April 26th 2012, while yields on Spanish government bonds have almost quadrupled over the same period.⁷

Figure 2 Impact of the crisis on yields on bonds issued by selected utilities operating in Spain and Portugal compared with their respective sovereigns (%)



Note: Government bonds presented have a maturity of approximately ten years. Comparable corporate bonds have been selected, with a maturity as close to ten years as possible.
 Source: Oxera analysis, based on Datastream.

However, there is evidence that bonds issued by companies operating in those countries worst affected by the crisis are trading at higher yields than bonds issued by companies with the same credit rating but operating primarily in countries less affected by the crisis. As an illustration, over the past year, average yields on bonds issued by Red Eléctrica have been trading at approximately 100 basis points higher than yields on bonds with the same credit rating issued by RWE, the German electricity and gas producer.⁸ This implies that debt investors in the countries most exposed to sovereign risk problems are likely to require a higher return from companies operating in these countries.

Therefore, when estimating the cost of capital for companies operating in those countries worst affected by the eurozone crisis, it is appropriate to take into account the additional returns required by debt investors in those countries compared with investors in less-affected eurozone countries.

Having considered the impact for debt investors, this raises a question about the read-across of sovereign

risk for equity investors. This is more difficult to answer because it is not as easy to observe data on required returns in equity markets as it is with debt markets. However, in view of the uncertainty about future market conditions, equity investors in countries that are hardest hit by the crisis are likely to be exposed to far greater volatility in returns.

Under standard finance theory, equity investors will require additional returns only for those risks that cannot be diversified away by holding a broader portfolio of securities. Therefore, the amount of additional compensation required by equity investors depends on the extent to which the risks associated with the eurozone crisis cannot be diversified away. In practice, this may be the case for several reasons, including investors' preference for domestic securities (the 'home-bias' phenomenon)⁹ and the increasing correlation that is observed between national economies and equity markets. This suggests that, as a result of the greater volatility and uncertainty in financial markets, equity investors would require a higher return in light of the risks associated with the eurozone crisis.¹⁰

Consequently, a prudent approach might be to include a premium in the cost of equity similar to that in the cost of debt. Although the cost of equity compensates investors for a different set of risks compared with the cost of debt, since equity investors have a residual claim on a company's cash flows, the additional premium required by equity investors might be expected to be of a similar size to the additional premium required by debt investors.

With companies operating in countries worst affected by the eurozone crisis likely to be more exposed to systematic risks than other countries, there may well be a knock-on effect from the ongoing crisis on the costs of both debt and equity. However, there is no one widely accepted methodology for quantifying these risks on the cost of capital.¹¹ Given the unprecedented nature of the current crisis, this is also not an issue that European regulators have had to deal with before. However, to the extent that the current volatility in European financial markets continues, the price control framework is likely to need to be developed in order to avoid creating additional financial distress.

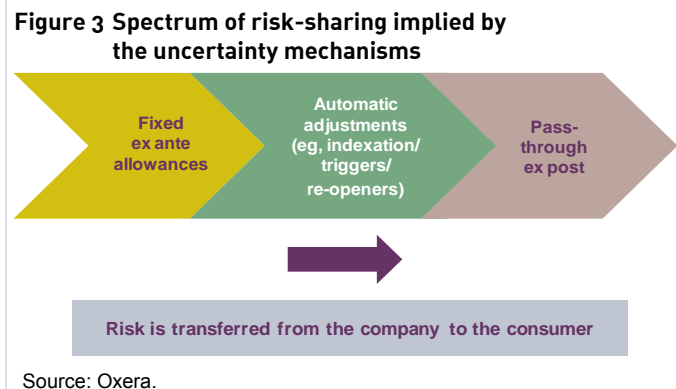
How can regulators manage these risks?

During periods of relatively benign market conditions, regulators have sometimes adopted mechanisms within the regulatory regime to deal with the possibility that unpredictable events might occur during the price control period—for example, unexpected changes in operating costs, driven by one-off cost shocks. However, for European regulators, the nature of some of the most significant risks facing companies has now changed, with greater consideration needing to be given to managing financial market risks within the regulatory framework. The current uncertainty about the future of the eurozone compounds the challenges

of estimating a cost of capital for regulated companies that ensures that customers pay a fair price and allows the regulated company to access capital markets on reasonable terms.

When estimating allowed revenues, subject to the potential for an interim review, European regulators have generally tended to adopt a fixed estimate of the cost of capital for the duration of the price control period, in the expectation that the cost of capital would not change over that period. However, bearing in mind the uncertainty about future market conditions, it may be necessary for regulators to consider alternatives to setting a fixed cost of capital for the price control period. Given the volatility in financial markets, the design of the uncertainty mechanisms may need to be adapted to take into account developments in financial markets for the cost of capital within the price control period itself.

The options in the box below transfer greater risk from the regulated company to customers (see Figure 3 below) than where a fixed cost of capital is estimated for the duration of the price control period. However,



What are some of the options?

- A *trigger mechanism*, whereby the cost of capital that is derived for the purposes of estimating allowed revenues is adjusted (upwards or downwards) for movements in some clearly defined benchmark beyond a pre-determined threshold. For example, this mechanism could be designed such that the cost of capital varies each year, depending on changes in conditions in bond markets. Such a mechanism has recently been proposed by the Irish energy regulator, the Commission for Energy Regulation (CER), for Bord Gáis Networks, in the context of the upcoming gas transmission and distribution price control.¹
- An *indexation mechanism*, whereby the allowed cost of capital varies automatically with some clearly defined benchmark. To ensure that changes in market conditions are reflected in the cost of capital, the

mechanism may need to involve a relatively frequent re-setting of the cost of capital parameters. A similar mechanism has been introduced by the Portuguese energy regulator, Entidade Reguladora dos Serviços Energéticos (ERSE), in the context of the electricity price control.²

- Provisions for a *price control re-opener* could be put in place, depending on the discretion of the regulator and company. An important difference with the two approaches above is that there is no mechanistic adjustment to allowed revenues. Instead, at the time of the re-opener, the regulator carries out an interim review to determine the level of the new revenue allowances, which could include alterations to the cost of capital.

Note: ¹ For further details, see: Commission for Energy Regulation (2012), 'Consultation on October 2012 to September 2017 Transmission Revenue for Bord Gáis Networks', May 22nd. ² ERSE (2011), 'Parâmetros de Regulação para o Período 2012 A 2014', December, section 5.2.3.

the risk may be less than if all outturn costs (ie, the actual cost of debt incurred by the regulated company) were passed through into allowed revenues, either periodically within the price control period or at the next price review. The choice therefore depends on preferences about the appropriate degree of risk-sharing between the company and customers.

Are there potential spillover effects?

Given the integrated nature of financial markets in the eurozone, the crisis may have implications for companies operating in countries with stronger government balance sheets. This raises a number of questions: do investors perceive these countries to be safe havens? Are financial markets in these countries currently distorted as a result? What might happen if sovereign defaults trigger a systematic shock to eurozone financial markets?

In recent weeks, almost every day has brought an unexpected twist to the eurozone crisis, and not only in the most troubled economies. As the International Monetary Fund itself has acknowledged, it is not possible to predict the outcome of these events with any certainty.¹² However, in the event of a sovereign

default, the impact is unlikely to be limited to the countries that are currently worst affected. Liquidity in credit markets could dry up, as experienced in 2008, with banks responding to the losses caused by the financial shocks by reducing their lending activities. To an extent, the losses caused by sovereign defaults could trigger similar reactions on the part of banks, potentially leading to a second credit crisis. This could pose difficulties for companies seeking to refinance their corporate obligations.

These developments highlight important questions about how the crisis affects companies' costs of raising capital—not only in the economies most severely affected, but also their eurozone partners—and how regulators deal with these conditions. A key consideration for upcoming price controls is therefore how to take into account the increased volatility and market frictions that may result from a systemic contagion of the sovereign crisis into financial markets. For regulated utilities facing significant investment programmes and related financing requirements, it may be necessary to prepare for all possible eventualities, even the most unlikely ones, such as a severe liquidity problem across the eurozone, as these events may have the greatest impact.

¹ For further details, see International Monetary Fund (2012), 'World Economic Outlook, Growth Resuming, Dangers Remain', April, pp. 6, 15 and 30.

² European Central Bank (2012), 'Financial Stability Review', June, p. 52; and Bank of England (2012), 'Quarterly Bulletin', 2012 Q2, 52:2, p. 105.

³ International Monetary Fund (2012), op. cit, pp. 17–8.

⁴ The cost of capital reflects the estimate of the rate of return required by investors as compensation for their risk exposure. Investors typically do not require compensation for those risks that can be eliminated through holding a diversified portfolio of securities ('non-systematic' risks). The cost of capital reflects underlying business and market conditions. It is typically estimated as the weighted average of the cost of debt and the cost of equity.

⁵ Standard & Poor's (2012), 'Spanish Power Grid Operator Red Eléctrica Ratings lowered to "A+/A-1" after Sovereign Rating Action; Outlook Negative', Global Credit Portal, Ratings Direct, February 8th, p. 2. In particular, S&P concludes that: 'downgrade of Spain to "A-" or lower would automatically trigger a similar downgrade of Red Eléctrica'. For further details, see *ibid.*, p. 5.

⁶ Standard & Poor's (2011), 'Portuguese Power Grid Operator REN Downgraded to "BBB" after Portugal Downgrade; Still on Watch Neg', Global Credit Portal, Ratings Direct, March 28th, p. 2.

⁷ Bonds issued by REN and Red Eléctrica that have been selected are as comparable as possible to government bonds with a ten-year maturity.

⁸ Oxera calculations, based on Datastream.

⁹ See French, K. and Poterba, J. (1991), 'Investor Diversification and International Equity Markets', *American Economic Review*, 81, pp. 222–6; and Coval, J. and Moskowitz, T. (1999), 'Home Bias at Home: Local Equity Preference in Domestic Portfolios', *Journal of Finance*, 54:6, December.

¹⁰ There is also evidence that, after a financial shock, stocks listed on the same national market could become increasingly correlated. See Bekaert, G., Ehrmann, M., Fratzscher, M. and Mehli, A. (2011), 'Global Crises and Equity Market Contagion', European Central Bank Working Paper Series, September. For further details on the relationship between equity market volatility and the premium required by investors, see Campbell, J.Y., Lo, A. and MacKinlay, C. (1997), 'The Econometrics of Financial Markets', Princeton University Press; Scruggs, J.T. (1998), 'Resolving the Puzzling Intertemporal Relation Between the Market Risk Premium and the Conditional Market Variance: A Two Factor Approach', *The Journal of Finance*, 53:2; Bliss, R. and Panigirtzoglou, N. (2004), 'Option-Implied Risk Aversion Estimates', *The Journal of Finance*, 59, pp. 407–43.

¹¹ A number of methodologies could be used to estimate the impact on the cost of capital. For further details, see Oxera (2012), 'What is the Cost of Capital of Bord Gáis Networks?', report prepared for the Commission for Energy Regulation in Ireland, May 21st, Appendix 1.

¹² International Monetary Fund (2012), 'Global Financial Stability Report, The Quest for Lasting Stability', April.

If you have any questions regarding the issues raised in this article, please contact the editor, Dr Leonardo Mautino: tel +44 (0) 1865 253 000 or email l_mautino@oxera.com

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