

## Credit Default Swaps on Government Debt: Mindless Speculation?

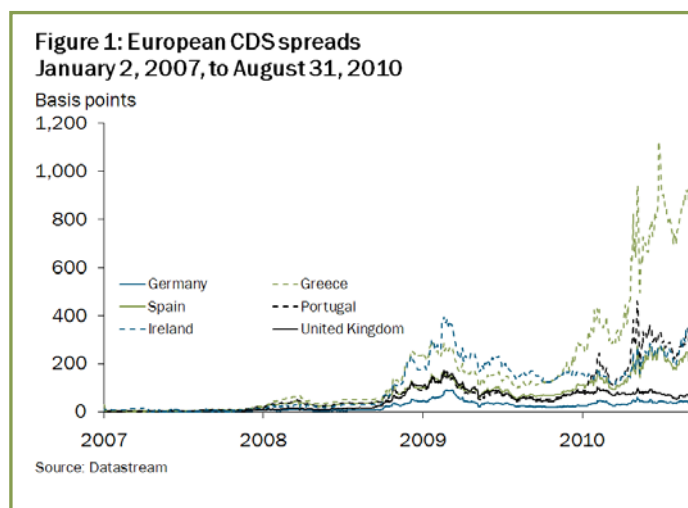
Gerald P. Dwyer and Thomas Flavin

- Credit default swaps (CDSs) continue to be controversial, with concern that trades in them drive prices of government debt down.
- Evidence from the CDS spread for one country—Ireland—indicates that its CDS spread has been reacting to news about developments in Ireland, Greece, and the European Union.
- This examination of Ireland's CDS spreads is consistent with the proposition that the spreads reflect fundamental developments, not mindless speculation.

Concerns about the debt of some European countries are in the news again in September 2010. At the same time, spreads on government debt have increased to levels near recent highs, never having returned completely to precrisis levels.

Spreads on government debt narrowed for a time after Greece received substantial financial aid, cut government spending, and raised taxes.

Figure 1 shows the levels of spreads on credit default swaps (CDSs) for selected European governments' debt. The figure includes two countries with relatively low spreads, Germany and the United Kingdom, and four countries with higher spreads—Portugal, Ireland, Greece, and Spain (PIGS). These four countries have substantial economic difficulties and government deficits, with no clear roadmap to sustainable government deficits. As a result, the long-term resolutions of their current deficit situations are in doubt.



### Credit default swaps and risk

Credit default swaps are a commonly used measure of risk assessments on government debt. The spreads in Figure 1 are for five-year contracts on CDSs with the spreads measured in basis points (hundredths of a percent). Similar to an insurance contract, buyers of a CDS pay for insurance against a credit event on the underlying government debt. For the Greek five-year CDS, the insurance premium is the annual insurance payment relative to the amount of debt. For example, a spread of 1,000 basis points implies that the buyer pays an insurance premium of 10 percent per year of the value of the securities. The seller of the credit default swap receives the premiums and pays out if a credit event happens.

A credit event occurs when there is a substantial, identifiable loss. Credit events applicable to governments are failure to pay on the debt or restructuring of the debt. Generally speaking, a

restructuring involves reduced payments or payments that are spread over time without compensation.<sup>1</sup> The occurrence of a credit event gives the insured the right to deliver certain government securities to the seller; and the seller of the insurance has the obligation to pay the face value of the debt, instead of the lower market value, to the insured.

These CDS spreads can be interpreted as a measure of the perceived risk that a government will restructure or default on its debt. CDS spreads in August 2010 suggest that the perceived probability of the Greek government restructuring or defaulting is substantially higher than it was even as recently as August 2009. The direction of relative changes can be inferred from the spreads, although the magnitude of the implied probability of a restructuring or default cannot be inferred without substantial detail on the underlying CDS contract.

### Do CDSs reflect risk or something else?

A major concern recently has been whether CDS spreads on government debt reflect assessments of the probability of restructuring or default or instead represent “speculative attacks” with little or no basis in the governments’ situations.<sup>2</sup> On September 15, 2010, the European Commission adopted a proposal for regulating short selling and certain aspects of credit default swaps.<sup>3</sup> As the March 2010 *Notes from the Vault* points out, there are similarities between short selling stocks that one does not own and buying CDSs on bonds that one does not own. Among other things, these positions are ones in which investors gain from adverse developments in the underlying security, and the positions are thought by some to contribute to decreases in prices in the underlying assets. For example, CDSs are thought to contribute to decreases in prices of government debt (European Commission 2010).

The European Commission proposal has two parts. The first part calls for continuous provision of information about positions to regulators. The second part permits financial regulators to restrict CDS transactions for up to three months in distressed markets. The reason given for these restrictions is to stop “negative price spirals” in government bonds stemming from CDS trading (European Commission 2010).

Have CDSs contributed to decreases in prices of sovereign debt? No doubt this question will be examined in the research literature for some time to come. Without waiting for decades of research, it is possible to explore an answer to a simpler question: Do CDS spreads change in ways that are consistent with events at the time?

It might seem most natural to examine Greek CDS spreads since they are most in the news recently, but we think it is more interesting to look at another of the affected countries, Ireland. Irish spreads have been affected by developments concerning the Irish government’s own finances and by developments concerning Greece. The experiences concerning Irish spreads make it clear whether developments concerning Greece have substantially affected other countries’ spreads, an interesting issue in itself.

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<sup>1</sup> Bedford, Penalver, and Salmon (2005, Box 1 and Box 2) summarize restructuring of sovereign debt and the economics of those restructurings.

<sup>2</sup> It is little mentioned, but CDS contracts on government debt are denominated in other countries’ currencies. For example, CDS contracts on countries in the euro area are denominated in dollars. As a result, CDS spreads reflect exchange rates. This fact has not been particularly important, at least for Europe and the United States.

<sup>3</sup> Details are available at the European Commission’s website.

## Irish credit default swaps

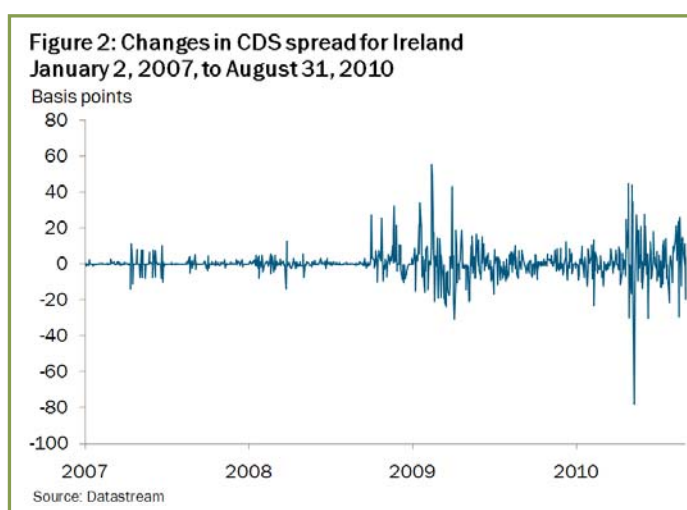
Before the Irish government's guarantee of all liabilities of the six largest Irish banks on September 29, 2008, the maximum spreads were 17 basis points in 2007 and 34.5 basis points in 2008. After this guarantee, a big change occurred in the spread. From the date of the guarantee through August 31, 2010, the spread has never been lower than 60 basis points and has been as high as 396 basis points. This change in the spread between these two periods is hardly surprising given the extraordinary demands on the Irish Treasury. The Irish government budget has been hard hit by the government's guarantee of all of Irish banks' debt, the dramatic decrease in Irish government revenue that followed the Irish housing-price crash, and the increase in government expenditure caused by the recession (Connor, Flavin, and O'Kelly 2010).

Figure 2 shows changes in the spread on Irish debt. A few days stand out with extraordinary changes. In addition, there are periods with large changes—up and down—and periods with smaller changes.

The largest single movement in the CDS spread on Irish debt was on May 10, 2010, when the spread fell 78 basis points. This fall occurred on the Monday after the weekend when the European Union's finance ministers agreed to assist Greece if requested to do so. As would be expected, the effect on Greece's CDS spread was bigger; it decreased by 362 basis points—from 939 basis points to 577 basis points.

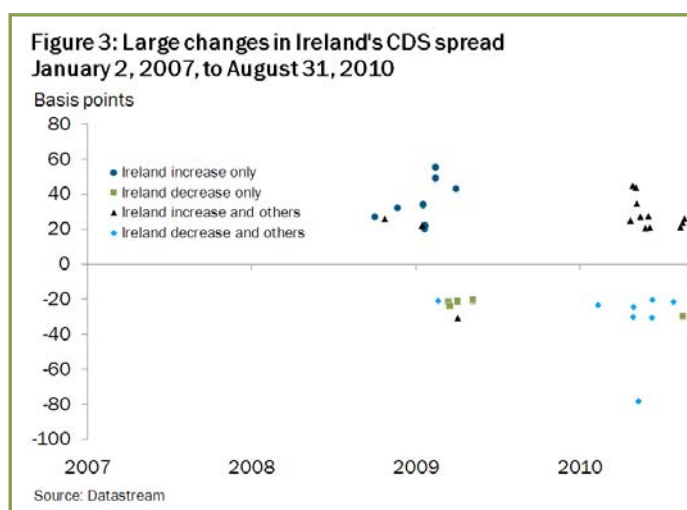
The next-biggest movement in Irish spreads was an increase in the spread by 55 basis points on February 12, 2009. This increase came the day after two developments: First, the Irish government unveiled a new bank bailout plan. Second, the public learned that Anglo Irish Bank's balance sheet had been inflated by a 7 billion euro loan by Anglo Irish whose apparent purpose was to create a deposit in Anglo Irish. This increase in the spread was followed on the next day by the third-biggest increase of 49 basis points. The fourth-biggest increase was more than a year later, on April 27, 2010, a day in the period of heightened concern about Greece, as evidenced by an increase in Greece's spread from 364 basis points on April 12 to 824 basis points on April 27. On Friday, April 23, Greece requested actual aid from the European Union and from the International Monetary Fund. On April 27, Standard & Poor's cut Greece's debt rating to junk and lowered Portugal's debt rating by two grades, downgrades that may have increased concerns about Ireland's debt rating.

These large changes in spreads were related to news at the time. While this analysis cannot indicate whether the changes were too large, too small, or just the right size, it does show that the changes are not random or thoughtless. In addition, it indicates that Ireland's spread has been affected substantially by developments that concern Greece or other countries directly and Ireland indirectly.



Another way of explaining the changes in CDS spreads is to examine whether the changes in the volatility of the spread in Figure 2 are consistent with other developments. Large changes were evident in early 2009 and again from late April 2010 up to the end of the data. Early 2009 was a period of developments concerning the Irish government's guarantee of bank liabilities and the effects on the government's finances. While Irish banks' debt and repeated capital injections into Anglo Irish Bank by the government continue to raise questions about the Irish government's ability to pay on its debt, the news in 2010 before September was dominated by stories about Greece and responses by the European Union and the International Monetary Fund. These developments have affected Ireland's CDS spread.

Figure 3, which shows all days with movements of the Irish spread by 20 basis points or more, illustrates the importance of joint developments in 2010. The first movement was on September 30, 2008, at the height of the financial crisis and the day after the Irish government's guarantee of the banks' liabilities. After making that guarantee until the middle of 2009, large changes for Ireland's spread are prominent amid no such changes for other countries. The pattern has been the opposite in 2010. From February 9, 2010 onward, there is only one day in which Ireland is the only one of the PIGS to have a change of 20 basis points or more. Instead, there have been common developments affecting Ireland's spread and the spread of one or more of the other PIGS countries—Greece, Portugal, and Spain. The earlier period of high volatility in Ireland's CDS spread is associated with Irish developments, and the later period is associated with developments affecting Ireland, Greece, Portugal, and Spain.



## Conclusion

Spreads on credit default swaps for some countries' sovereign debt have increased recently. Given the terms of CDS contracts, this increase in the spreads can be interpreted as a reflection of heightened concern about countries having difficulty making the promised payments. On the other hand, the increase in spreads could simply reflect mindless speculation on these countries' debt.

A review of the Irish CDS spread indicates that CDS spreads have been reacting to news—about both Ireland and the European Union. Large changes in the Irish spread in late 2008 and in early 2009 reflected Irish developments, but later changes before September 2010 were associated with European Union developments. The Irish spread has been sensitive to news concerning Ireland and to news concerning Greece and the European Union's responses to the Greek government's difficulties.

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