

# Democratic Risk, the Great Recession, and the Euro Crisis

This paper estimates the impact of elections on government bond interest rates. We calculate the scale and nature of event-country and spillover electoral impacts in ten euro zone countries and a group of four placebo countries. Our analysis produces three conclusions. First, democratic risk is not limited to the euro zone. The great recession has brought about a return to historical levels of democratic risk outside Europe too. The euro zone is different because democratic risk is so difficult to manage in a single currency. Second, spillover is often asymmetrically distributed. Therefore, it can be an obstacle to, rather than an incentive for, international co-operation. Third, within the euro zone, the domestic impact of elections is greatest in vulnerable countries but the largest spillovers are associated with elections in strong countries. These conclusions have important implications for the EU's debt crisis management policy.

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## 1. Introduction

Democratic risk has been a prominent feature of the euro crisis. Investors have worried about how the democratic process will influence the value of their investments. Indeed, citizens and policy-makers have also been concerned with how democratic decisions can influence the sustainability of public debt. The complex interaction, and frequent incompatibility, of democratic legitimacy, economic efficiency, and international co-operation have exposed the design flaws in Europe's single currency project. The complexity of the crisis has also overwhelmed analysts. The dominance of economists has helped understand some elements of the problem but they often admit their plans are unrealistic because of "myopic" politicians or "ideological" policy-makers. A satisfactory analysis is most likely to come from a political economy approach. However, multiplying political complexity by economic complexity can end up with an account that is so complex that it becomes a hindrance, not an aid, to understanding. In this paper, we concentrate the politically fundamental event of elections and the economically fundamental figure of the interest rate on government debt. In particular, we focus on how an election in one country can spillover into changes in the interest rates of other countries.

Our analysis produces three main arguments. First, democratic risk is not limited to the euro zone. The great recession has brought about a return to historical levels of democratic risk outside Europe too. The euro zone is different because democratic risk is so difficult to manage in a single currency. Second, spillover is often asymmetrically distributed. Therefore, it can be an obstacle to, rather than an incentive for, international co-operation. Third, within the euro zone, the domestic impact of elections is greatest in vulnerable countries but the largest spillovers are associated with elections in strong countries. This last conclusion comes close to expressing the essence of the euro zone's political-economic problem. The incentives for strong countries to find a solution for Europe's debt problems might be strong in the long-term but they are weak in the short-term.

We use techniques from financial econometrics to estimate the impact of elections on government bond interest rates. We calculate the scale and nature of event-country and spillover electoral impacts in ten euro zone countries. We compare these estimations across time: pre-euro, early euro, and crisis. Furthermore, to test the extent to which the spillovers are particular to the euro crisis, we perform the same calculations for some rich countries outside Europe. The paper proceeds in a straightforward fashion. The next section briefly outlines the relationship between elections and markets. Section three explicates our methodology. Sections four and five look at raw spillovers and types of spillovers in turn. Finally, we offer some conclusions and implications.

## **2. Political Events and Bond Market Spillovers**

Sovereign debt is a political choice. States decide whether to incur debt and whether to pay it back. Investors have very rarely succeeded in recovering their money through legal challenges to sovereign defaults and restructurings. Thus, markets should watch politics to estimate the credibility of a sovereign's promise to pay back its debts. Political competition should provide information, not just on a country's willingness to pay, but also on its ability to pay, which it can endeavour to maximise through economic policy. Elections are the most important political event in democracies. In all countries, they determine the composition of lower house of the legislature. In many, they virtually simultaneously determine the composition of the executive; in others, where coalition governments are the norm, elections remain an important influence on the make up of the executive. Therefore, especially when the market for a government bond is stressed, elections should impact on the interest rate charged on government debt. Elections should provide investors with new information on the basis of which to adjust their expectations about the likelihood that a government bond will be repaid in full.

Government bond markets do not exist in splendid isolation. Investors may switch between government bonds and the array of other financial products. However, it is especially common for holders of government debt to move between the bonds of different countries. Thus, if an election affects the interest rate of the country where it took place, it can also spillover to other countries by impacting on their interest rates too. Like event-country impacts, spillover impacts are more likely in the context of a bond market crisis. In the context of pooled sovereignty, political events in one country would appear to be more likely to spillover to the bonds of its international partners. Spillover can take various forms. The impact on spillover countries may be closely aligned with the impact on the event country or it may be very different. Spillovers might be skewed towards relatively large interest rate increases or decreases; or they might redistribute capital amongst countries. These different types of spillovers have very political consequences. In particular, they could influence the ability of countries to co-ordinate their responses to a debt crisis.

The literature on comparative political economy has tended to contrast the relative indifference of financial markets to political events in rich, stable countries (Bernoth, Von Hagen and Schuknecht 2004; Katzenstein 1985; Mosley 2003: 65; Rodrik 1988) with their close attention to current affairs in emerging markets (Block and Vaaler 2004; Vaaler et al. 2005; Mosley 2003: 102-3). This generalization is accurate for an earlier period but has been superseded by the great recession and the euro crisis. A small number of scholars using financial econometric techniques similar to ours have found more evidence of political impacts on financial markets (Bechtel 2009; Fowler 2006; Sattler 2013). A handful of pieces identified continuing political risk even in periods largely characterised by growth and stability (Breen and McMenamin 2014; Hallerberg and

Wolff 2008). The euro crisis has motivated more scholars to begin investigating the link between politics and bond prices but, so far, they have tended to concentrate on the EU level (Goldbach and Fahrholz 2011; Smeets and Zimmermann 2013) or on particularly vulnerable countries (Phillips 2013). Spillover has previously been studied by Bernhard and Leblang, albeit for much smaller (2006) or very different samples to ours (2007). They briefly tested the alignment of event-country and spillover alignments but did not mention any further types of spillover. We share the same definition of spillover: an event in one country is treated as an event in all countries, in our case, elections to the lower house of the legislature.

### 3. Methodology

We estimate the impact of elections on bond yields using the classic, or finance, event-study methodology (Corrado 2011: 220; Sandler and Sandler 2012: 3). We do not measure simple changes in yields before and after elections. Instead, the essence of this technique is to posit the counterfactual: the yield of the bond if the election had not happened. In event studies, this is known as the normal return. The abnormal return, then, is the difference between the actual yield and the normal return (Campbell, Lo and Mackinlay 1997: 151). We establish a normal return by regressing the yield of the bond in question on the previous day's yield for United States bonds. In Europe, and particularly in the euro zone, the German bond is usually regarded as the safest investment and the main driver of the price of all other bonds. We have three good reasons for using the US bond instead. Firstly, the US bond is a much stronger predictor for our non-European countries and we want to be as consistent as possible. Secondly, if we use the US benchmark Germany can remain in the dataset. This is particularly desirable for investigating the spillover from event countries to other euro zone members and the differences between those spillovers. Thirdly, the German bond does indeed have greater predictive power than the US equivalent for the pre-euro and pre-crisis eras. Crucially, however, the US bond does better in the crisis era, perhaps because relationships with Germany are part of the crisis itself.<sup>1</sup>

Some scholars add other factors to the market-driving bond to calculate CARs. This is more difficult to do for a diverse group of countries over three decades. At any rate, extra factors often add little marginal explanatory power (Campbell, Lo, and Mackinlay 1997, 156; Lo and Mackinlay 1999, 189-212). The period for which we regress the bond of interest on its US counterpart is called the estimation window. For each event in our dataset, the estimation window consists of the period between one month and six months before the event. This amounts to 100 trading days in most cases. We exclude the last month before the event to

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<sup>1</sup> From 2008 to 2012, the R-squared on estimations of the normal return for 36 Euro zone budgets is 0.6 for the US and only 0.52 for Germany. For more details on the budget CARs see McMenamin, Breen, and Muñoz-Portillo 2013.

reduce contamination from campaign effects. Since it takes markets some time to assimilate new information, we specify an event window of five days after the event. We then cumulate the abnormal returns over these five days to give us the cumulative abnormal return (CAR).

We estimate the CAR using daily yields on ten-year benchmark bonds from Datastream, which for most rich countries date back to the 1990s and 1980s (Kuttner and Posen 2010: 360).<sup>2</sup> Many studies use credit default swaps as a cleaner measure of risk. Unfortunately, they are a relatively recent innovation and we can extend the sample using the interest rate. We have data for 147 elections for in nineteen countries. Here we concentrate on the following euro zone members: Austria, Belgium, Finland, France, Germany, Ireland, Italy, the Netherlands, Portugal, and Spain. Clearly, we are missing many eurozone members. Cyprus, Malta, Slovenia, Slovakia and Estonia have not had benchmark bonds for long periods. Luxembourg has had a benchmark bond for over twenty years but we exclude it because the country's debt is so tiny, not just in absolute terms, but also in relation to GDP. Greece is omitted due to the impossibility of estimating a plausible CAR in the same fashion as the other countries. The estimation window for the two Greek elections of 2012 includes the conclusion of the deal on the most valuable restructuring in history. The estimation window for the June election also includes the May election.<sup>3</sup> In spite of these limitations, our ten countries provide a good mix of economically strong and vulnerable countries.

We seek to distinguish the effects of the internal euro zone crisis from the great recession, which affected the global financial system. In order to so, we compare the euro zone countries with Australia, New Zealand, Canada, and Japan. This hardly comprises a true placebo group, as the euro zone is such an important part of the world economy in general and the government bond market in particular. Nonetheless, these countries are obviously much less reliant on the euro zone than non-euro countries in Europe.

#### **4. Spillover**

Figure 1 plots the impact of euro zone and placebo group members' elections on each other over the last thirty two years. An importance caveat to this graph is that most of the future euro zone members enter the dataset in the late eighties or early nineties. Nonetheless, this graph suggests that the euro's calm first decade was exceptional and the crisis was not. In both the pre-euro and crisis periods a large number of spillover CARs diverge substantially from zero and indeed many exceed plus or minus five per cent. The euro crisis

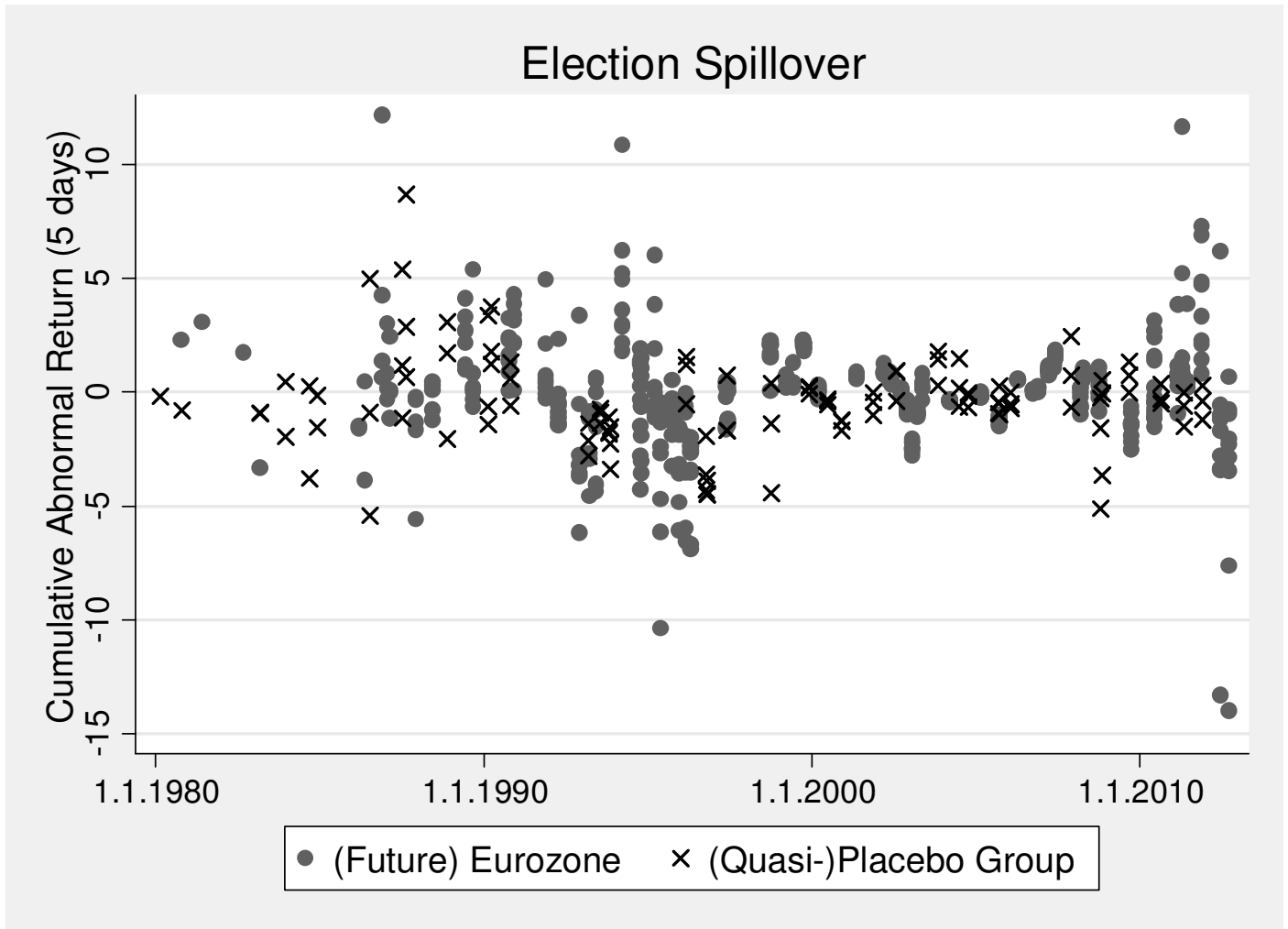
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<sup>2</sup> For some countries, we lengthen the time series somewhat by using another long-term bond that we can show correlates at over 0.97 with the benchmark bond.

<sup>3</sup> We intend to estimate Greek CARs using a special short estimation window including virtually all the campaign. While this will be a good measure of the impact of the elections, it will not be strictly comparable to our other CARs.

does include two spillover CARS that approach minus fifteen while the pre-euro minimum is only just over ten. Otherwise, spillover effects do not appear at all extreme in relation to the mid-1990s.

Figure 1



The pattern is broadly the same for the placebo group. Prior to the early 2000s elections often have substantial spillovers into the bond markets of other countries. In the early 2000s, the range tightens very considerably and risk returns in the current era. The differences are relatively subtle. In the placebo group, the most dramatic impacts are in 2007, presumably because of reliance on America, in which the sub-prime crisis had broken. The euro zone was still quiet at this time and the bond markets do not react noticeably to elections until 2010. Another difference is that the euro zone does have a handful of extreme interest-rate impacts.

The observation of similarities between the euro zone and stable countries elsewhere is not to deny or minimize the crisis. Political risk that was manageable with independent currencies spiralled out of control

under a common currency. The impossibility of devaluation removed one key option from domestic authorities. The common currency introduced a need for collective management of political risks. However, political risk was hardly divided evenly, and this posed a real obstacle for policy co-ordination. An analysis of how one election's impact can spillover into other countries in a variety of different ways sheds a lot of light on the nature of political risk management and its chances of success.

**Figure 2**

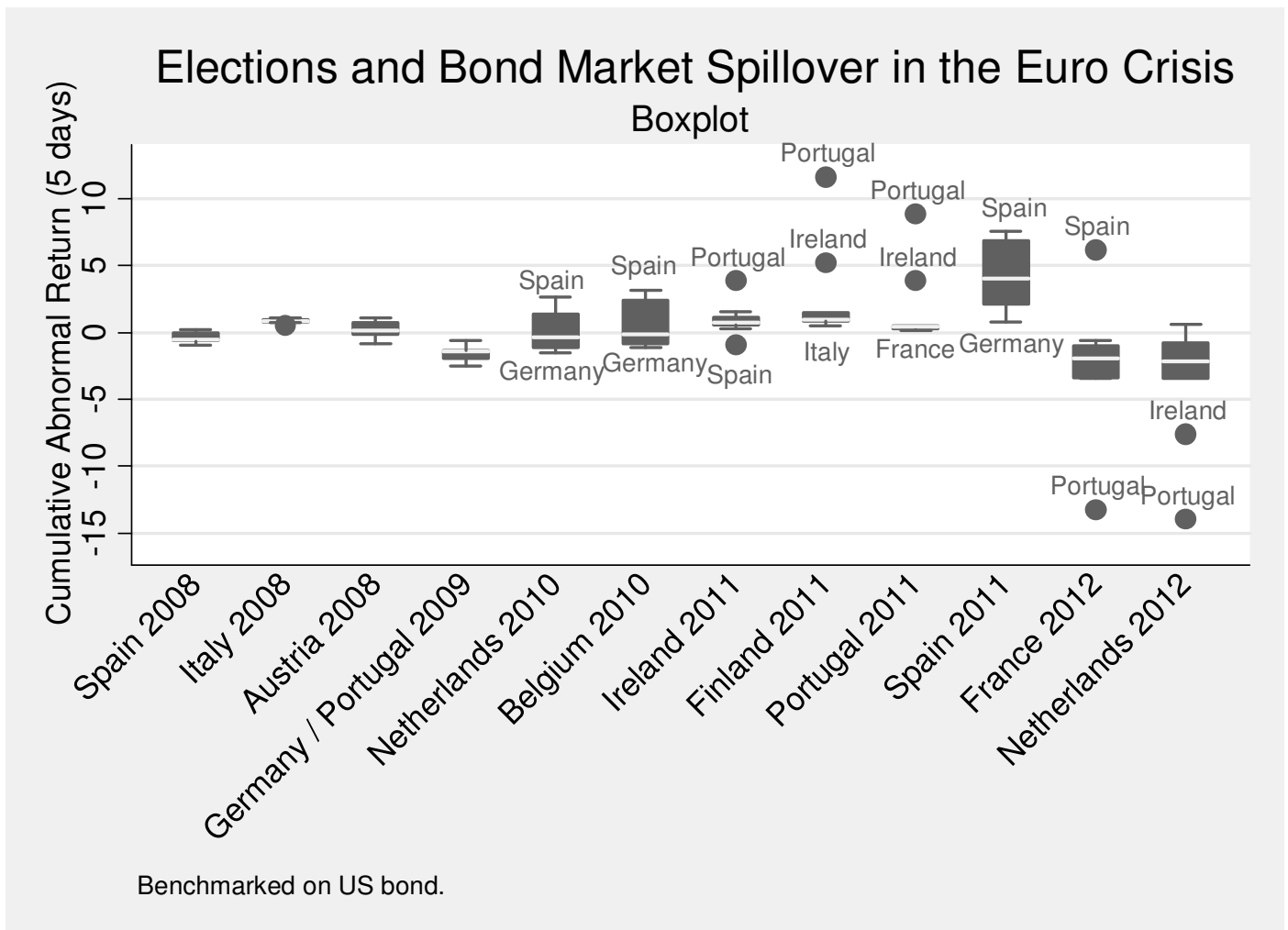


Figure 3 presents a boxplot of spillover impacts of elections in the euro zone between 2008 and 2012. There were 13 elections in our sample during this period. Inconveniently, Germany and Portugal held elections on the same day in 2009, meaning that we cannot distinguish the impact of these two elections. Nonetheless, the basic picture fits the overall evolution of the crisis. The three 2008 elections are still in the calm period when the crisis was still centred on America. The mean across all ten countries is close to zero and there is little variation across countries. However, this changes in 2010 with clear differences emerging between how countries' interest rates are affected by elections. The range remains at over five per cent thereafter. The

mean impact also moves above zero, meaning that on average the elections increased interest rates in the euro zone. The two elections in 2012 heralded substantial reductions in interest rates. Really big impacts all occur in vulnerable countries, with Portugal exhibiting great sensitivity to elections in the euro zone. An increase in the interest rate of one country and a decrease in the borrowing costs of another do not necessarily mean that capital shifted directly from one bond to the other. Nonetheless, it is reasonable to assume that such shifts account for a substantial part of the change in interest rates. Looking at the extremes of the spillover range identifies some fairly consistent pairs. On three occasions, Spain occupied the top of the range and Germany the bottom. When Portugal is at one end of the range the opposite is occupied by a large Latin country, twice Spain and one each for Italy and France. This suggests an ordinal ranking of safe, stable but concerning, and risky. In reacting to elections, investors appeared to move between adjacent groups, rather than, for example, buying German bonds instead of Portuguese bonds. This is consistent with other evidence that investors tend to “categorize” sovereign debtors (Brooks, Cunha, and Mosley 2013).

It is easy to construct a plausible narrative linking these figures with the election results and the situations of the countries at the extremes of the boxplots. The Dutch election in 2010 was notable for the collapse of the prime minister’s Christian Democratic Appeal and the rise of the Freedom Party of Geert Wilders. This suggested it was less likely that the Netherlands would support financial aid for countries suffering from high interest rates. In this context, a shift of capital from Spain to Germany made sense. Belgium’s election in 2010 was also a triumph for a non-traditional party, the New Flemish Alliance. This was the first time a new party had attained a plurality in Belgium, albeit by only one seat. The Alliance’s former Christian Democratic partners did much less well. So, the election sent, very broadly speaking, a similar message to the Dutch election and had a similar spillover in the euro zone, with investors appearing to move their money from Spanish to German bonds. In the Irish election of 2011 the forever second-placed and centre-right nationalist, Fine Gael supplanted its long dominant and ideologically close competitor, Fianna Fáil. Fine Gael’s planned coalition with the moderate Labour Party was set to rule with a massive majority. The resolution of uncertainty in bailed-out Ireland perhaps contrasted with the escalating crisis in Portugal, the interest rate of which jumped. Many investors seem to have fled risk, while still seeking a substantial yield, by buying Spanish bonds. The Finnish election registered spectacular gains for the populist Young Finns. This was the first election where the range of spillover impacts moved from substantial to the extreme figure of almost ten per cent. The Portuguese CAR was over ten per cent and the Irish CAR was five per cent, revealing a concern that the interplay of Finland’s electoral politics and her European policy could have a real effect on the likelihood of default in euro zone members. Italy is at the opposite end of the range. Like Spain in previous elections it was much more stable than the small crisis-hit countries but still paying a valuable spread over super-safe German bonds. The Portuguese election had much in common with its Irish



counterpart. The Socialist Party simultaneously abdicated national economic sovereignty and its own control of government and was duly savaged by its historic rival in the ensuing election, although not to the same extent as Fianna Fáil in Ireland. This is the first of only two elections at which the greatest impact is observed in the event country. Portugal's CAR was almost ten and Ireland's almost five. The Spanish election of 2011 had by far the largest impact on the bonds of euro zone members, heralding a mean CAR of four per cent in our sample. Clearly the resounding victory of the Partido Popular did not convince the markets that Spain could re-establish its fast-disappearing credibility as a debtor. The largest increase was registered by Spain itself and the lowest, but still a small increase, by putatively riskless Germany. The French election of 2012 was not just after the European Central Bank's interventions had begun to calm markets, but also the first time during the crisis that a strong country elected a parliament that was more, rather than less, inclined to express solidarity with the crisis countries. The election was greeted by a reduction in the mean interest rate and a very wide range, with Spain at the top and Portugal at the bottom. The political support of France seems to have convinced investors that high-yield Portuguese bonds were better value than their Spanish counterparts. Finally, the Dutch election of 2012 also provided comfort to the euro zone. There was a disappointing result for the eurosceptic Party of Freedom and established, pro-European parties appeared destined for government. The markets reacted by posting large reductions in the interest rates of vulnerable Portugal and Ireland. A case-by-case approach can be illuminating and is perhaps especially useful in a complex, fast-moving, and closely-watched process like the Euro-crisis. Nonetheless, a deeper understanding is potentially attainable from a more systematic analysis. In the next section, we apply a typology of event spillovers to our data.

#### **4. Types of Spillover**

Spillover is potentially complicated. The simplest scenario is where there is a close relationship between the impact in the event country and the spillover countries. In this case, the interests of the countries in the group are aligned. For example, if an election reduces the interest rate in the event country it will reduce the interest rate in the spillover countries by a similar amount. While this scenario is important, it appears not to be the only one. Event country CAR explains only 13 per cent of spillover country CAR.

Spillover impact can diverge from event country impact in three different ways:

1. The event tends to reduce the interest rate in the spillover countries by substantially more than the event country – negative skew. Capital appears to move from the event country to the spillover countries. In this

case, the spillover countries will not have a strong, immediate incentive to co-ordinate with, or help, the event country.

2. The event tends to increase the interest rate in the spillover countries by substantially more than the event country – positive skew. Capital appears to move from spillover countries to the event country. In this case, the event country will not have a strong, immediate incentive to co-ordinate with, or help, the spillover countries.

3. The impact on the spillover countries varies, with some interest rates increasing, and some reducing, substantially more than the event country – redistribution. The event causes capital to move between spillover countries. In this case, the spillover countries will have diverging interests from each other.

Empirically, the measurement rests on the residuals of a regression of spillover CARs on event-country CARs. Each classification is derived from the characteristics of these residuals across the spillover countries for each event.

**Alignment.** Less than the median of the absolute residuals. We use absolute residuals because we are interested in the size of the deviation from the event-country impact, not the direction of that deviation. We use the median rather than the mean because the absolute residuals are skewed to the left.

**Negative Skew.** More than the median of the absolute residuals and more than a half of a standard deviation below the mean of the residuals.

**Positive Skew.** More than the median of the absolute residuals and more than half a standard deviation above the mean of the residuals.

**Redistribution.** More than the median of the absolute residuals and less than half a standard deviation from the mean of the residuals.

These calculations are affected by the accuracy of the estimated CAR. In the appendix, we present the same analysis of types of spillover as below, but weighted by the inverse of the standard error of the prediction of the normal return. Several of the figures are noticeably different but they do not change the substantive interpretation.

**Table 1**

Election Spillover Types in the (future) Euro zone									
	Pre-1999			1999-2006			2007 onwards		
	<i>Prop.</i>	<i>Elec. Obs.</i>	<i>Spill. Obs.</i>	<i>Prop.</i>	<i>Elec. Obs.</i>	<i>Spill. Obs.</i>	<i>Prop.</i>	<i>Elec. Obs.</i>	<i>Spill. Obs.</i>
Redist.	.56			.047			.33		
Pos.	.14	32	206	.19	21	189	.067	15	135
Neg.	.30			.0			.2		
Align.	0			.76			.4		

Notes: The Portuguese and German elections of 27 September 2009 have been excluded. The number of spillover countries increases in the earlier years of the pre-euro period.

Table 1 shows the proportions of different types of spillover in the euro zone sample. The greatest contrast is between the pre-euro and early euro periods. Before the euro no elections produced aligned impacts among the aspiring euro members. Over half of elections were redistributive, in that there were substantial increases in interest rates for some of the aspiring euro members and substantial decreases for others. When the euro is introduced, this figure falls below ten per cent. Instead, over three-quarters of the elections have aligned spillovers, in which the spillover effects are similar to the impact in the event country itself. From the sub-prime crisis to the current day there have been very diverse impacts. Forty per cent of elections had aligned spillovers but one third were redistributive. The combined proportion of negatively and positively-skewed spillovers is somewhat larger than the equivalent figure for the early euro period but considerably smaller than during the pre-euro era.

**Table 2**

Election Spillover Type in the Placebo Group									
	Pre-1999			1999-2006			2007 onwards		
	<i>Prop.</i>	<i>Elec. Obs.</i>	<i>Spill. Obs.</i>	<i>Prop.</i>	<i>Elec. Obs.</i>	<i>Spill. Obs.</i>	<i>Prop.</i>	<i>Elec. Obs.</i>	<i>Spill. Obs.</i>
Redist.	.33			0			.14		
Pos.	.26	22	58	0	11	33	.286	7	21
Neg.	.41			0			.43		
Align.	0			1			.14		

In Table 2, once again, the variation over time in the placebo group is very similar to the euro zone. There is a very clear shift from redistribution prior to 1999 to alignment from 1999 to 2006 and then to all spillover types in the recent period. The contrast between the second two periods is stronger in the placebo group, for which all election spillovers were aligned from 1999 to 2006. However, it is important to remember that this is a group of only four countries with consequently relatively small numbers of elections.

**Table 3**

Vulnerability and Spillover in the Euro crisis				
	<b>Max. Interest Rate</b>	<b>Event-country CAR</b>	<b>Spillover Type</b>	<b>Spillover Range</b>
France	4.73	-2.13	Redistributive	19.51
Netherlands	4.73	-1.39, -0.56	Redistributive, Negative Skew	4.17, 14.54
Finland	4.78	1.33	Positive Skew	11.15
Austria	4.8	-0.18	Redistributive	1.94
Belgium	4.85	.18	Redistributive	4.25
Spain	6.79	-0.49, 7.57	Aligned, Negative Skew	1.15, 6.49
Italy	7.06	0.95	Aligned	0.54
Ireland	12.45	1.53	Redistributive	4.79
Portugal	13.85	8.86	Negative Skew	3.71

Notes: The Portuguese and German elections of 27 September 2009 have been excluded. Interest rate maxima for the first day of each month from 1 January 2008 to 1 December 2012 are from the European Central Bank. The second entries for Spain and the Netherlands refer to later elections.

Table 3 explores the relationship between the vulnerability of euro zone countries and spillovers from their elections. Although the timing of an election mattered a lot for its impact, it is possible to draw some conclusions. The countries are listed in order of their maximum interest rate. This clearly divides them into stable countries with almost identical maxima under five per cent and vulnerable countries ranging from 6.8 to 13.9. The event-country CARs are mostly relatively modest. All but two are in the range -2.1 to 1.5. The spectacular exceptions are Spain (7.6) and Portugal (8.9), both in 2011. Clearly, vulnerable countries are exposed to greater democratic risk. By contrast, the last two columns suggest that elections in strong countries are a greater a risk to fellow euro zone members than elections in vulnerable countries. The greatest range of spillover CARs is found in the Netherlands, Finland, and France, followed at a considerable

distance by Spain and Ireland. There also seems to be some relationship between a country's vulnerability and spillover type, although any generalizations here are necessarily tentative. There are four redistributive spillovers from strong-country elections and only one, Ireland, amongst the vulnerable states. These data suggest that strong-country democratic risk played an important role in escalating the crisis. Redistributive elections do not indicate mere volatility in the bond market they also set countries against each other. The types are more evenly spread in amongst the vulnerable country elections. However, it can be noted that there are two negatively-skewed elections in this group. In the Portuguese and Spanish elections of 2011, other euro zone members received significant interest rate reductions relative to Spain and Portugal themselves. This could have acted as a disincentive for the other countries to show solidarity with their Iberian partners.

## **6. Conclusions and Implications**

We have probed the central tension between democracy and sovereign debt by estimating the impact of elections on interest rates, in both the election-country and other countries. Our particular focus has been the euro crisis, the nature of which we have explored by calculating at changes over time and in comparison to other rich countries and by considering recent euro zone elections in detail. We concluded that the democratic risk evident in the contemporary euro zone is not historically or comparatively very unusual. Prior to 2000 and since 2007 substantial democratic risk has been present in elections. The euro zone's specificity is that democratic risk cannot be at all adequately managed domestically, but rather requires international co-operation. Investors tend to move between the bonds of different countries and not just in and out of the government bond market as a whole. Therefore, the spillover effects of elections are often asymmetric. If spillovers in the euro zone had tended to be aligned, there would have been a much more obvious and immediate incentive for co-ordination. Not only were spillovers asymmetric, the greatest spillovers were associated with elections in the strongest countries.

In good economic times, there is little democratic risk and spillovers are aligned. In good economic times, strong countries long-term interest in the economic health of their partners is consistent with their short-term interest in low yields on their own public debt. In bad economic times, democratic risk is much more prevalent and is likely to generate asymmetric spillovers and, indeed, spillovers that in the short term appear to benefit strong countries. In bad economic time, strong countries' long-term interest in the prosperity of their partners tends to diverge from their short-term interest in cheap borrowing. The EU's current efforts prioritize prevention rather over cure: the minimization of macroeconomic imbalances and a banking union to prevent more debt crises. Of course, prevention makes sense. Nonetheless, economic crises are part of

capitalism and democratic risk has been the norm, not the exception, in the last thirty-two years. So, perhaps Europe needs to consider how a future outbreak could be treated. An effective treatment should focus on reducing spillovers from strong countries and increasing the alignment of those spillovers. Moreover, in the confidence-sensitive world of the markets, the existence of an effective treatment would aid prevention.

## Appendix: Alternative Measure of Spillover Types

**Table 3**

Election Spillover Types in the (future) Euro zone									
	Pre-1999			1999-2006			2007 onwards		
	<i>Prop.</i>	<i>Elec. Obs.</i>	<i>Spill. Obs.</i>	<i>Prop.</i>	<i>Elec. Obs.</i>	<i>Spill. Obs.</i>	<i>Prop.</i>	<i>Elec. Obs.</i>	<i>Spill. Obs.</i>
Redist.	.56			.06			.47		
Pos.	.14	32	206	.23	21	189	.03	15	135
Neg.	.30			.0			.23		
Align.	0			.71			.27		

Notes: The Portuguese and German elections of 27 September 2009 have been excluded. The number of spillover countries increases in the earlier years of the pre-euro period. The proportions are weighted by the inverse of the standard error of the prediction from the estimation equations.

**Table 4**

Election Spillover Type in the Placebo Group									
	Pre-1999			1999-2006			2007 onwards		
	<i>Prop.</i>	<i>Elec. Obs.</i>	<i>Spill. Obs.</i>	<i>Prop.</i>	<i>Elec. Obs.</i>	<i>Spill. Obs.</i>	<i>Prop.</i>	<i>Elec. Obs.</i>	<i>Spill. Obs.</i>
Redist.	.34			0			.13		
Pos.	.18	22	58	0	11	33	.17	7	21
Neg.	.47			0			.5		
Align.	0			1			.2		

Note: The proportions are weighted by the inverse of the standard error of the prediction from the estimation equations.

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