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Political Affiliation and Risk of Default: Are Republicans or Democrats More Fiscally Responsible?

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Abstract

Past research has largely ignored the effects that political parties have on the risk of default of state governments. The objective of this paper is to address this important policy question using data from Credit Default Swaps (CDS), a type of derivative contracts designed to protect from risk of default. I use polls data to exploit any information available on election outcomes prior to Election Day. The findings of the paper suggest that state Republican governors have a significant positive effect on CDS spreads. On average, Republican governors reduce credit spreads by more than five percent, which represents almost half of CDS standard deviation during the period of analysis. Ex-ante, Republican candidates are good news for debtholders. An event case study and placebo panel regression analysis provide robustness checks of the direction of this effect. I present evidence that the effect is stronger for states with severe financial distress and highly contested gubernatorial elections.

1 Introduction

Are Republican governors good news for holders of state debt, or is political affiliation irrelevant? This paper is an empirical study of the impact that election outcomes have on state credit spreads. I use Credit Default Swaps data (a.k.a. CDS)[1] to obtain a proxy of states risk of default, and collect polls data from 136 pollsters to measure the likelihood of gubernatorial election outcomes. I obtain political parties' effects by considering the response of CDS spreads to movements in poll predictions during the gubernatorial election race. If an increase in the probability of victory translates into a decrease in credit spreads, the political party is good news for debtholders. I find that, at the state level, an increased likelihood of a Republican victory is associated with a decrease in credit spreads. On average, Republican governors reduce credit spreads by more than five percent, which is equivalent to half of CDS standard deviation during the period of analysis. This result is robust to placebo regression analysis and to an event case study. I also present evidence that the effect is stronger for state governments with higher default probabilities and for more contested gubernatorial elections.

Previous literature shows that Republicans and Democrats have opposite fiscal policies. Democrats favor high taxes and spending, while Republicans are eager to cut spending and taxes. To my knowledge, no study have attempted to answer which political party has been more successful in balancing their tax and spending policies. The results of this paper show that Republican governors reduce the risk of default, which suggests they are more fiscally responsible. Their greater ability to repay debt does not seem be a consequence of a faster economic growth. There is literature like

[1] A CDS is a financial contract that works like an insurance contract. In case of default by the State authority the protection seller buys the defaulted bonds at par value from the protection buyer. The protection buyer pays a quarterly fee known as CDS spread for this insurance, for the duration of the CDS contract or until a credit event of the underlying security, whichever happens first. The biannual payments are either 100 bps or 500 bps depending on the CDS contract, plus a down payment that sets the present value of both legs of the contract as equal to one another. Nonetheless, prices are traditionally quoted as if there were no down payment and just biannual payments.

Santa-Clara and Valkanov (2003), Knight (2006) and Alesina and Sachs (1986), that finds that stock market returns and output are positively correlated with Democratic governments. Therefore, my results suggest that market participants expect future balanced budgets with Republican governors.

There is a long list of literature that has studied the effect of political parties on public spending, tax levels, fiscal deficit, redistribution and welfare and debt financing at the state level. On the spending side, papers like those of Rogers and Rogers (2000) and Besley and Case (2003) find that a higher fraction of Democrats in the state House is associated with larger expenditures. Alt and Lowry (1994) asserts that Democratic state governments are inclined to produce higher public spending as a share per capita income. According to Reed (2006) Democratic control leads to a government size increase of the order of 3-5% compared to Republican control. On the other side, older papers like Garand (1988) find inconclusive evidence that party control affects public spending. Besley and Case (1995b) find that Democratic governments increase public spending in the last term. Gilligan and Matsusaka (1995) find a small effect at the state and local levels. On the tax side Besley and Case (1995a and 1995b) find that Democrats facing term limits increase taxes, but there no differences between political parties otherwise. Knight (2000) shows that taxes drop with Republican control of both states Houses, while the opposite is true for Democratic control. Caplan (2001) finds that higher Democratic representation in either state legislative Houses is associated with tax increases. Alt and Lowry (1994) also contends that Democrats increase state taxes as a share of per capita income. As regards the literature about welfare spending, Winters (1976) does not find a correlation between welfare policies and political parties affiliation. Dye (1984) shows an effect of political parties in less than half of the states. Grogan (1994) finds that party control impacts Medicaid spending. Besley and Case (2003) find positive effects for Democrats on welfare expenditure.

Thus, according to several papers Democratic governments increase spending and taxes, with an opposite effect for Republican governments. None of these papers, however, have studied the effect that political parties have on the government's ability to honor its debt. Both political sides are often quoted in the media as contending their rivals will create fiscal imbalances, however, I am not aware of any academic attempt to answer this question. I contribute to the literature of political effects on fiscal policies by providing an empirical answer to the above-stated question . My contribution includes the use of a novel database for state default risk. The empirical method employed in this paper also presents an innovation in such literature by exploiting information contained in poll predictions prior to Election Day.[2] Lastly, I also perform an original application of placebo regression analysis in the context of panel regression analysis.

The results of this paper are also relevant to every municipal bondholder who has the right to vote at the jurisdiction of the bong issuing public authority. The municipal bond market is large in size (around one third of the corporate bond market) and a majority of its clientele consists of retail investors which are mostly located in the jurisdiction of the issuing authority. Segmentation is particularly high across states due to state income tax exemptions. Why bondholders vote the Democratic Party if they increase the risk of default is a question that remains to be answered and goes beyond the scope of this paper. A possible explanation could be a tradeoff between public goods and risk of default. An alternative explanation could be that in an environment with heterogeneous voters, bondholders vote for Republican Party while non-holders of state debt vote Democrats.

Democratic and Republican policies are not expected to converge and reflect the

[2]This method has been employed before in studies on the effect of political parties on stock and other market securities returns, but not on fiscal policy studies. Papers like those of Herron et al. (1999), Knight (2006), Snowberg, Wolfers and Zitzewitz (2006) and Mattozzi (2010) estimate the effect of political parties on interest rates, stock prices and commodities using this approach.

median voter's preferences, which would erode any discrepancy between them.[3] Several authors have developed models that rationalize the existent discrepancies between the two main political parties and justify why it is conceivable that they may never converge to reflect the median voter's preferences. In chronological order, theoretical works that support this view are those of Wittman (1977), Calvert (1985), Alesina (1988), Wittman (1990), Roemer (1994) and Alesina and Rosenthal (1996). We can expect the same discrepancy persistence applies to the different effects that political parties produce on credit risk presented in this paper.

The remaining of the paper proceeds as follows. Section 2 briefly describes state default risk. Section 3 introduces the empirical strategy employed to estimate political parties' effect. Section 4 offers a detailed description of the data. Section 5 shows the empirical findings along with different robustness checks. Section 6 concludes.

2 State Default Risk

Several states have defaulted in U.S. history. Ang and Longstaff (2013) presents a detailed summary of state defaults. Nine states and one territory defaulted during the first half of the 19th century, and ten states in the second half of the 19th century. One default took place in the 20th century, and some states have been close to default recently. State debt is not riskless. It pays a risk premium and investors enter CDS contracts to insure against default. State CDS spreads are not negligible either. Between 2008 and 2012 the median state CDS spread was three times larger than the median federal CDS spread.

[3]Differences between Democrats and Republicans are not limited to fiscal policies. Lee, Moretti, and Butler (2004) shows that political party affiliation explains a large part of congressional voting behavior. Fredriksson, Wang and Warren (2009) and Lee, Moretti, and Butler (2004) argue that political parties offer a whole bundle of different policies, and voters pick from such policies rather than political parties adapting to voters' preferences. Poole and Rosenthal (1984a, 1984b, and 1991) document political divergences in both parties at the Federal level.

States have defaulted in the past and may default again in the future. Future default probabilities are priced into bond yields and CDS spreads. Duffie (1999) shows that under certain conditions, credit spreads are equal to CDS spreads. Thus, both types of securities can be used to obtain risk of default proxies; however CDS spreads present some forecasting advantages over bond yields.

There is generally no yield information on state bonds during a gubernatorial race. New bond issues present a low number of trades which are mostly concentrated over the course of the first trading days, with almost null activity afterwards. Low trade frequency for state bonds has been documented by Green, Hollifield and Schurhoff (2007a and 2007b) and Cestau, Green and Schurhoff (2013). No data are available in the absence of an issue during an election race. On the other side, CDS present complete data series for long periods, with frequent daily movements, which provides a unique measure of risk of default during election races. Besides frequent data movements, liquidity in state CDS, measured by the mean bid-offer spread, is comparable to mean values for country CDS.[4][5] Moreover, several authors argue that CDS may bear negligible liquidity premiums. Longstaff, Mithal and Neis (2005) enumerate a list of seven reasons why CDS spreads are not sensitive to liquidity spreads. In their paper they do not include a liquidity premium in the pricing model of corporate CDS spreads. Neither do Ang and Longstaff (2013) in their state CDS pricing model.

3 Empirical Strategy

In this section I present the framework to obtain political parties' effect on state risk of default. I consider every state gubernatorial election that took place between 2008

[4]More or less trades at any given day may create more or less noise as a default proxy, but not a bias.

[5]15% state CDS and 12.3% country CDS.

and 2012 for which CDS and poll data are available . State CDS data do not go beyond 2008. I use panel regression analysis with fixed effects by gubernatorial election and heteroscedastic errors clustered by gubernatorial election race. My dependent variable is the weekly change in the five year state CDS spreads. The independent variable is the weekly change in poll predictions of state gubernatorial elections. I add a set of national and international economic variables in order to capture CDS spread movements caused by economic outcomes. Other effects on credit spreads may be captured by state fixed effects.

The panel regression model to study political effects at the state level is specified as follows,

$$\Delta S_{s,t} \;=\; \alpha_s \;+\; \beta \Delta Sh(Republican)_{s,t} \;+\; \Delta X_t^{'} \theta_t \;+\; \gamma_t \;+\; \epsilon_{s,t} \qquad (1)$$

where s indices states and t denotes time. The dependent variable $\Delta S_{s,t}$ denotes weekly changes in five years CDS spreads measured in basis points. The independent variable $\Delta Sh(Republican)_{s,t}$ denotes the weekly change in the Republican share of the total predicted votes for Republicans and Democrats at gubernatorial election polls. X_t is a vector of high frequency control variables, α_s are state fixed effects, γ_t time fixed effects and $\epsilon_{s,t}$ is a white error. β and θ are parameters to be estimated, where β is our parameter of interest. I take first difference in both sides of the equation to avoid cointegration as unit root tests do not reject the null hypothesis of a unit root for the dependent and independent variables. The parameter β is common for every state since I am interested in the average effect of the Republican Party in credit spreads.

I include a set of control variables for the case that election outcomes, economic variables, and credit spreads are correlated. A negative economic shock may affect the likelihood for a party to retain or win control of the Executive branch, and the

government risk of default.[6] I control for local state of the economy by including high frequency economic U.S. variables and CDS indices, and control for the international state of the economy by including foreign economic variables and foreign CDS data.

Some standard controls used in the literature, such as public employment rate, unemployment rate, per capita income, debt as a percentage of state revenues, and others, have less than weekly frequency and thus are not useful in this framework. As done by Ang and Longstaff (2013), I choose control variables based on market determined values. To begin with I use the same controls they use in their paper, plus some others. I use 4 groups of variables: State of the economy variables, company CDS indices, sovereign CDS indices, and individual nation CDS spreads. The first group is compounded by the S&P500, DAX index and the VIX index. The second group contains the following indices for North America, Europe and Asia: North America Investment grade CDSs index (CDX.NA.IG), Benchmark Europe CDSs index (iTraxx Europe), Asia excluding Japan Investment Grade CDSs index (iTraxx Asia) and Japan CDSs index (iTraxx Japan). The third one is a one element group compounded by the Emerging Market CDSs index (CDX.EM). The final group is formed by G-8 sovereign CDSs plus five major economies CDSs: Brazil, China, Indonesia, Mexico and Russia. Canada is excluded due to unavailability of CDS data.

Missing control variables would not bias the estimates for political parties effect under the following conditions. If the correlation between missing economic variables and a candidate's probability of winning the election is independent from the candidate's political party, any bias in the individual effect of such candidate will be averaged out by the law of large numbers. Therefore you obtain unbiased average political party effects by using panel analysis. There is no evidence in the literature that political party success be linked to economic variables, i.e. there is no evidence that

[6]Recent literature such as Lee (2008), Fredriksson, Wang and Warren (2009) and Ferreira and Gyourko (2009) has dealt with it by using regression discontinuity design analysis. Lee (2007) establishes weak conditions to justify a sharp regression discontinuity design by arguing that close decision elections have enough random variation in their outcomes.

voters prefer Republican candidates in bad states of the economy and Democratic in good ones, or vice versa. As an illustrative example, Table 1 shows the correlation between unemployment and GDP growth, and the Republican fraction of Senate and House seats.[7] The coefficients indicate that Republican Senate representation slightly decreases during good times but slightly increases in the House of Representatives.[8] This result is inconsistent with a hypothesis that political parties' success in elections is linked to economic variables. Lastly, even if there were missing economic variables that are correlated between states, that cause a general party swing, and that cause general CDS movements, they would be correlated by definition with national economic variables. In such case, their effect in CDS would be captured by the national and international control variables.

Table 1: Republican Seats and Economic Correlation

	Senate	House
Unemployment	0.09	-0.09
GDP growth	-0.12	0.07

4 Data

4.1 CDS credit spreads.

I obtained CDS data from 3 sources: Bloomberg, Datastream and CMA datavision.

CDS securities may be issued in multiple currencies. For some countries, the notional amount in one currency may be as important as in another currency, however the general case is that one currency dominates over the others. For example, U.S.

[7] As Senate and House elections take place at the end of the fiscal year, no lead or lag variables are needed.

[8] The GDP growth rate has a negative and small correlation with the Republican fraction of Senate seats, while it has a positive and also small correlation with Republican fraction of House seats. Unemployment shows similar correlations but with opposite signs.

CDS are mostly denominated in Euros. Theoretically, the choice of currency should not be important, since credit spreads have no denomination. Nevertheless, it is better to use the currency with the most frequent trades and notional amount, in order to reduce liquidity effects on each of the dependent and independent variables of the model.

There are also four types of credit event definitions used in CDS contracts[9]. The preferred default definition that triggers par value payment from the seller to the buyer of protection in CDS contracts changes from region to region, type of reference entity, and type of the underlying asset. Again, it is important to choose the default definition according to trade frequency and notional amount of CDS, rather than to the definition itself.

In order to select the currency and default type for each dependent and independent variable in the model I relied on three criteria. I choose those ones that have the longest time series in the three sources, have high variability and show fewer differences between the 3 sources. The reason behind high variability is that once a CDS or CDS index is obsolete, trade frequency decreases and quotes tend to remain unchanged for longer periods. The reason I use time series that are similar in all sources is obvious; it reduces the likelihood of typographical errors. As a result, I use five year midmarket spreads with "CR" default definition and US$ denomination for

[9] "CR" - Complete Restructuring (a.k.a. full restructuring, FR): Any restructuring event qualifies as a credit event and any bond with up to 30 years maturity is deliverable. This is standard for EM and MCDX trades. It was the standard for IG and HY trades but was replaced by MR in 2001.
"MR" - Modified Restructuring: Restructuring agreements count as a credit event, but the deliverable obligation against the contract has to be limited to those instruments with a maturity of 30 months or less after the termination date of the CDS contract or the reference obligation that is restructured (regardless of maturity). Generally used for IG trades in the U.S.. This doc-clause started in 2001.
"MM" - "Modified-Modified" restructuring: In 2003, market participants in Europe found the 30 months limit on deliverable bonds to be too restrictive, so MM was introduced with a maturity limit of 60 months for restructured obligations and 30 months for all other obligations. This is used mostly in Europe.
"XR" - No Restructuring (a.k.a. NR): All restructuring events are excluded as trigger events. This is prevalent in the high yield market.

states CDS spread data. The control variables used in this study have various currency and default types. I choose "CR" default definition and US$ denomination for country CDS controls with the exception of the U.S. Federal government, for which I use Euros denominated papers. I select the CDX index for emerging markets with "CR" and US$ denominations and the CDX index investment grade that uses "XR" and US$ denomination. European index itraxx is denominated in Euros and uses "MM" definition. Asian Itraxx excluding Japan is denominated in US$ and "MM", while Japan Itraxx is denominated in Yens and bears a "CR" credit event definition.

Five year credit spreads quotes for the dependent and control variables were obtained from Bloomberg since it is the longest time series and has reliable daily data under the criteria described above. I use ten years spreads from CMA datavision. Datastream data was mostly incomplete. It was useful to verify the accuracy of the other two sources. Data for VIX, S&P 500, and DAX indices were obtained from Datastream. I use end of week values, and take Friday to Friday differences for every CDS and market variables.

4.2 Poll data

I collected polls data on gubernatorial races for each state for which I have CDS prices. As mentioned before, CDS is a new kind of financial instrument and CDS data spans from 2008 to 2012. During this period every state had at least one gubernatorial election, most of them in 2010. There are no CDS data for every state nor there are poll data for every election during this time frame. States with both types of data during an election period are: New Jersey in 2009, California, Connecticut, Florida, Illinois, Maryland, Massachusetts, Michigan, Nevada, New York, Ohio, Pennsylvania, Texas and Wisconsin in 2010, and North Carolina, Washington and Wisconsin in 2012.

There are more than 130 pollsters for states altogether. I gathered poll data from 4 different sources: FiveThirtyEight (NYtimes), Real Clear Politics, Ballotpedia and Wikipedia. They provide 4 fields of interest for every Poll: pollster name, dates reported, sample size and vote predictions. I check and contrast every poll, and amend some errors after matching by source, date, sample size and vote predictions. Duplicated data within the same source is not uncommon since the same poll might be released by several companies. The most common case is use by a newspaper, and TV news use, of the same poll information, or the case where a University carries out a poll and then uses different platforms to publish its results. This makes contrasting the 4 sources with one another more complicated. There is no data of when the polls results were publicly available. I adopt the simplifying assumption that polls predictions are released the day after the poll was conducted.

I use the average Republican share from every poll prediction released from Saturday to Friday. I equally weight every poll prediction, as independent from the poll's source, for the following reasons. While it is true that some pollsters are more reliable than others there is no unequivocal and transparent ranking of pollsters. The reliability of a pollster does not depend on the sample size either, but on a correct statistical selection of its sample. Different sample sizes modify the margin of error without creating a bias. I do not weight by sample size because it is not uncommon to find that a smaller sample size poll prediction is more reliable than a larger one.

5 Empirical Results: State gubernatorial elections

This section analyzes the effect of political affiliation on state default risk. I consider every state gubernatorial election that took place between 2008 and 2012. The period from 2008 to 2012 covers almost all of the state CDSs' life. More than half of the states do not have CDS trades for this time frame. Every state had at least one

gubernatorial election during this period, most of them in November 2010, however poll data is not available for every state. I drop off from the sample those states with three party contests with the exception of New Jersey gubernatorial election 2009 that had a weak third party for the most part of the election race. After dropping from the sample every election contest without polls data, with a three party contest, and every state without CDS data, my final sample consists of 16 states and 17 gubernatorial elections. I restrict my data to six months prior to Election Day because there is limited polls data before that date and there is too much uncertainty about primaries outcomes.

Table 2 provides summary statistics for state CDS during the sixth months prior to Election Day for each governor election contest. Average values range between 62 and 282 basis points. The max and min gap average 71 basis points and the median state standard deviation is thirteen points. Compared to mean spreads, there is considerable variation in credit spreads during the six month prior to Election Day. The individual values for each election contest are fairly close to such values, which means that all states experienced considerable variability during the period of analysis.

Table 3 shows summary statistics for the time series of Republican vote shares during the sixth month prior to Election Day. Mean Republican shares pivot around 50%, the cutoff point that determines the election winner, which indicates preferences for Republican or Democratic candidates were not pronounced during the period of analysis. The difference between the maximum Republican vote share and the minimum Republican vote share during election race is around 9% for each contest. This is a significant change when we consider that increasing the vote share by ten percent points, from 45% to 55%, translates into losing the election with almost certainty to winning the election with almost certainty. Thus, it is not unusual that election contests have swings on the foreseeable winner. The median standard deviation is close to 2.5%, which again indicates considerable variability in the Republican vote

Table 2: Summary Statistics for State CDS (in basis points)

	Mean	Std. Dev.	Min.	Med.	Max.	N
N. Jersey 09'	176	52	75	195	235	26
California 10'	282	23	243	278	346	26
Connect 10'	114	13	90	116	141	26
Florida 10'	138	23	96	143	187	26
Illinois 10'	281	38	199	279	360	26
Maryland 10'	62	9	44	62	81	26
Massachu 10'	126	13	96	127	153	26
Michigan 10'	230	23	186	232	283	26
Nevada 10'	193	13	164	192	218	26
New York	222	26	185	220	284	26
Ohio 10'	129	11	106	130	153	26
Pennsylvania	126	7	119	126	147	18
Texas 10'	80	11	58	80	102	26
Wiscon 10'	118	11	93	119	146	26
N. Carolina 12'	79	10	50	83	95	27
Washing 12'	80	11	64	76	101	27
Wiscon 12'	101	14	83	95	126	26
Median	126	13	96	127	153	26

share during the election races.

Table 4 analyzes the average effect that the Republican Party has on credit spreads. It estimates three different specifications: one that does not include any control variable, a second one that includes only North America control variables and a third one that includes all of the control variables described in section two. Every specification includes state fixed effects and Newey-West standard errors clustered by election contest. I divide the sample into two groups: A first group that contains every election contest and a second one that includes only gubernatorial elections in 2010. Each specification is estimated for both samples. Every coefficient on the Republican share in table 4 is negative, of similar magnitude, and statistically significant at 95% or 99% confidence. These results are strong evidence that on average, the Republican Party is good news for debtholders at the state level.

The coefficients in table 4 are read in the following way: An increase in the

Table 3: Summary Statistics for Republican vote shares

	Mean (%)	Std. Dev. (%)	Min. (%)	Med. (%)	Max. (%)	N
N. Jersey 09'	54	2.4	50	54	58	29
California 10'	49	2.7	46	49	54	26
Connect 10'	46	4.6	40	46	56	14
Florida 10'	50	2.7	44	50	55	20
Illinois 10'	55	2.0	51	55	58	18
Maryland 10'	47	2.5	44	48	52	13
Massachu 10'	46	2.6	41	46	50	15
Michigan 10'	61	2.6	57	61	67	16
Nevada 10'	59	2.2	56	59	64	23
New York	33	5.6	25	32	42	21
Ohio 10'	52	2.8	46	52	56	21
Pennsylvania	57	2.4	54	56	64	23
Texas 10'	54	1.9	50	54	57	15
Wiscon 10'	54	2.1	51	54	61	19
N. Carolina 12'	56	2.0	51	56	59	21
Washing 12'	49	2.1	46	49	52	12
Wiscon 12'	52	2.0	48	53	54	9
Median	52	2.4	48	53	56	19

expected share of Republican voters from 0% to 100% translate into an average reduction in CDS spreads of 61[10] basis point, or 50% reduction. A practical way to interpret this result is to think of the necessary change in polls predictions an investor should observe to go from expecting a Democratic victory to expecting a Republican triumph. At the Election Day, if a poll with a median sample size[11] predicts a Republican share of the votes of 46.8%, an investor expects that the Republican candidate will lose the election with a 99% confidence interval. If on the contrary the poll predicts a 54.4% vote share for the Republican candidate, an investor expects that the Republican candidate may win the election with a 99% confidence interval. The difference between both values is the necessary change in a predicted Republican vote share to go from expecting a Democratic victory to expecting a Republican triumph with a 99% confidence interval. Therefore, if we make the simplifying assumption that a 10% is the necessary change in polls to create a swing in the expected winner, and we use it to scale the estimates of party effects, table 4 coefficients may be

[10] An average of the 6 estimates in Table 4

[11] 625

interpreted as follows: a Republican victory versus a Democratic victory translates into an average reduction in credit spreads of 6.1, or an equivalent of five percent. Although the effect might not be linear we may assume local linearity around 50%.

My estimates of political effects are conservative and in fact represent a lower bound for party effect on credit risk. In the first place, the effect may be decreasing as we move away from 50%, but I am equally weighting every gubernatorial election. The response of CDS spreads to changes in poll predictions may be smaller in some elections where party differences are so big that investors do not perceive a change in predicted vote shares as a source of meaningful changes in the expected victory. The way I interpret the results of table 4 considers that every change in poll predictions is equivalent to a change of around 50%, which overestimates the change of an expected winner and underestimates the effect on CDS spreads. Later in the paper I drop practically uncontested elections and it significantly increases my estimates. Second, the change in investors' expectations about the election winner becomes more responsive to polls predictions as we move towards the Election Day, where poll accuracy improves. However I equally weight poll changes over time, which, again, overestimates the change of an expected winner and underestimates the effect on CDS spreads.

Table 4: 5y CDS Week Last Vs. Polls Week Avg

	All	2010	All	2010	All	2010
Republican Share	-54.24***	-59.64***	-62.98***	-62.19***	-74.42***	-49.51***
	(0.006)	(0.008)	(0.003)	(0.004)	(0.000)	(0.006)
Controls:						
U.S. Economy			Yes	Yes	Yes	Yes
U.S. CDS			Yes	Yes	Yes	Yes
CDX indices			Yes	Yes	Yes	Yes
ITRX indices					Yes	Yes
OECD CDS					Yes	Yes
State Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
N	170	125	170	125	170	125
R-sq	0.018	0.031	0.21	0.30	0.37	0.50

Robust p-values between parentheses
* p<0.10, ** p<0.05, *** p<0.01

5.1 Robustness Checks

Table 5 presents six robustness checks using three alternatives of the baseline model. The first two columns transform vote shares into probabilities of victory if the election was carried out at the date the poll was released. Columns three and four replicate the baseline model of table 4 using ten-year CDS spreads. The last two columns in Table 5 show event case study estimates. In this setting, a conventional event case study is not feasible, because there is too much cluster of events in 2010. A way to implement it is to generate a dummy variable that equals one if a Republican candidate wins the gubernatorial elections and -1 if a Democratic candidate wins the gubernatorial election. For each alternative of the baseline model I estimate two specifications: one where I only include North America control variables and a second one using the whole set of control variables.

The coefficients of the first two columns offer a direct interpretation. A one hundred percent point increase in the probability of a Republican victory reduces credit spreads between 6.3 and 6.8 basis points. These coefficients are slightly larger than

those shown in Table 4. Columns three and four also present an increase in the political party effect while maintaining a significance level of 99%. The last columns show the response of CDS spreads to election outcomes, ignoring information prior to Election Day. Results from the event case study also suggest that Republican governors are good news for debtholders. Significance decreases to 90%, which is expected given that at Election Day some election outcomes are quite predictable and may be incorporated into CDS spreads in advance.

Table 5: Robustness Checks

	Win Probability		10 Years CDS		Event Study	
Republican Share	-6.340***	-6.805**	-63.66***	-69.06***	-3.119*	-3.028*
	(0.006)	(0.033)	(0.001)	(0.000)	(0.099)	(0.086)
Controls:						
U.S. Economy	Yes	Yes	Yes	Yes	Yes	Yes
U.S. CDS	Yes	Yes	Yes	Yes	Yes	Yes
CDX indices	Yes	Yes	Yes	Yes	Yes	Yes
ITRX indices		Yes		Yes		Yes
OECD CDS		Yes		Yes		Yes
State Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Month Fixed Effects					Yes	Yes
N	170	170	170	170	3003	2984
R-sq	0.113	0.263	0.276	0.398	0.263	0.318

Robust p-values between parentheses
* p<0.10, ** p<0.05, *** p<0.01

5.2 Effect by level of contested elections

In this section I study the conjecture that political parties' effect may be larger for highly contested gubernatorial elections.

The upper panel of Table 6 shows descriptive statistics of the transformed Republican vote shares into probabilities of victory. I use polls' sample size and a standard method to obtain a probability measure in a two-party election contest. Not every election contest has an uncertain outcome. For some gubernatorial elections the final outcome can be accurately predicted several weeks prior to Election Day. Columns one, two and three show the mean, maximum and minimum weekly probability of a Republican victory, respectively. The first five contests in the list show almost no movement in the probability. Their election outcomes were quite foreseeable. The remaining twelve contests in the list show moderate or high outcome uncertainty. The lower panel of Table 6 replicates the panel analysis shown in the first column of Table 4 using a sample of elections with uncertain outcomes. In this case the average effect of the Republican Party on credit spreads almost doubles the effect found in column 1 of table 4. An extra ten percent of the vote share translates into a 9 basis points decrease in credit spreads, or 7% drop, for election contests with uncertain outcomes during the election race.

I divide my sample into two subsamples. The first subsample contains the eight election contests with mean probabilities closest to 50%. The second subsample contains the eight election contests with mean probabilities most distant to 50%. If the conjecture is correct, political parties' effect should be stronger for the first group. Table 7 presents three alternatives to study if the effect differs across the two subsamples. The first two columns in the table, replicate the baseline model of table 4 for the two subsamples. Columns three and four present individual event case studies for individual effects in CDS spreads from election outcomes at the Election Day, disregarding previous information. The values indicate the number of election contests in

Table 6: Individual State Analysis

Republican Win Probability by State				
State	Mean	Min	Max	
Michigan	1.00	1.0	1.0	
North Carolina	0.97	0.7	1.0	
Nevada	1.00	1.0	1.0	
New York	0.00	0.0	0.0	
Pennsylvania	0.98	0.9	1.0	
New Jersey	0.85	0.3	1.0	✓
California	0.32	0.0	1.0	✓
Connecticut	0.21	0.0	1.0	✓
Florida	0.50	0.0	0.9	✓
Illinois	0.80	0.0	1.0	✓
Maryland	0.19	0.0	0.8	✓
Massachusetts	0.09	0.0	0.5	✓
Ohio	0.56	0.0	1.0	✓
Texas	0.93	0.5	1.0	✓
Wisconsin 10'	0.88	0.4	1.0	✓
Washington	0.59	0.1	1.0	✓
Wisconsin 12'	0.76	0.2	1.0	✓
Panel Analysis - Checked States				
Republican Share	-84.75**	R^2	=	0.027
	(0.015)	N	=	112

the subsample with significant coefficients at 95%. The last columns show the average subsample response of CDS spreads to election outcomes, disregarding information prior to Election Day. For each alternative I estimate two specifications: one where I only include North America control variables and a second one using the whole set of control variables. Although the achieved significance level is not high, Table 7 consistently shows larger political party effects on risk of default in the subsample of highly contested elections.

Table 7: Effect by level of contested elections

	Baseline Model		Individual Events - N^o at 95% conf		Panel Event	
Republican	-88.67**	-57.51	7	4	-4.316	-3.973
(top 8 states)	(0.043)	(0.201)			(0.181)	(0.171)
Republican	-26.89**	-29.33	2	2	-1.334	-0.960
(bottom 8 states)	(0.014)	(0.136)			(0.448)	(0.540)
Controls:						
U.S. Economy	Yes	Yes	Yes	Yes	Yes	Yes
U.S. CDS	Yes	Yes	Yes	Yes	Yes	Yes
CDX indices	Yes	Yes	Yes	Yes	Yes	Yes
ITRX indices		Yes		Yes		Yes
OECD CDS		Yes		Yes		Yes
State Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Month Fixed Effects					Yes	Yes
N	71/77	71/77			1428/1491	1422/1479
R-sq	0.22/0.42	0.39/0.68			0.26/0.29	0.30/0.34

5.3 Effect by level of default risk

In this section I study the conjecture that political parties' effect may be larger for states with more severe financial distress.

Again, I divide my sample into two subsamples. The first subsample contains the eight election contests with the highest CDS spread mean according to Table 2. The second subsample contains the eight contests with the lowest mean CDS spread. If the conjecture is correct, political parties' effect should be stronger for the first group. Table 8 replicates table 7 in order to study if the effect differs across the two subsamples. The first two columns in the table, replicate the baseline model of table 4 for the two subsamples. Columns three and four indicate the number of election contests in the subsample with significant individual effects, disregarding information prior to Election Day. The last columns show the average response of CDS spreads

to election outcomes, disregarding information prior to Election Day. I estimate two specifications for each alternative: one where I only include North America control variables and a second one using the whole set of control variables. For every measure, Table 8 shows larger political party effects on the risk of default for the subsample with higher financial distress. Results support the above conjecture.

Table 8: Effect by default probability

	Baseline Model		Individual Events - N^o at 95% conf		Panel Event	
Republican (top 8 states)	-69.22** (0.045)	-82.45** (0.011)	5	5	-4.511 (0.241)	-4.920 (0.189)
Republican (bottom 8 states)	-63.39 (0.111)	-42.39 (0.401)	4	1	-2.617 (0.188)	-2.422 (0.176)
Controls:						
U.S. Economy	Yes	Yes	Yes	Yes	Yes	Yes
U.S. CDS	Yes	Yes	Yes	Yes	Yes	Yes
CDX indices	Yes	Yes	Yes	Yes	Yes	Yes
ITRX indices		Yes		Yes		Yes
OECD CDS		Yes		Yes		Yes
State Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Month Fixed Effects					Yes	Yes
N	109/56	109/56			1781/999	1766/ 996
R-sq	0.27/0.27	0.48/0.51			0.28/0.26	0.35/0.31

Robust p-values between parentheses
* p<0.10, ** p<0.05, *** p<0.01

5.4 Placebo panel regression analysis

In the context of linear regression analysis, placebo regression analysis means to estimate a linear model using an independent variable that looks similar to the true independent variable, but with no theoretical effect. An example would be to study if CDS spreads in Wisconsin are responding to poll results in Michigan, with Michigan

being the state with a governor's race while Wisconsin is not having one.

I adapt this concept to panel regression analysis. I take every election in 2010 in my sample and I randomly interchange polls data across states gubernatorial races. I repeat this process fifty times[12] and estimate three specifications for each of the fifty derangements: one that does not include any control variable, a second one that includes only North America control variables and a third one that includes all of the control variables described in section two.

The placebo panel regression model is specified as follows,

$$\Delta S_{s,t} \;=\; \alpha_s \;+\; \beta \Delta Sh(Republican)_{j \neq s,t} \;+\; \Delta X_t^{'} \theta_t \;+\; \gamma_t \;+\; \epsilon_{s,t} \qquad (2)$$

where s and j denote states and t denotes time. The reaming notation is the same to equation (1) at section III.

Table 9 shows that rejection rates are close to the theoretical ones for different significance levels. These results strongly suggest that the panel regression model in equation (1) is well specified.

Table 9: Placebo Panel Analysis

Null Hypothesis	Conf. Interval	Rejection Rate
	99%	1%
$\beta = 0$ (No Political Effect)	95%	5%
	90%	12%
Total trials		150

[12]I randomly generate 50 derangements of polls data using Matlab 2013a derangement function with a default seed

This section presents evidence that ex-ante the Republican Party is good news for debtholders. Robustness checks that use 10 year CDS spreads and a transformation of the independent variable into a probability of a Republican victory, show that Republican governors have a significant positive effect on CDS spreads. An event case study presents additional evidence of the direction of this effect. I present results to support the conjecture that political parties' effect may be larger for states with higher financial distress and for more contested gubernatorial elections. Results from placebo panel regression analysis strongly suggest that the model is well specified.

6 Conclusion

In this paper I present a new study of the effect that the Republican and Democratic parties have on state risk of default. Republicans and Democrats have historically taken different approaches to fiscal policies that do not have an obvious effect on credit risk. The former pairs spending cuts with tax cuts while the latter corresponds tax increases with more spending. In order to address this important policy question I consider the response of the default risk to changes in poll projections during the gubernatorial election race. If an increase in the probability of victory translates into a decrease in credit spreads, the political party is good news for debtholders. I use Credit Default swaps data to obtain a proxy of states default risk and polls data from 136 pollsters.

The empirical results in this paper show that election outcomes are priced into credit spreads in state CDS. Every result shown in this paper evidences the fact that, ex-ante, the Republican Party is good news for debtholders. On average, Republican governors reduce credit spreads by more than five percent, almost half of CDS standard deviation during the period of analysis. I present results to support the conjecture that political parties' effect may be larger for states with higher financial

distress. There is also evidence that the effect of political parties is stronger for more contested gubernatorial elections.

Political party effect estimates slightly increase with the inclusion of more control variables and so the significance level, however always significant at 99%. Robustness checks that use an alternative independent variable and a transformation of the independent variable show that Republican governors have a significant positive effect on the risk of default. An event case study presents additional evidence on the direction of this effect.

The nature of this setting and of panel regression analysis provides the framework to obtain unbiased estimates of the effect of political parties on state default risks. Any bias at individual candidate effects will average out under non restrictive conditions, by law of large numbers. In order to test that the model is well specified I include an innovating application of placebo regression analysis to the context of panel analysis. By randomly interchanging poll data across different gubernatorial elections, I re-estimate the model 150 times. Under the assumption that the model is well specified, I should not obtain a response in CDS spreads to changes in out-of-state election contest poll data. The rejection rates for the simulated samples are almost equal to the theoretical ones, which guarantees that my estimates are not capturing a spurious effect.

State debt presents a special feature that is common within municipal bonds. A large subset of bondholders have the right to vote at the jurisdiction of the issuer public authority. Naturally, the question arises as to: why bondholders vote the Democratic party if they thus increase the risk of default? The estimates obtained in this paper could be interpreted as the value of a tradeoff between higher public goods provision and increased default risk.

This paper focuses on political party control of the Executive branch by the two main U.S. political parties. Natural extensions are to employ this framework to compare conservative and liberal parties in Europe, explore the effect of a legislative branch party control, and analyze the effect of divided government on default risk.

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A An application for the Federal Government

In this appendix I show an application for the presidential election 2012, Obama Vs. Romney. I use Intrade prediction market data, to get Romney's probability to win the presidential election and Obama's probability to win the election. Figure 1 plots the evolution of CDS credit spreads and Romney's probability of winning the presidential election in 2012. Table 10 presents estimate results using daily data and 10 year CDS spreads.

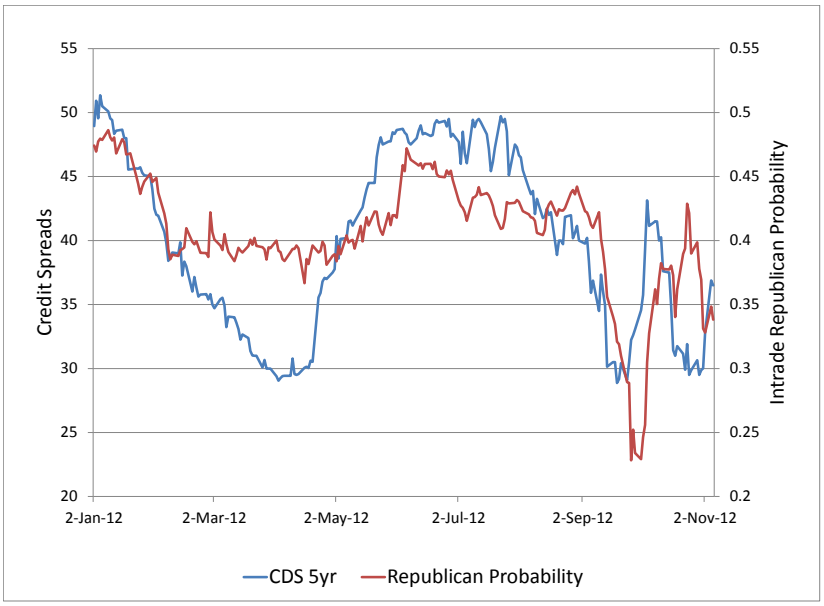

Figure 1: Credit Spreads Vs. Romney - Presidential Election 2012

Column 1 of table 10 shows that an increase in the probability of a Romney victory was bad news for sovereign debtholders in 2012 election. It is positive and statistically significant at 99% confidence. Columns two, three and four also present positive numbers with statistical significance ranging 95% and 99% of confidence. Panel D of table 3 analyze the effect of an Obama victory on credit spreads. Columns one to four show negative values with statistical significance of 99% confidence. The results

are consistent with those obtained in panel R. They indicate that a democrat victory (Obama) was good news for debtholders. The coefficients offer a direct interpretation of its values. They measure the change in credit spreads from a one unit change in the probability of victory, i.e., the dichotomous difference from going from Obama to Romney and vice versa.

Table 10: 10 Years CDS. Presidential Election 2012, 1 year before election

	Panel R				Panel D			
	Intrade Republican Victory				Intrade Democrat Victory			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Prob	69.48***	68.45***	57.09**	37.13	-69.15***	-71.38***	-74.01***	-87.24***
	(0.006)	(0.007)	(0.019)	(0.118)	(0.006)	(0.005)	(0.004)	(0.003)
Lag Prob		-26.16	-20.07	-0.33		17.08	11.98	-14.77
		(0.233)	(0.350)	(0.988)		(0.517)	(0.656)	(0.554)
Oct Prob			35.96***	119.3**			8.107***	24.54
			(0.000)	(0.014)			(0.000)	(0.272)
Lag Oct Prob			-9.604	-26.46			-0.67	16.69
			(0.172)	(0.616)			(0.578)	(0.660)
Congress				Yes				Yes
Mkt Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
S.C. Prob	.24	.24	.20	.13	-.22	-.23	-.24	-.28
N	196	196	196	196	196	196	196	196
R-sq	0.227	0.234	0.241	0.261	0.158	0.161	0.175	0.229

Robust p-values between parentheses
* p<0.10, ** p<0.05, *** p<0.01