

Sovereign Debt, Migration Pressure, and Government Survival*

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As soon as the sovereign debt crisis began, it was widely understood that Germany's response would dictate its ultimate resolution. If Germany chose to provide assistance to shore up other economies or to support bailouts, then it was possible that Portugal, Ireland, Italy, Greece and Spain (PIIGS) as well as the other debt-saddled countries would be able to survive within the Eurozone. If Germany chose not to support any sort of assistance or if it insisted on excessive conditionality, it would force the costs of adjustment on the PIIGS, creating enormous hardships for those economies, likely resulting in a larger wave of financial sector failures. Ultimately this may have led to countries defaulting and, possibly, to exit the Eurozone.

When Greece appeared on the brink of default, the German government weighed the costs and benefits of action carefully. A bailout would entail costs—both in terms of taxes and credibility. The German government would have to provide taxpayer money to cover the bad habits of governments that did not manage their economic policies with a Teutonic fastidiousness. Almost as importantly, a bailout of Greece would require the German government to go back on historic pledges to not bailout profligate Euro governments, reducing its credibility to prevent future abuses.

On the other hand, failure to support these economies might have catastrophic economic consequences, plunging the periphery economies into a severe depression that could spread to northern Europe. Depression in southern Europe could also trigger massive immigration into Germany as people in these economies would move north looking for employment. These immigrants could provoke social unrest and conflict, adversely affect German labor markets, and place pressures on social insurance.

Failure to support a bailout might also endanger the broader European project, the cornerstone of Germany's foreign policy since the 1950s. Without a bailout some countries would leave the Euro, dealing a blow to the idea of European solidarity. This would not have been merely a symbolic cost since, for Germans, the EU is more than just an economic club. It represents an invaluable security commitment, the fundamental

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institutional mechanism to prevent the outbreak of war and hostility on the European continent.

These stark policy choices created tension within the governing parties as German policymakers grappled to find the best response to a rapidly-evolving situation. The prospect of a bailout aroused a passionate response from some German voters. Indeed, a new anti-government and party—the Alternative für Deutschland (AfD)—quickly developed in response to these costs, calling for Germany to rid itself of the single currency. Other voters recognized the value of the European commitment and, though annoyed at the profligacy of southern governments, accepted the costs of a bailout as the price of solidarity.

During the early months of the crisis, Chancellor Merkel walked a fine line between support for Euro and demanding accountability from southern Europe countries. Why, ultimately, did Germany's governing coalition decide to bailout Greece? We argue that the decision to bailout Greece reflected domestic political calculations. While bailing out Greece would result in some short-term political costs—and perhaps some longer-term ones if Germany ended up on the hook for other bailouts—Merkel's government was more concerned about the social and economic consequences of potential default. These social and economic costs—measured in terms of the prospect of a massive inflow of migrants from Southern Europe and the fiscal consequences of serial default—would have longer-term political consequences; consequences that may have led to Merkel's coalition losing electoral support among the German public.

Our argument rests on counterfactual reasoning—that is, we must make assumptions about the response of the electorate in the event that Germany did not bailout the Greeks in May of 2010. In order to make the most plausible counterfactual argument, we draw on three literatures that heretofore have remained disconnected from one another: models of the determinants of sovereign spreads, studies of international migration, and work on government approval. Sovereign spreads provide a clear illustration of the fiscal costs associated with a potential default within the Eurozone. The German electorate, we argue, incorporates the probability of default within the Eurozone when evaluating the competency of the incumbent government. But spreads are also a leading indicator of future economic prospects within member-states; a variable that can influence out-migration if they signal a dismal economic outlook. Immigration flows, in turn, can impact government approval directly as migrants cause competition within the labor market and contribute to social dislocation and conflict.

The crisis within the Eurozone intensified the shocks to the German economy associated with an increase in sovereign spreads and immigration. As an economic union with free movement of labor yet with no centralized fiscal authority, the Eurozone debt crisis created a perfect political storm for the Merkel government. Remaining in office required that the Merkel coalition prevent sovereign defaults within the Eurozone which, in turn, would reduce future fiscal costs and would help protect the German labor market.

The remainder of this paper proceeds as follows: Section one develops our argument about the determinants of government approval during the European debt crisis. Section two details the data, models and methods employed to test our argument. In section three we present the results of estimating separate models of spreads, migration and government approval while in section four we discuss the counterfactual and shows the consequences for Germany's government had it failed to bailout Greece. Section five concludes and provides some directions for future research.

1. The Argument

Standard political science models of government approval emphasize the role of macroeconomic fundamentals in shaping the public's perception of the incumbent. Voters typically rely on domestic economic indicators, such as inflation, unemployment, and stock market performance, not only to assess the government's competence, but also to form expectations about the trajectory of the economy. These retrospective and prospective evaluations of the economy, in turn, shape voters' decisions about whether to support the government.¹

We contend that the financial crisis reshaped this basic calculation of political support. First, the nature of the crisis broadened the electorate's focus to include economic and financial factors beyond the domestic context. Kayser and Peress (2002) and Hellwig (2014) show that the electorate "benchmarks" their elected officials against economic performance in neighboring countries. Given Germany's central role in Europe, voters understood that the crisis would likely affect their pocketbooks. As the crisis in the periphery worsened, German voters became acutely aware of the fiscal conditions in the other economies.² Since the fiscal condition of the PIIGS were likely to affect their own economy, debt conditions in other countries entered into electoral calculations of political support for the Merkel government.

Second, we argue that German voters understood that the debt crises of other EU countries would not just impact the German government's fiscal balances, but that the electorate was also aware that the collapse of the periphery economies could affect the German economy in other ways, particularly by unleashing waves of immigration into Germany. Germany has always been a key destination country for many migrants in search of better economic opportunity; in fact, given the strength of its labor market, Germany is the destination for the largest number of migrants in the EU (see Figure 1). While the estimated impact on wages is small, prior work shows that migration into Germany decreases the wages of native workers (Steinhardt 2009). It is too early to see if the debt crisis strengthened this effect.

But a small effect on wages as a result of immigration can often be perceived as a significant problem by mass publics where it can influence how they assess the causes of

¹ Duch and Stevenson 2008; Lewis-Beck and Stegmaier 2000.

² <http://www.theguardian.com/world/2011/sep/04/germany-euro-bailouts-angela-merkel-nicolas-sarkozy>

unemployment and contribute to cross-cultural frictions (Facchini and Mayda 2010; Boeri 2009). This effect may be magnified in a country like Germany where immigration has always been an important, hot-button political issue (Joppke 1996).³ Although polls show that voters continued to identify economic problems such as inflation and unemployment as more pressing topics, it is notable that concerns over immigration spiked—see Figure 2—in the early part of 2010 as both Greece and Spain had their sovereign debt ratings downgraded and sought bailouts from the Troika.

Thus, the financial crisis broadened the concerns of the electorate, beyond domestic conditions and beyond the macro-economy. These concerns shaped their evaluations of the Merkel government and, in turn, shaped its policy choices. If voters placed more emphasis on the fiscal costs of the bailout, then Merkel’s strategy should have been to let the PIIGS default. On the other hand, if the Merkel government inferred that the political costs of default through immigration were higher, then it would make sense to pursue a bailout.

2. Models, Data and Methods.

Our argument, therefore, relies on counterfactual reasoning—on the “what if” scenario had Germany not bailed out Greece in May of 2010. Economic turmoil within the Eurozone was sufficiently great that government bond spreads made it appear that Greece was on the precipice of default; a default that would have let loose falling dominoes across Southern Europe and would have forced significantly higher costs of adjustment in fiscal terms. It would have also resulted into massive migration into Germany which would have, all else equal, been catastrophic for approval of the governing coalition.

To evaluate these claim, we proceed as follows: we first model the evolution of credit default swap (CDS) spreads in the Eurozone. CDS spreads are often used as a real-time measure of the market’s perception of a particular country’s default risk.⁴ Our model of CDS spreads allows us to evaluate the effect of bailouts on the market’s perception of that default risk in that country.. Because we model spreads as local CDS rates vis-à-vis comparable CDSs in Germany, this model also allows us to examine how changes in the German coalition’s support affects those spreads. Second, we model immigration flows into Germany so we can estimate the impact of CDS spreads on immigration. Finally, we estimate a model of government vote intention that will then allow us to evaluate how different paths of immigration and bond spreads would affect the governing coalition’s political standing.

Modeling Sovereign Bond Spreads

³ This effect may be especially pronounced during periods of economic crisis. Dancygier and Donnelly (2013) and Zamora-Kapoor and Vereba (2014) find that anti-immigrant sentiment increases during times of economic stress.

⁴ See Heinz and Sun (2014) for a discussion of CDS spreads and the modeling strategies utilized to explain them.

Building on the finance literature, we interpret the spread of a country's CDS spread vis-à-vis a risk-free asset as a measure of sovereign default risk. The risk-free asset in this case is a German CDS of similar yield. Monthly data for the countries⁵ in our sample are from Bloomberg.⁶ Because the CDS series are non-stationary for all markets we use the change in CDS spreads as the dependent variable.

Theoretical models of sovereign spreads focus on both economic fundamentals and on the global appetite for risk. Following Berine and Fratzscher (2013) and Heinz and Sun (2014), we proxy for a country's fundamentals using monthly changes in inflation and the real effective exchange rate (which taps the potential for productivity).⁷ To measure the global appetite for risk we use the lagged level of the VIX index which is generally considered a useful proxy for the market's overall tolerance for risk. We measure country specific risk using the level a country's sovereign risk rating as measured by Fitch Ratings with higher values indicating safer, or less risky, bonds.⁸

We also include the lagged value of the level and the difference of the yield spread to control for persistent changes (long swings) in country-specific sovereign spreads as well as potential ceiling or floor effects (when very high or very low values can influence the range of a dependent variable).

Because we examine spreads across a panel of countries we also include a set of country specific dummy variables which capture unmeasured, but country-specific, influences on yield spreads.

To what extent do bailouts influence CDS spreads?⁹ Our variable of interest in the spread model is the Troika's bailout of Greece, Portugal, Ireland and Spain. We code the bailout variable "1" for those months when bailouts were officially announced by the Troika. A negative and statistically significant coefficient on this variable would indicate that the Troika's offer of financial assistance is associated with calmer markets across sample. In addition we include separate variables for the months of individual country bailouts.

⁵ Our sample includes Austria, Belgium, Denmark, Spain, France, Greece, Hungary, Ireland, Italy, the Netherlands, Norway, Poland, Portugal and Sweden.

⁶ These data were used in Heinz and Sun (2014) and were generously provided by the authors.

⁷ These variables are from the OECD (<http://www.oecd.org/statistics/>) and are available on a monthly basis.

⁸ <https://www.fitchratings.com/gws/en/sector/overview/sovereigns>

⁹ Saying something causal about the effect of a bailout on spreads is challenging: the idea of bailing out a country does not come into play until and unless that country's financial markets are already signaling distress. In addition, there is little literature that directly addresses this point; the closest is the work on "catalytic finance" which finds that IMF bailouts and/or official assistance to recipient countries may spur other interested parties to take action. This action may (or may not) prevent a currency crisis (Eichengreen and Mody, 2000; Morris and Shin 2006).

We estimate the spread model using OLS and report Newey-West standard errors. Newey-West standard errors are preferable because the error term may be correlated across country and over time.

Modeling Migration into Germany

We obtained monthly data on flows of migrants into Germany from the German Federal Statistical Office. The data begin in January 2006 and count the number of permanent migrants entering Germany based on their country of origin (which does not always match their country of birth).

Our point of departure is the standard micro-economic model of immigration.¹⁰ The basic intuition of these models is that migration occurs when the expected wage in the host country exceeds the expected wage in the home country less the cost(s) of moving. Empirically these models have been implemented within the context of gravity models.¹¹ Gravity models of international migration control for the economic conditions that exist within a source and destination country and the distance between the two countries. To capture economic conditions, we include three variables: the difference in per-capita GDP in country *i* and Germany at time *t*-1, the unemployment rate in country *i* at time *t*-1, and the unemployment rate in Germany at time *t*-1. Our inclusion of fixed effects for the migrant's countries of origin make it unnecessary to include standard controls such as the existence of a common border with Germany, whether the official language of the country of origin is German, or the distance between Germany and the migrant's country of origin as these values do not vary over time.

The literature on diaspora networks and global migration (Beine, Docquier and Ozden 2011) argues that migrants will flow to countries where there are already a large number (stock) of co-ethnics from their homeland. Thus, we use a measure of the stock of migrants from country *i* living in Germany at time *t*, obtained from the OECD's International Migration Database.¹² We also include a lagged endogenous variable to account for persistence in migration flows—and as a proxy that could potentially capture changes in German migration policy. Additionally, we include the level of flows lagged by twelve months along with a set of month dummy variables to capture any potential seasonality in migrant flows into Germany. Finally, we include a dummy variable coded “1” to capture the period after April 2011 when labor flows between Germany and Poland and Hungary were liberalized.

Our variable of interest in the migration model is the CDS spread in the migrant's country of origin vis-à-vis. While a CDS spread has been used as an indicator of the

¹⁰ Borjas 2014; Hatton and Williamson 2005.

¹¹ See Ortega and Peri (2012) and Fitzgerald, Leblang and Teets (2014) for a discussion of the literature and for additional references.

¹² Migrant stock data is only available on an annual basis so we use piecewise linear interpolation to obtain monthly values.

global market's assessment of default risk, we argue that it reasonably proxies for economic expectations within that country. Unlike contemporaneous measures of income differentials, the CDS spread is future looking and is correlated with national prospective economic assessments. In Figure 3 we plot the log of CDS spreads against national level assessments of the economy in the coming year using data from the Eurobarometer surveys.¹³ There is a clear positive relationship between the CDS spread and the share of the public who expect that the economic situation in the coming year will get worse. This effect does not go away if we eliminate the high CDS countries—Greece and Portugal.¹⁴

We estimate OLS models of migrant inflows into Germany where the dependent variable is transformed into the monthly change in migrant flows. To maintain consistency in this model we also difference the CDS spread variable. To deal with unequal error variance across observations we cluster standard errors by country.

Modeling German Government Vote Intention

To measure the government's popular standing we employ data on vote intention for the parties in government. Opinion polls ask the question: "If parliamentary elections were held tomorrow (or next Sunday), how would you vote?" Respondents then identify which party they would choose to support.

The frequency of these polls vary depending on the time of year and the length of time before an election is due, but there were at least two polls in every month during our sample period—and usually more. Following a procedure by Kropko (2014), we created monthly averages of vote intention for the four major parties. Throughout the sample period, Germany had a coalition government although the identity of the governing parties changed. We added the vote intention for the parties in government to form one measure of vote intention on the assumption that those parties were most likely to be held accountable for the government's policy performance.¹⁵

As with the spread series, the intention series is non-stationary and the null hypothesis of a unit root could not be rejected, so we use differenced data on vote intention for the governing parties. We obtain identical results if vote intention is measured in levels.

¹³ Specifically the question asks "What are you expectations for the year to come: will 199x be better, worse or the same, when it comes to the economic situation in (our country). Data accessed from http://ec.europa.eu/public_opinion/cf/index_en.cfm

¹⁴ Bertoli et al. (2013) find similar results in correlating government bond spreads with a Eurobarometer question assessing "personal job market prospects and market conditions in general in the coming year."

¹⁵ In alternative specifications, we experimented with using the combined vote intention for the two largest parties (CDU/SPD) and the combined vote share for the four largest parties (CDU/SPD/FDP/Greens).

Because approval may have floor and/or ceiling effects, we include the lagged level and change in approval. In addition we measure the performance of the German economy through the inclusion of measures of domestic unemployment and inflation. We also include dummy variables for periods of political campaigns, elections, coalition formations, and new government honeymoons as well as two variables that capture the length of time that a specific coalition has been in power (electoral clock and electoral clock²).

Including measures of Eurozone default risk and the potential inflow of migrants from other EU countries is complex because the weight of these variables depends on other country-specific factors. An increase in default risk in Denmark, for example, would not strike the German electorate as significant because the size of that country's budget deficit is small relative to that of one of the PIIGS. Likewise, an increase in Spanish spreads is a far more significant event in 2011, after government debt had exploded, than in 2005, when it was assumed that Spain's debt-to-gdp ratio was below 60%. To measure how spreads would potentially affect the German electorate, therefore, we use the average of spreads in the Eurozone for each month, weighted by the respective country's debt-to-gdp ratio.

As with spreads, the impact of migrants from different countries will likely have heterogeneous effects on the native population. Germans may be more sensitive to migrants from countries that are culturally distinct from themselves (e.g., Greece or Hungary) than they are to migrants from countries that are culturally and ethnically similar (e.g., Austria or the Netherlands). Bridges and Mateut (2014), indeed, find that opposition to immigration is a function of cultural dissimilarity between the native and immigration populations even after controlling for socio-economic, political and fiscal variables. That said, an influx of migrants from all of these countries could have economic and social (and ultimately political) consequences for the governing coalition. To create a measure of immigrant pressure, we take the total number of migrants entering Germany each month weighted by the migrant country's genetic distance from Germany.¹⁶ Figure 4 contains descriptive information about the values of genetic distance.¹⁷

3. Results

Table 1 contains the results for the CDS spreads equation. We find that both lagged levels and changes in spreads are statistically significant predictors of current changes in bond spreads. Even during the height of the financial crisis, a ceiling on spreads was present as the lagged level has a negative effect. Standard indicators of economic risk/volatility are statistically significant and correctly signed: a higher VIX index has a

¹⁶ We obtain similar results if we use a measure of cultural distance based on data from World Values Survey questions.

¹⁷ See Spolaore and Wacziarg (2009). The data was obtained from Spolaore's webpage: <http://sites.tufts.edu/enricospolaore/>

positive effect on CDS spreads while a higher sovereign rating from Fitch is associated with lower spreads. Inflation also has a positive effect on CDS spreads while increased productivity—as measured by the country’s real effective exchange rate—has a negative effect on spreads.

Interestingly, political conditions in Germany do affect default risk throughout the Eurozone: increases in vote intention for the German governing coalition has a negative and statistically significant effect on CDS spreads across the Eurozone. This effect is robust across a wide range of changes in vote intention—the high end of spikes in vote intention are relatively rare in our sample. As demonstrated in Figure 5, when support for the Merkel-led government decreases, CDS spreads go up. Bond traders likely inferred that a weak German government was less able to come to the rescue. Clearly, markets respond not only to the fiscal performance of Eurozone governments, but they are also concerned about the future course of government policy in Germany.

Did the bailout influence perceptions of government default in the Eurozone? The coefficient on the bailout variable in column 1 is negative and statistically significant; on average bailouts decreased CDS spreads by about 1.7% or 1700 basis points! When we break out the bailouts into discrete episodes the results are also impressive: the first Greek bailout decreased spreads by 1.2% on average while the Spanish bailout reduced them by 1.9%. Interestingly neither the Irish or Portuguese bailouts had a statistically significant effect on CDS spreads.

When countries asked for assistance, CDS spreads generally increased. The requests for bailouts by the Greek, Spanish and Portuguese governments all resulted in an increase in CDS spreads

The initial bailout of Greece significantly decreased spreads; does the reduction of spreads have an impact on flows of migrants into Germany? We examine that question in Table 2. In column 1 of table 2 we use OLS to evaluate the effect of covariates on the number of migrants from Eurozone member countries into Germany. Results from the model indicate that migrant flows into Germany are persistent and seasonal—both the one-month and the twelve-month lag are statistically significant. Interestingly the coefficient on the migrant stock variable is negative; this is at odds with existing literature which emphasizes the importance of social networks in the migration decision.¹⁸ But further investigation suggests that large increase in inflows into Germany from non-traditional source countries (e.g., Poland and Hungary) drive this result.

There is mixed support for the importance of lagged economic conditions: while lagged unemployment in Germany sends a negative and significant signal about employment prospects there and unemployment in the sending country is also statistically significant, there is no evidence that income differentials drive immigration into Germany.

¹⁸ This result is consistent with empirical models focusing on migration into single countries (Clark, Hatton and Williamson 2002).

We argued above that CDS spreads are a reasonable indicator of prospective economic evaluations within countries. Even after controlling for a multitude of factors—including monthly and country dummy variables—we find a statistically significant and positive effect of the log of CDS spreads on immigration into Germany. CDS spreads, therefore, provide an indicator of future economic conditions, giving people incentive to vote with their feet. The magnitude of this effect is plotted in Figure 6.8. But to get a sense of the size of this effect in context, consider that prior to the Greek and Spanish bailout the average CDS spread of Eurozone countries was around four percent; this is associated with an inflow of approximately 600 migrants *per sending country*. At the height of the crisis, when spreads were at their peak, migration into Germany is predicted to increase to almost 2000 migrants per sending country. Thus, worsening economic conditions and the prospect of default spurred more migration into Germany from the European periphery.

So far, we have shown that the initial Greek bailout reduced bond spreads and, in turn, that bond spreads influenced migration into Germany. We next turn to the model of vote intention for Germany’s governing coalition during the sample period. The dummy variables for electoral periods in Germany—the campaign, election, and honeymoon periods, are a mixed bag with increases in coalition approval occurring during election months while other periods—the exception being the 2009 campaign—being insignificant. The “electoral clock” variables—which measure time in power—are statistically significant and suggest that popular support for a coalition levels off the longer it is in power.

Consistent with the idea that vote intention has ceiling effects, we find that higher levels of vote intention for the coalition are associated with decreases in subsequent support. Somewhat oddly we obtain a positive coefficient on the unemployment rate suggesting that the German public does not punish the coalition during bad labor markets as the traditional literature would suggest. Inflation, on the other hand, is not statistically significant nor is the dummy variable for Merkel’s U-turn on the nuclear issue.

The bailouts of the PIIGS did not have a statistically significant effect on government approval.¹⁹ How does the electorate respond to changes in Eurozone spreads or increased immigration from member countries? These coefficients are not straightforward to interpret given that they are based on weighted aggregations. An increase in weighted spreads by one standard deviation from the mean decreases public approval by three percentage points while an increase in weighted immigration decreases approval by almost four percent.

It is important to note that our use of debt-to-gdp and genetic distance to weight the spread and immigration variables, respectively, is not driving this result. Below we describe a model—estimated via three-stage least squares—where we estimate the spread, migration and approval model simultaneously on a country-by-country basis.

¹⁹ In analyses not reported here we include the bailouts separately and only find a negative effect on approval for the first Greek bailout.

That is, rather than pooling the countries when estimating the spread and migration model, we estimate 12 separate models. The results of this exercise for the approval model are quite telling—and are consistent with our expectations. As we show in Figure 7, for all countries spreads—unweighted this time—have a negative and statistically significant effect on approval in Germany. The size of the estimated effect squares with our priors regarding weighting: the largest effects are seen in large debt-to-gdp countries: Portugal, Italy and Spain. Likewise we find the largest effect of migration shocks to German approval occurring in Greece, Hungary and Poland with insignificant effects occurring from inflows of migrants from the Netherlands and Belgium.

Taken together these results tell a compelling story: while bailouts may have had short-term negative consequences for approval of the Merkel government, the bailouts did reduce spreads which, in turn, decreased immigration into Germany. An increase in spreads combined with an increase in immigration would have, all else equal, been far more costly over the long-term for the Merkel government than loss of one percent in approval experienced in the initial month of the bailout. The magnitude of that long-term loss is explored in the next section.

4. What if there had been no bailout?

We place immigration at the center of our analysis, arguing that the potential political consequences of immigration provided a strong incentive for the Merkel government to support a bailout of governments in the periphery. And yet, immigration was not a major issue in the 2013 election. Although there was discussion of the bailouts in the campaign—while Merkel dismissed the possibility of future bailout, her Finance Minister Wolfgang Schäuble suggested that Greece would need a third bailout—the other main parties did not press concerns about the bailout actions, other than to note that they perhaps cost too much. Only the upstart Alternative for Germany party (AfD) dared to suggest that Germany would be better off outside of the Eurozone.

We argue that immigration and bailouts did not play a larger role in the election because the bailouts worked: they had the desired effect of preventing a flood of immigrants into Germany. Thus, none of the parties could raise that as a compelling issue against the Merkel-led government. It is straightforward to imagine that it would have been a hot button issue if the bailouts had not worked to relieve pressure on the periphery economies.

This conjecture can be subjected to a more rigorous analysis using the models developed thus far. Our counterfactual asks: what would have happened to vote intention had the Merkel government *not* bailed out Greece in May of 2010?²⁰ To implement this

²⁰ It is important to acknowledge that our models are far from completely specified—we know of no existing work that does a thorough counterfactual analysis of the consequences for spreads had a bailout not occurred.

counterfactual we focus on CDS spreads in Greece and immigration from Greece to Germany because Greece was the first country bailed out.

Given that we are focusing only on Greece, we can use three-stage least squares to solve this as a simultaneous equation model. In order to do dynamic forecasting we have to make the bailout endogenous or, as at a minimum, specify that it is determined by values of variables outside of the model. We argue that the timing of the Greek bailout is a function of the risk adjusted cost of default—that is, Greece’s debt-to-gdp ratio weighted by the risk of default—along with the direct cost to German bondholders who are exposed to a Greek default.²¹ Thus, we endogenize the Greek bailout by arguing that it is a function of the Greek debt-to-gdp ratio and the exposure of German bondholders to Greece, both weighted by the risk of Greek default as measured by the Greek CDS spread.

Figure 8 plots the counterfactual by assuming that on May 2010 the bailout of Greece did not occur. For purposes of comparison we plot the observed approval series along with dynamic in-sample forecasts assuming that all variables take their observed values. Note that the dynamic in-sample forecast and the observed approval forecast series match closely; this gives us confidence that our approval model is well specified.

The counterfactual—if spreads had increased absent a bailout of Greece—is telling. We construct 95% confidence intervals for this dynamic counterfactual forecast using bootstrap resampling. The immediate effect of this spread shock is a large and sustained decrease in approval for the governing coalition: by October of 2010 approval decreases by approximately seven percent only begins to increase slowly by mid 2012.

In Figure 9 we repeat the same analysis but examine the effect of CDS spreads and migration from the Netherlands, rather than from Greece. Recall that spread shocks from all countries impact coalition approval in Germany but that migration shocks from the Netherlands have no effect. This is borne out in Figure 6 where we observe no statistically significant effect of the failure to bailout Greece on Dutch immigration and spreads shocks.

The results in figures 8 and 9 are compelling: absent a bailout, spreads and migration would have increased dramatically, causing an enormous long-term loss for the Merkel government. The 95% confidence intervals associated with the counter-factual forecasts are well below both the observed approval series and the in-sample prediction. It is fair to say that even though the bailout costs the Merkel government an initial point in public approval, failure to commit to bailing out Greece would have been far more costly. While migration did not receive any attention in the run-up to the 2013 election, it is highly likely that this would have been a huge campaign issue had the bailout not

²¹ We measure the exposure of German bondholders to Greek markets by calculating the share of total German bonds held by Greek financial institutions using data from EPFR Global (<http://www.epfr.com/>). EPFR provides fund flows and asset allocation data covering over 90% of global bond holdings.

occurred. Our counter-factual indicates that the effect of a migration shock would have been far more difficult to overcome than a fiscal shock associated with a Greek default. It is reasonable to infer that the observed reduction in concern over immigration illustrated in figure 2 would have not occurred had the Greeks not been bailed out.

5. Implications and Conclusions

We argue that the German government weighed social, political and economic factors when deciding whether to bailout Greece. While a bailout created large short term fiscal costs and problems associated with moral hazard, failing to bailout Greece would have generated far greater social and political fallout due to the possibility of migration from Southern Europe into Germany. Our counterfactual analyses demonstrate the enormous public approval cost that the Merkel government would have confronted had it not bailed out Greece.

What does this mean for the future of German politics? The main parties—the Christian Democrats and the Social Democrats share a commitment to Europe and to the Euro. Thus, it was often difficult to see significant differences between them on the bailout. An SPD-led government likely would have acted in a similar manner, perhaps being even more aggressive in bailing out the peripheral economies to prevent immigrant inflows that would hurt their working-class constituents. And yet there are costs to this consensus on the Euro and Europe. Germans must pay for bailouts and structural funds or accept that migrants will come to Germany to work and live.

Given the centrist consensus around Europe, political outlets for voters opposed to the consensus will have to be found outside of the main parties. The AfD, composed largely of defectors from the CDU, offers an alternative on the right. The AfD takes a populist stance that rejects the Euro and wants to place limits on immigration.

The AfD did not fare well in the 2013 federal elections, failing to meet the 5 per cent electoral threshold. Yet since then, the party has gained in popularity, winning seats in the European elections and in recent state level elections. Given the relative consensus between the CDU and SPD, it is unsurprising that there is room in the political space for the development of this type of party.

More generally, our findings have a number of implications for understanding the relationship between global financial markets, cross-border migration and domestic politics.

The Euro and the Free Movement of People

Neofunctionalists argued that a rationale for the adoption of the Euro was to guarantee the gains from trade brought about the removal of trade barriers. By removing exchange rate risk within the E.U., countries could trade without the potential distortions of a competitive devaluation. In a similar fashion, our argument suggests that the credibility of the Euro relied on the existence of free movement of people in the Eurozone.

As the Euro was being negotiated, member state governments had wildly different fiscal positions: Italy and Belgium, in particular, had debt to gdp ratios in excess of 100. Reflecting these fiscal differences, bond spreads throughout the late 1980s and 1990s were relatively large. European policy makers recognized that these differing positions created the potential for problems under a single currency: There was the potential for a profligate government to enter into a vulnerable financial position and require a bailout. To deter this possibility, a no-bailout clause was explicitly negotiated.

Despite these very different fiscal positions, once the Euro was adopted, bond spreads quickly converged, suggesting that market actors believed that the Euro reduced the risk of a government default, even though government debt still varied widely. What made it credible that governments would not default or that someone would come to the rescue to save a defaulting government? Our analysis suggests the threat of internal migration from the periphery made any sort of promise not to bailout incredible.²² Market actors understood that northern European countries would not want to deal with the flood of immigrants that would happen if a government defaulted. They calculated that the northern European countries would rather pay than accept a flood of immigrants. Thus, the free movement of people within the EU helped guarantee the credibility of the Euro and reduced bond rates for debt-ridden EU countries.

Without the free movement of people, northern European countries would not have had the same incentives to bailout the periphery countries. And if the EU had not sequenced the institutional reforms in this manner, the bond spreads would not have fallen as quickly or as far as they did. The free movement of people, therefore, provided some debtor governments with increased fiscal flexibility as the bond rates were lower than anticipated.

Argentina and Mexico

Our argument has implications that extend beyond the sovereign debt crisis and Germany. The threat of immigration into a creditor country may prompt that government to respond more aggressively to credit crunches in other countries. Consider the cases of Mexico and Argentina. Both are middle-income countries with important trade linkages with the United States. Both countries experienced debt crises in the 1980s. Yet the U.S. hurried to Mexico's aid, providing a generous bailout package while it stood on the sidelines and allowed the IMF to negotiate with Argentina over the terms of its rescue package.

Our argument suggests that the key difference between the two cases is the threat of immigration in the event of an economic meltdown. Mexico's proximity to the U.S. meant that the possibility of a flood of immigrants was quite possible--immigration that

²² This is consistent with Beramendi (2012) who makes the argument for centralized fiscal institutions in situations when labor mobility results in large externalities.

would have been politically unpopular for the Clinton administration.²³ Although Argentina has a sizable ex-pat community, its emigrants are spread around the world. And given its remote proximity to the U.S. and other creditor countries, the U.S. was not faced with the imminent threat of increased immigration from Argentina. Hence, there was much less urgency to the Argentine bailout from the US perspective.

Our counterfactual argument shows that we cannot examine the implications of capital mobility and labor mobility in isolation. Potential migration pressure is an important factor in how governments in creditor countries respond to financial crises. Just as importantly, the potential for migration shapes how creditor countries offer assistance to deter that possibility.²⁴

²³ This was certainly part of the Clinton administration's calculus in moving forward with Mexico's bailout. "The president argued that the bailout was critical for U.S. interests. He said it would protect American corporations already in Mexico as well as those seeking to export south of the border. He also warned that the world economy was at risk, that other emerging markets in Latin America and Asia might suffer similar fates if investors began pulling out en masse. Finally, the White House asserted, the Mexico bailout would help prevent a flood of illegal immigrants from rushing toward the U.S. border." http://articles.chicagotribune.com/1996-02-28/news/9602280230_1_mexico-bailout-zedillo-administration-billion-international-rescue

²⁴ Bermeo and Leblang (forthcoming) argue that the allocation of overseas development assistance can be understood as a part of a donor country's broader immigration policy.

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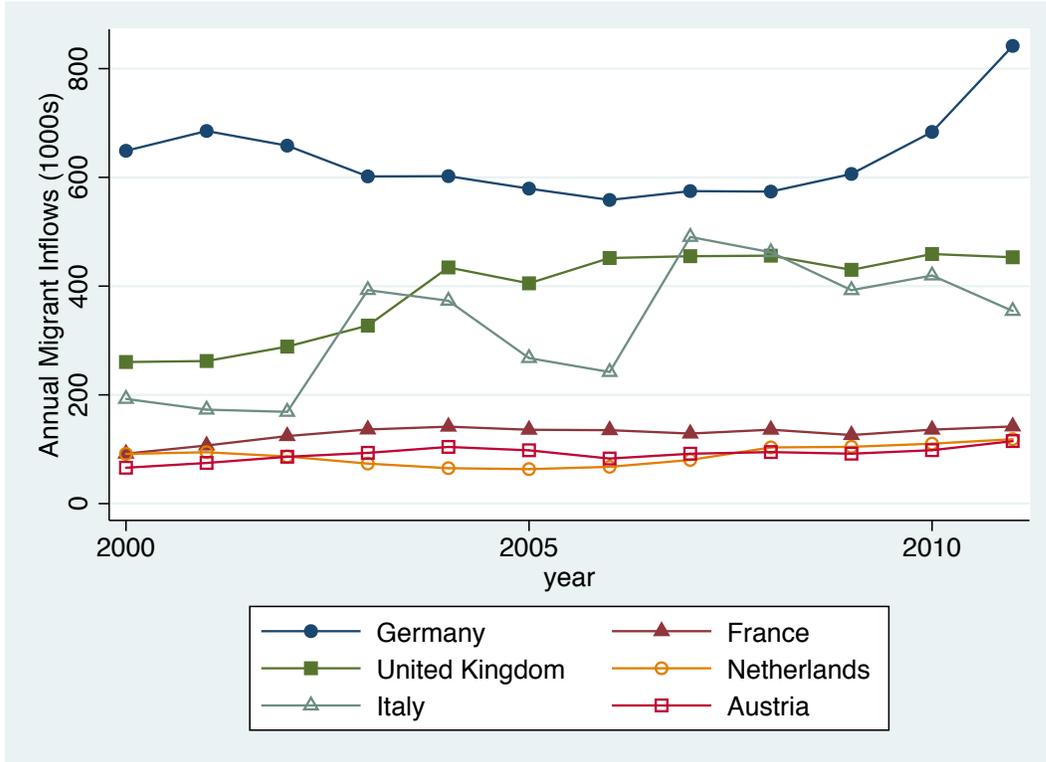
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FIGURE 1 – MIGRATION FLOWS INTO EU COUNTRIES



(Source: OECD Immigration Statistics)

FIGURE 2 – GERMAN ATTITUDES TOWARDS IMMIGRATION

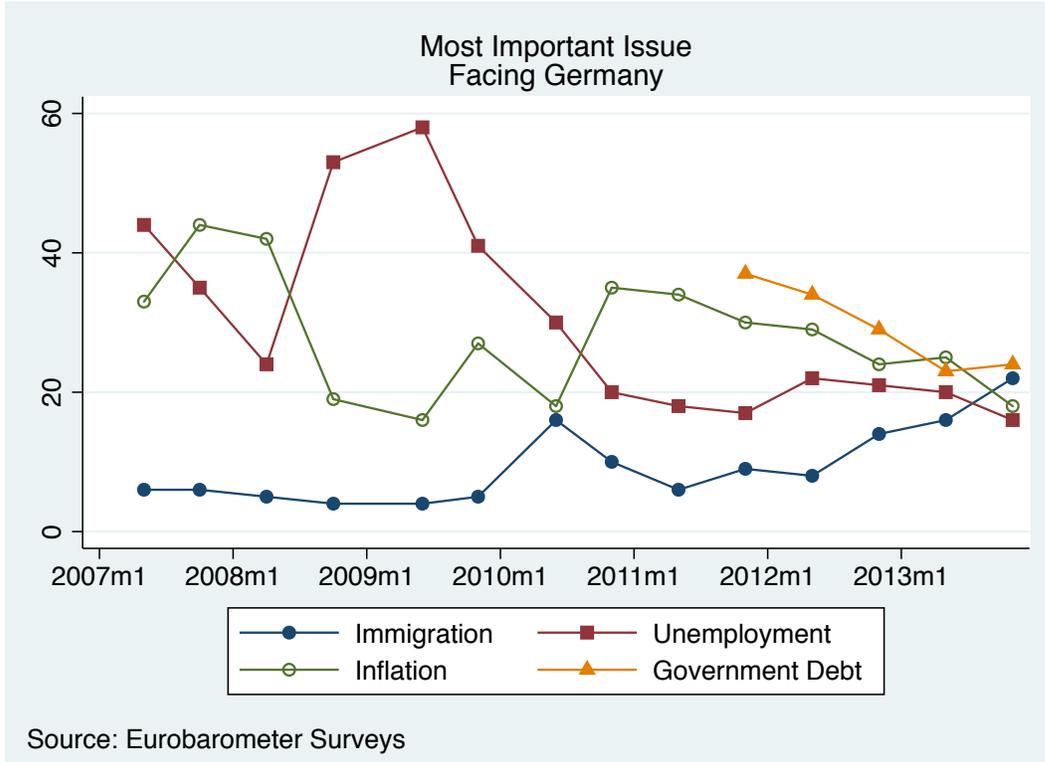
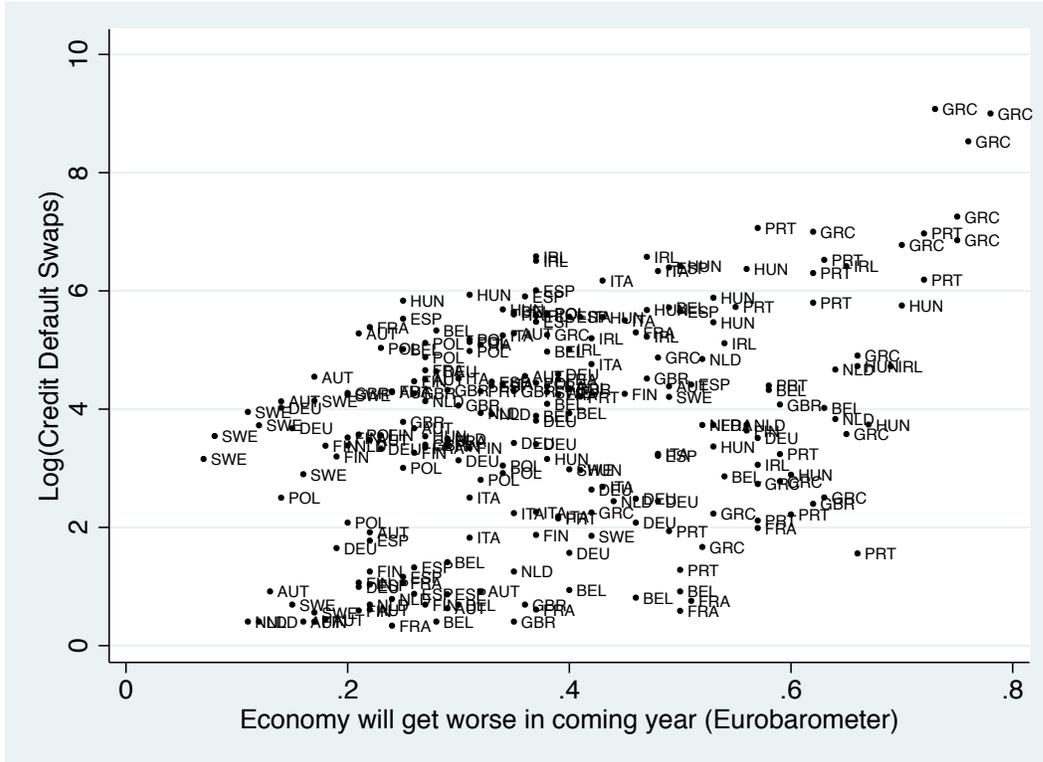


FIGURE 3 – CDS SPREADS AND PROSPECTIVE ECONOMIC EVALUATIONS



(Source: Bloomberg and Eurobarometer)

FIGURE 4 – GENETIC DISTANCE FROM GERMANY



(Source: Spolare and Wacziarg 2009;
http://www.anderson.ucla.edu/faculty_pages/romain.wacziarg/downloads)

FIGURE 5 – EFFECT OF Δ COALITION APPROVAL ON Δ CDS SPREADS

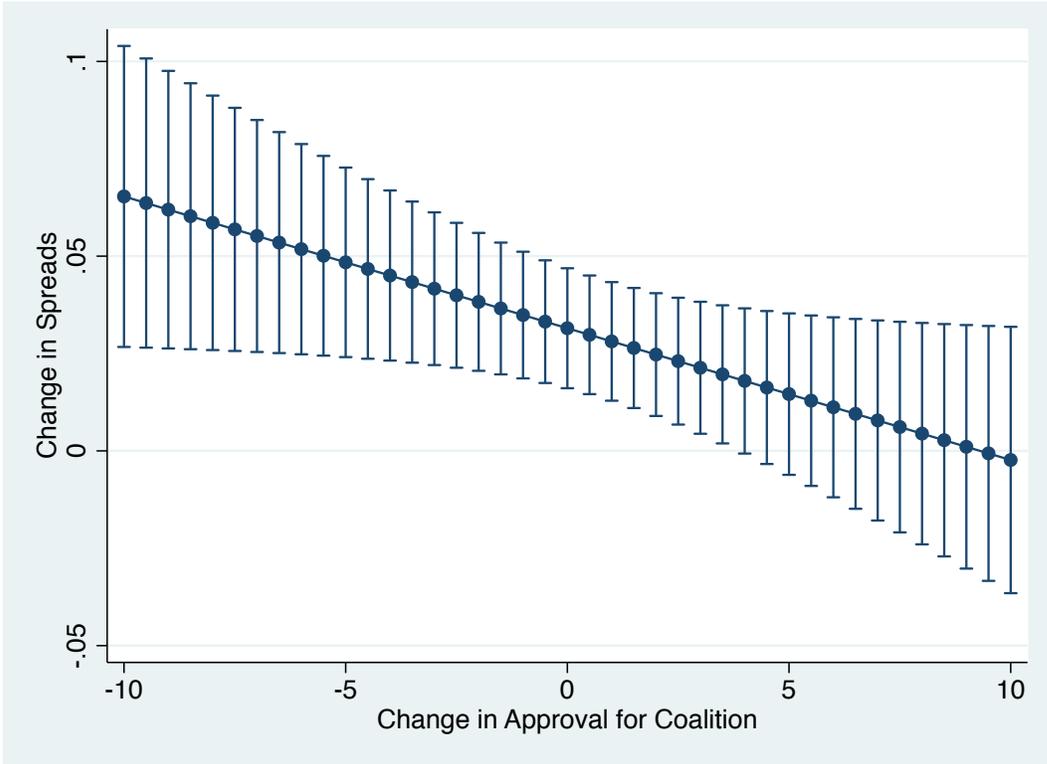


FIGURE 6 – EFFECT OF Δ CDS SPREADS ON Δ MIGRATION INTO GERMANY

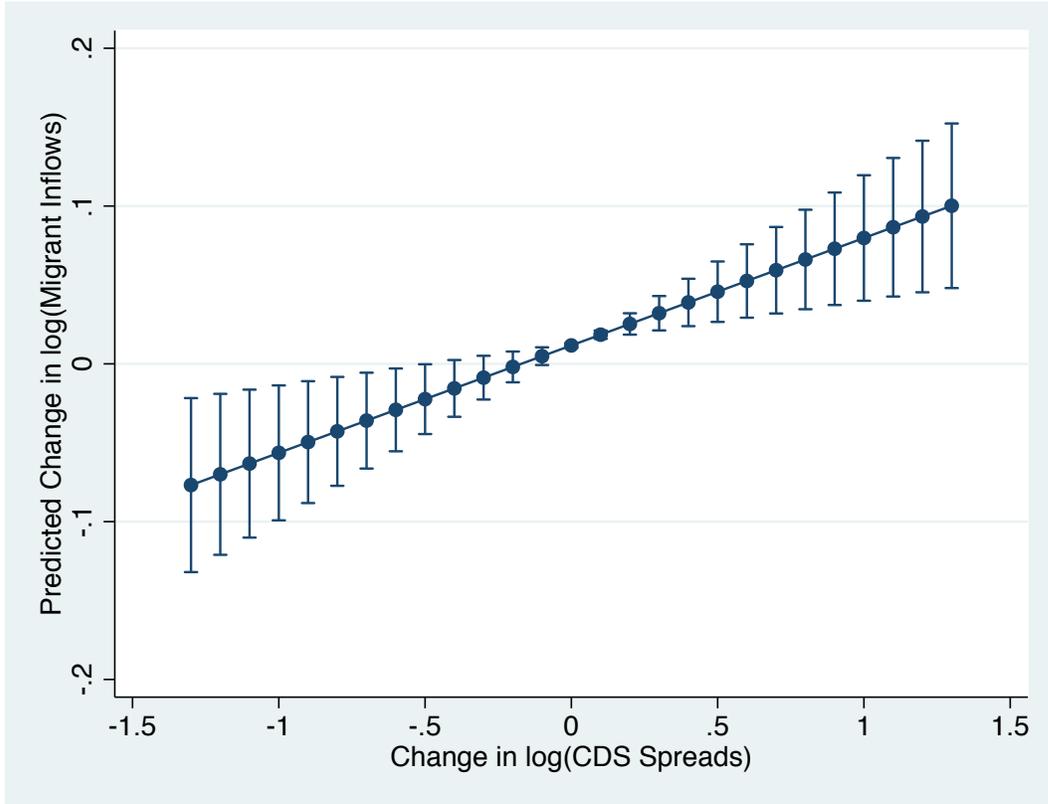


FIGURE 7: ESTIMATED EFFECT OF SPREADS AND MIGRATION ON APPROVAL

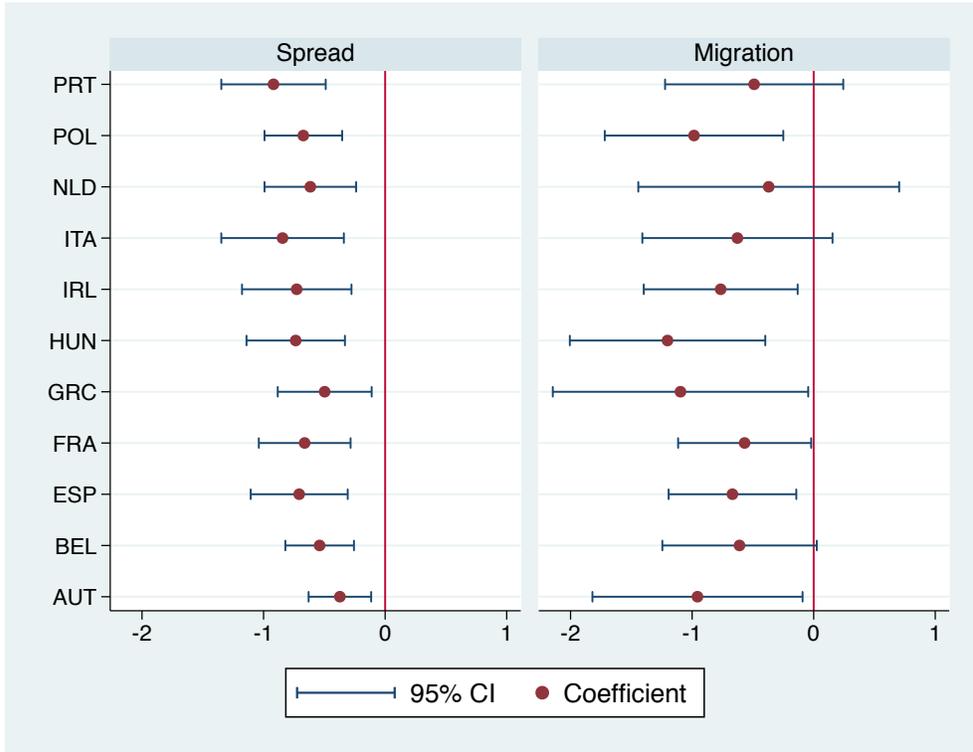


FIGURE 8 – COUNTERFACTUAL FORECAST: GREECE

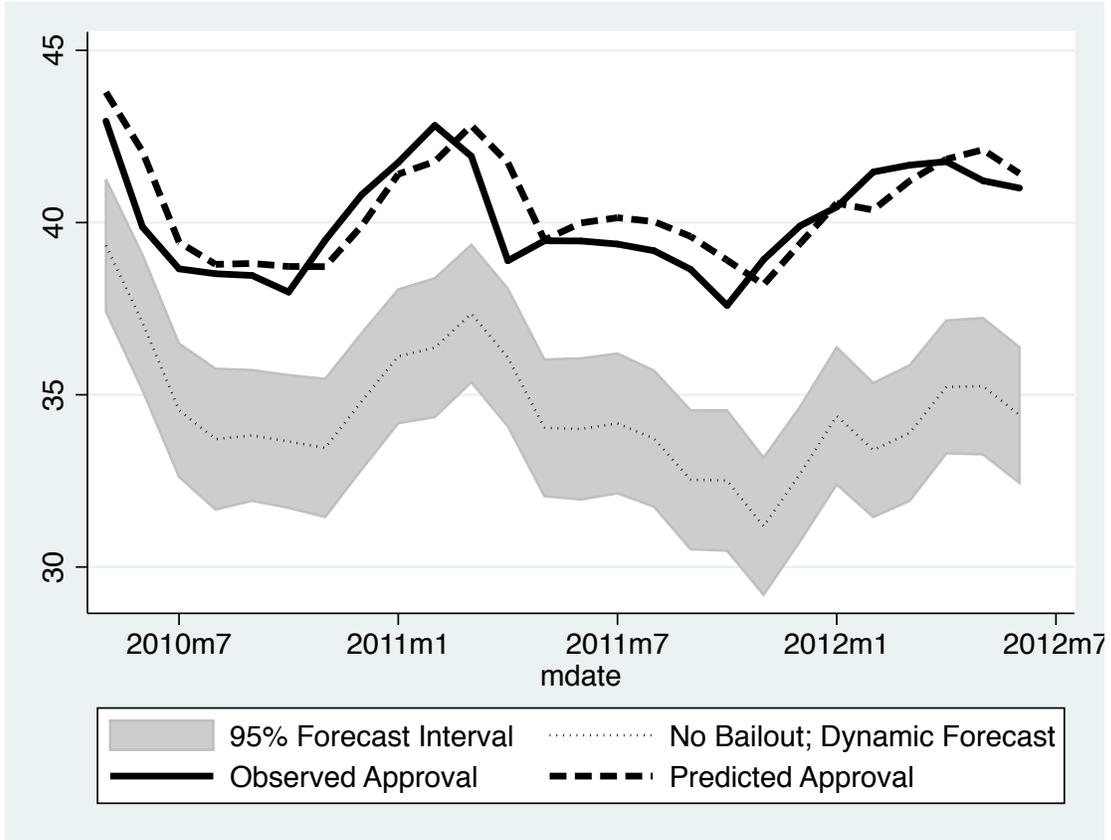


FIGURE 9 -- COUNTERFACTUAL FORECAST: NETHERLANDS

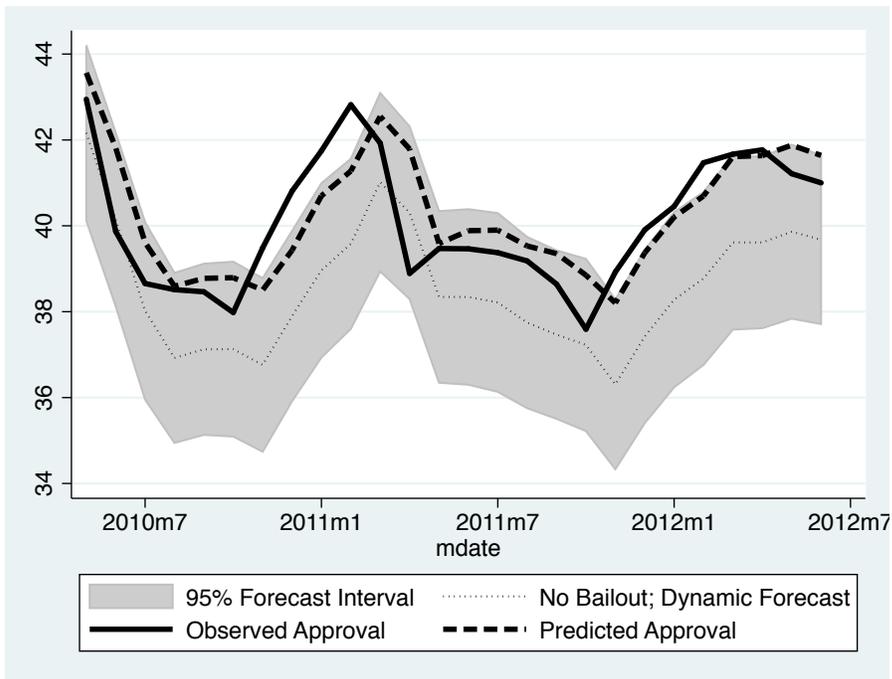


Table 1: Determinants of Sovereign Spreads

	(1)	(2)
$\Delta \log(\text{CDS Spread})_{t-1}$	-0.0238 (0.0452)	-0.0260 (0.0460)
$\log(\text{CDS Spread})_{t-1}$	-0.0336** (0.00629)	-0.0354** (0.00633)
Δ German Approval _{t-1}	-0.00338** (0.00169)	-0.00317* (0.00171)
Vix Index _{t-1}	0.00400** (0.000984)	0.00406** (0.00100)
Domestic Inflation _{t-1}	0.0238** (0.00516)	0.0228** (0.00517)
Δ Real Effective Ex Rate _{t-1}	-0.0515** (0.00481)	-0.0524** (0.00495)
Fitch Rating _{t-1}	-0.0102** (0.00512)	-0.0107** (0.00519)
Bailouts	-0.0708** (0.0206)	
Greek Bailout, 5/2010		-0.0253* (0.0175)
Spanish Bailout, 8/2012		-0.0918** (0.0270)
Portugese Bailout, 5/2011		-0.0150 (0.0254)
Irish Bailout, 12/2010		-0.0436 (0.0320)
Greek Ask, 4/2010		0.676** (0.0328)
Portugese Ask, 4/2011		0.0775** (0.0303)
Spanish Ask, 7/2012		-0.0542 (0.0368)
Irish Ask, 11/2010		0.181** (0.0330)
Constant	0.187* (0.107)	0.201* (0.108)
Observations	1128	1128

Dependent Variable in Columns 1 and 2 is the Change in CDS Spreads vis-a-vis Germany). Newey-West standard errors in parentheses.

Both columns include a set of 12 country dummy variables.

* $p < 0.10$, ** $p < 0.05$

Table 2: Determinants of Migration into Germany

(1)

Log(Inflows into Germany) _{t-1}	-0.642** (0.0613)
Log(Inflows into Germany) _{t-12}	0.466** (0.0725)
Lagged Bilateral Migrant Stock _{t-12}	-0.0135 (0.0861)
German Unemployment _{t-1}	-0.0401** (0.0118)
Domestic Unemployment Rate _{t-1}	0.0174** (0.00469)
German GDPPC - Domestic GDPPC _{t-1}	0.105 (0.0789)
Δ log(CDS Spread) _{t-1}	0.0681** (0.0194)
Hungary/Poland Labor Agreement	0.111** (0.0251)
Constant	1.404* (0.693)
Observations	1247
Adjusted R^2	0.741

Dependent Variable in Column 1 is the Change in Log(Bilateral Migration Flows).

The model includes a set of 12 origin country dummy variables and 11 monthly dummy variables. Robust standard errors are clustered by country of origin

* $p < 0.10$, ** $p < 0.05$

Table 3: German Coalition Approval

	(1)
Approval _{t-1}	0.790** (0.0505)
Change in Approval _{t-1}	0.159 (0.136)
German Unemployment _{t-1}	1.080** (0.328)
German Inflation _{t-1}	0.340 (0.302)
Nuclear U-Turn	0.685 (0.710)
Campaign 2009	-1.076** (0.448)
Campaign 2013	0.286 (0.381)
Honeymoon 2009	1.686 (1.172)
Election 2009	4.825** (1.364)
Election 2013	5.344** (1.650)
Log(Weighted Eurozone Migration Flows) _{t-1}	-0.907* (0.469)
Log(Weighted Eurozone Spreads) _{t-1}	-0.450** (0.155)
Bailouts	-0.257 (0.394)
Electoral Clock	0.267** (0.0861)
Electoral Clock ²	-0.00284** (0.00126)
Constant	2.404 (2.532)
Observations	91

Newey West Standard Errors in Parentheses

Dependent Variable is the Change in Coalition Approval

* $p < 0.10$, ** $p < 0.05$